



Supplement

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UNEVOC Forum

Workers as learners / learners as workers: Why the knowledge society needs a thinking workforce and how to get there

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This keynote address was delivered at the opening session of the international seminar "Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Workplace", held in Bonn, 8-10 September 2005.

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Oxford. It is part of a larger joint project between UNESCO-CEPES and the UNESCO-UNEVOC International Centre which aims to investigate the extent of and the trends in vocational content in higher education of today.

>> I stand before you in some trepidation, knowing that I am confronted by people who know more about the details and the specifics of the subject that I am supposed to address than I do. I am also flanked by people who are absolute experts in this area. I have been accused upon occasion of being occupied by an intellectual quality called "immaculate perception", which is another way of saying unvarnished by the facts! Therefore, I am going to be as cautious as possible today, because I want to be sure not to embarrass myself in the presence of all this talent and knowledge.

I want to thank you for the introduction, Mr Maclean, and tell a short, true story that happened about the time I left the United States Congress – which is a euphemism for losing an election. There is a period of

time after you have lost an election when you remain in your post; you are still a representative of the people. It is rather like attending your own wake from an employment or political perspective. I was travelling around the state of Vermont where people still needed help. There was a civil society meeting in a small town where the chairman and I had known each other for a very long time (Vermont is not a big state). I say that we had known each other for a long time, but it was one of those unfortunate situations, for we did not really like each other very much! In fact, we had not liked each other since the third grade in elementary school! It was his job to introduce me (he was thrilled I had lost the election, just thrilled). It was very hard for my opponent for he could barely contain his glee. He picked up my resume and, thank God, we had sent him the short one. He read it word for word and then stood back

and said: "And now it is a great pleasure to introduce Congressman Peter Smith, a man with a great future behind him." This is to say that I am always especially relieved when people are at least moderately more generous than that, especially in their introductory comments, and I appreciate your warm welcome.

First of all, I want to share with you a few of my own feelings about education. So often we have jumped into interpreting the technical aspects of the data as a philosophy, without first trying to show who we are in the art of education as a result of our own experience. As I stand before you, I have to tell you that I am exactly what I appear to be. By any reasonable global standard, I am a child from an enormously privileged background. I was born into a stable

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family where food was plentiful and love abundant. It is a wonder to me that at some point very early in my life I became fixated on learning. You will hear this theme throughout my comments today because it is the way I keep my – otherwise, complicated and complex – world organised. For me, learning lies at the core of everything. It is the transformational event in people's lives – if and when it happens. My meaning (and I was speaking to some of you last night on this same point) is as follows: we know that education is the pathway that brings justice to unjust societies governed by a few powerful people. We know that good teaching and learning and thoughtful preparation of education is the pathway that gives power to individuals. Thus, symbolically, we represent the pathway or the bridge to power – to individual power – for people through education.

That is my own view of education. It is especially relevant when we are talking about vocational education, and the relationship between higher education and preparation for the workforce in an ever-changing and dynamic economy. We must have a conception of opportunity in which there are an adequate number of seats at the table. Our objective would be that there is a place at the table of opportunity for every single child and working adult who is able and who has chosen to come to that table. And the only way to come to that table is with an education that allows you to think critically and to make your own judgements. My experience of life and events is that they can be terribly unfair to people, although in general this has not

been true in my case. I have never lost any fight that I did not choose. And I would include leaving Congress under this heading. It was, for instance, the nature of that employment. I performed my functions in exactly the way I wanted to and it turned out that the voters in my state decided that they did not like my particular brand of politics. So I cannot complain about what happened. That was the very nature of the game. However, I think that it is fair to say – and I want to reach the essential deep meaning of what we are talking about here – that being educated and being able to continue to learn are important.

These are capacities that cannot be taken away from you. You can lose your house, your health, your money, your business, your family. Those are all things over which you may not have any control. But what goes on inside your mind and your heart as they are deepened and enriched by life's experience – that is yours. I therefore believe that the opportunity to learn is the single most important thing we can provide for any person, any group of people or any society. This is because it leads to a kind of strength that frankly makes some people nervous. People interested in power are not the friends of education. People who desire to control others are not sympathetic to education because it is a troublesome capacity when individuals and groups of individuals possess it and put it into practice. So this then is the motivator for me. Through an increasingly deep set of experiences, I have come to understand what I believe to be an essential truth about learning.

Now, the second point that I would like to make is that UNESCO carries out its operations according to a global objective. Combining all of the interlocking points of view from national and regional perspectives, I believe that the correct term for this objective is "sustainable development". In other words, there has to be an answer to the question: "Education for what?" Education is a moral good. It is an abstraction and it is a personal good. I have just told you about my understanding of it. But education also has to operate within the context of society – a national society or a regional collection of interests. It has to connect to other things: the economy, the notion of open communication and social justice, of environmental balance and protection. It must also connect to other areas that are of particular interest to a country or a local region. This means that we must understand what we are doing not only in the context of the individual but also in the larger context of accumulative expectations, needs and impact at the societal level – however we define that unit of society.

It seems to me that the big idea behind education is the same big idea that our grandfathers – in my case and perhaps also in yours – would have talked about when discussing education. I am not about to launch into a defence of the traditional academy! But I would tell you that if we, for one minute, believe that we can or should offer something of a different value to students in the context of the twenty-first century, I think we are making a great mistake. By that I mean that we would be

selling students short and I think that we would be selling our societies short too.

Education has been the most important investment that societies make. And the reason why more people want more education – the reason why people who operate on the margins of society want education – is to bring their lives into the mainstream, to obtain the mainstream of opportunity for their people and their associates.

As we broaden our appreciation of and our commitment to education and to investments in education driven by our evolving economies, it will change our understanding of new types of careers, new opportunities and probably multiple career change throughout life. These are matters that I know others are going to talk about. We must understand that at the heart of this situation lies a person who is educated. Not a pipe-fitter or an electrician or a computer technician, but a person who is educated to think critically, to solve problems, to work in teams, to be analytical, to understand how he or she learns so that they can learn more. They must be educated to the point where they can be confident about facing situations of ambiguity and difficulty in the workplace or in their lives. These are the traits that we need in a workforce. But I would agree with you that these are the same traits that we need in a society. They are the very same traits I would want for my children and my grandchildren. What we need to do is to understand in the largeness of our spirit – but also in the definition of what our purposes are – that there is a difference between what someone does with their education and what it means to be educated. I am, of course, more familiar with the situation in my own country. I have upon occasion made the mistake of separating out and making different definitions of what it means to be educated.

I have participated in educational programmes where, by design, we have been teaching two things. First, we are teaching the content: science, maths, social science or whatever. But at the same time, we have been working with our professors and the

experts in teaching communities (and we use a wide variety of models in the United States). Through the pedagogy they use and the things they ask learners to do, we want them explicitly to help learners develop their abilities to understand consciously how they approach and solve problems – what it means to think critically. When we deal with learning outcomes in these experiences, we are not only measuring knowledge. We assess the learners' capacity to apply the knowledge, skills and abilities that were the purpose of the course. We also evaluate the ability to demonstrate familiarity with improved critical or analytical thinking, of problem-solving and teamwork. And we give weight to both, because both are important.

Therefore, I would say to you that it is possible to focus on a very important question: Do we know how and, if we do know how, are we willing to try always to teach on two levels? One is the content to be taught and the other is a broader, enduring, intellectual capability that we want learners to acquire.

Now, I wish I could tell you that at Princeton or Harvard University they taught me all that. They did not teach me any of that! We may now be coming to the "immaculate perception" part. I may be wrong – but my experience tells me that I am not. The fact of the matter is, how do you make the leap from knowing a great deal about a subject area – whether nanotechnology today or American or Russian history (forty-five years ago in my case) – to being able to think intellectually across problem areas? How do you perceive the commonalities of the elements in different situations? How do you break them down? That happens by osmosis. I can compare it to the situation in Vermont some years ago when we used to have lots of small pork farms. The manure from the farms was spread on the fields to grow better hay and corn. I always thought that critical thinking skills – the part that universities say they value so much – is like fertilizing a field from an airplane ten thousand feet up in the air. It basically consists of flying over the field and throwing the manure out of the back of the plane and hoping it will land on something. So they know about the



Mr Peter Smith, ADG for Education, UNESCO, giving his keynote speech at the international seminar "Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Workplace", Bonn, 2005

connection between the study of content and the actual extraction of generic and high-level intellectual skills that we all associate with a wonderful education, but the connections are not explicit.

Today, we know enough to make them explicit. We know enough to give every single learner that kind of value, if, in fact, it is something that we chose to do. A related point that I would avoid – and urge you to avoid – is what I call the remedial trap. So much of what we do is based on the assumption that a person or a population needs to catch up. And the question then is: catch up to what? What this does is that it leaves you without a positive script for the person or the people or the society that you are thinking about. My own view, based on my experience and the research that I have seen, is that people who fail in school do not fail because they lack the capacity to learn. They fail because we as educators have failed. We have not used the capacity to be successful with them. They do not fit our definitions and they do not fit our pedagogy. They become failures because we, as professionals, did not know how or did not care enough to organise our learning to respond to them.

Thus, I do not like remediation because it suggests that there is an illness that is at-

tributable to the student. And I think in many cases, perhaps more than we are willing to admit – I know this is true of the United States –, the problem, the fault lies with the organisation and the assumptions of the school and the teacher. I would be happy to explore this matter further if there is enough interest and we have the time.

You are in the business of education and the subject of this conference is how we maximize the human potential of the greatest number of people in each of our societies through education. This also involves an understanding that there must be an absolute connection between vocational results and the ability to be successful in professional or sub-professional areas. How can we become capable when faced with a changing and dynamic workforce and economy? Let us understand that, by its definition, if we want people to succeed – and we are saying that they must in order to survive – then they should not only be prepared for a job, but must be able to think. In short, they must be educated.

Our purpose, it seems to me, is to produce thinking people. We may consider our approach successful when it has created as many thinking people as possible who are also ready to go to work based on a future – and I saw some of this in the material disseminated – that they themselves might in fact have been involved in researching and learning about. My experience tells me that if you counsel somebody about a career, it is an intellectual exercise. If you ask them to go out and investigate careers, it becomes a learning project. In the latter case, they find out much more, learn a great deal and can begin to make their own decisions.

How might we achieve this objective? I think that there are some changes in pedagogy that we have to think about. One – to which I am very committed – is establishing learning outcomes. Learners have the right to know what we expect of them, what we would consider as success and what good work looks like. But we hide these things from them. We tell them to go

and do their best, and then we tell them later whether they got an 'A' or a 'B'. As an alternative, what we did in experiments was to give students examples of good work in terms of statements, papers and projects, so that they would have a very clear idea of what excellent, intellectual work looks like. And then we told them what was expected in order to show us that they could produce the same kind of work. More students did better according to this arrangement because there was no secrecy about what was expected of them. They still had to do the work; plagiarism is still plagiarism; copying is still copying (we experienced all of those problems too; we are not unique). But why don't we tell people what we expect of them?

If you are a marginalized person and you do not know what is expected of you, then you are even more at the mercy of the teacher or professor who stands in front of you with power. He or she holds the key to your

...you cannot plan lives. You can help people acquire the capacity to make their lives better, but you cannot anticipate where a job will take you. That is why being a thinking person who is prepared to work has got to be our objective.

future and you do not know what the rules are. So I would say that describing learning outcomes is important because it is associated with the intellectual traits that you want to encourage. It is linked to the job-oriented competencies that you seek and it connects to the conceptions of work that industries or the private sector are telling you about. We need to put ourselves in a position of making clear at the outset what it is we want.

Secondly, in my own mind, I believe that engaged learning, project-oriented learning, in other words learning not done alone is the way that we have to go. It is interesting to me that the intellectual enterprise, the way we expect people to perform

in schools, is almost the last thing in a person's life that they would want to do alone. If we continue to ask people to work alone – whether they are reading physics or chemistry or learning to be an astrophysicist – we are training them to be autonomous in a world where autonomy is almost the first thing that we all know we do not want in society or in the labour force. Students will learn to behave in the way they have been trained. My experience tells me that we need to think anew about the pedagogy we employ because how we present it and what we ask of learners individually and in groups will, in fact, either improve their education in the way we want to go – or not. You know that old saying that you reap what you sow; you will become how you are treated. It is a wonder to me that we have not yet realised the incredible impact of how we teach people and the subsequent way people will behave in life or in the workforce. In short, pedagogy is terribly, terribly important.

The third most important thing for me – and one could say that it is even the most important in career-oriented workforce-type programmes – is to focus on what I would call reflective thinking. Reflection is the process by which you extract meaning and experience. It is something that you can do with literature or chemistry or philosophy or any professional or occupational studies. Students who learn how to reflect will become lifelong learners. It is that simple. And if you want to know where to start, ask students to reflect on their own lives! How did they get where they are? Why are they doing what they are doing? And what do they think they want to do with their futures? This is called experience and most students have never had to think about it. They do not know why they are where they are. They do not really know

where they want to go. By making them examine their own motivations, you can actually begin to develop their ability to be lifelong learners.

I believe that our pedagogy has to include reflection as a core element – because it is the key. We all talk about lifelong learning. Lifelong learners are reflectors. They are able to look at situations, understand them and do something about them. Now, there is more to reflection than this one word. What I mean is the ability to look at broad experience across multiple settings and then extract meaning from that experience – in short, to learn. Whether you are examining your personal behaviour or trying to unravel a complex intellectual problem – it is learning, that is, the act of making meaning for the individual. And I believe that reflection lies at the heart of it. In order to produce thinking people in the workforce, we need to look at new models.

...it is our intention to use technology in the service of learning. If we want the workplace to be a learning place, to assess prior learning and to do all of the other things, technology becomes a critical part.

I believe that convergence is the first step: convergence of the curricula. I have read about this, but I really believe that we also need to think about new ways of doing business. I will elaborate on that in a moment. At the heart of it, we, as educators and employers, have to find ways to make the workplace a learning place. It is already a place where learning takes place informally and sometimes formally, although we do not always acknowledge it. With a little bit of help, the workplace can often become a laboratory for learning while you are actively involved in your profession. You can work on your weaknesses. Teachers want to become better teachers? What better place to become a better teacher than in the classroom? You are going to be a better teacher more quickly in your laboratory – in this case the classroom, but for

the teacher it is the workplace. Thus, you are in a classroom carrying out intellectual exercises about how to teach better. You can bring all the value of the classroom to that laboratory. I have used this as an example because so often we do not think of the classroom as a workplace. But, of course, for the teacher it is their place of work.

I think that there are models that we should look at about the sequence of education. I hope we will use them in the education sector where our interests converge from the end of the tenth grade to the fourteenth year of education – what might be seen as the first two years of college. It is a period of time when students in more developed countries have entered the beginning of adulthood and are beginning to think about careers – or about more education. But there is an alternative to the opportunity to work. It is the opportunity to work and to learn at the same time. That is, to move flexibly back and forth. Students do not go and find a job when they are 17 years old because they fear they will never

be able to return to school. They do not know how they can afford to go back to school. Once they are working, they start developing an appetite for money and, all of a sudden, they are in what we call "a velvet box".

Whether people are 17 or 37 or 57, we must find a way of letting them go to work and to school. They can finish high school, continue working in the same place or change jobs, earning academic credit connected with what they are doing at work – making work part of their learning and making learning part of their work. Living a new education/work continuum as opposed to education being a finality. My own view is that if we set fourteen years of edu-

cation as the hurdle that you have to overcome before you are allowed to work, economically it becomes far more difficult for many people. It is a huge mountain to climb, but, more importantly, after the age of 16, it is no longer necessary.

We provide fourteen years worth of value. If we say that you have to complete this stage before you can go to work, then what have we done? We have said that we can still teach you what you need to know subsequently. During the period they are in school, we cannot teach people everything they need to know because the pace has changed: information and knowledge are outracing us all. I would therefore argue that thinking about the interface between the school and the outside world is more than just an interesting idea. It would change the economics of what we do; it would change the economics of learners' lives; it would change the relationship between schools – or the education sector, if you will – and the private sector. It will put an entirely new face, I believe, on opportunity.

Now, just two more ideas and I will stop. There is something that our group at the UNESCO Institute for Education is working on and some of you already know about it. I am referring to the commitment to assess the learning that students and learners have acquired outside college (which I plead guilty to having read about in a book more than twenty-five years ago before anybody was really interested in it). We must figure out a way to pick up that lost capacity. Our workforce is far more knowledgeable than we give it credit for. Employed people are learning all the time. They are attending seminars, institutes and training sessions, but we do not connect that with higher order skills (an educational higher order). In too many cases, they are trapped in jobs because we do not know how to acknowledge the value of how they may have improved themselves and what they have learned.

I believe that Europe is ahead of the United States in this area. Yet, it is a vital programme everywhere because who benefits

in the end? People know things, are capable of doing things and do not receive credit for it, which hurts their pride. They are not being rewarded for it at work and in the larger society, which hurts the economy.

Meanwhile, employers do not benefit, because they are losing the capacity that is sitting right in front of them. I believe we need to think about that. We may think about co-investing with employers and businesses to turn workplaces into learning places. My experience is that we are no longer in the public sector. We cannot capitalize vocational or occupational education because the higher we go, the more expensive it becomes. You can pay for it, get it online and it is still current.

One of the three greatest technical universities in the world has just completed a \$750 million building. It was obsolete the day they opened the door. Now, this university may still be the best one in the world for education, but what would have happened if they had taken that \$750 million and co-invested it through some kind of a third party in a whole series of businesses and think tanks? I am referring to bodies that would, in fact, be committed to the same kind of knowledge creation and development that they are interested in themselves and to which they want to expose their students. That is lateral thinking. But it will not happen because of whom we are talking about. They need their identity far too much to lose it in a complication.

If we want people to be exposed to the latest and the best, I think that we have to ask ourselves some hard questions. Perhaps you would expect that exposure to be achieved solely through individual or public investments in the learning place. Unfortunately, I would say to you respectfully that those days are over. We have to admit that we are running the risk of being out of date. We have to find different ways to present our investment in learning and learning creations and match it with the strength of the private or amalgamated sectors, which is the current trend. That is the competitive edge.

Somehow, we can identify our strengths and their strengths, and go from strength to strength in favour of the learner. And when the learners win, the employers win and the society wins – everybody wins. To me this is something we really need to think about.

My third point is that we have to invest in technology far more deeply than we have so far. I hear you say: how in the world are we going to do all of these things? Well, it beats me! Most of the time, communication technology is still being used in education at all levels as a different way to do the same thing as in the past. Perhaps the UNESCO institutes should be involved in changing this? I would like to see these technologies used to transform the learning cycle. Technology transforms our understanding of time, of space and of responsibility. Technology is turning the world upside down.

Nevertheless, it is our intention to use technology in the service of learning. If we want the workplace to be a learning place, to assess prior learning and to do all of the other things, technology becomes a critical part. And I would argue that as long as technology becomes just an additional expense, we are not using it as the resource that it is. I do not believe for one minute that technology does things by itself, but I do think we have to work much harder at making it a transformational tool. This is because our subject today is a transformational subject. The fact that you are familiar with it makes it no less daunting. We cannot bridge the growing gap between public investments in traditional models and where we need to go without thinking about new ways of teaching, learning and organizing education. So we have to be much more serious about technology.

My youngest son just graduated from university. He wants to be a newspaper reporter, a journalist. Currently, he has a wonderful job – he is in a writers' group. He knows how to write, he has written for the school newspaper – but what happened? The people who were working in the profession said: "Thank God, you didn't take an undergraduate degree in journalism. We wanted you to learn how to think, and we need to know that you



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can write. We want to know that you are good in the newsroom and that you are trustworthy. We'll take care of the rest." The point of the matter is this: being able to think, being able to learn particular skills to do a job – particular intellectual skills – and to know what you are doing: this is the key. In terms of the dynamism of the job market, the fact that you are a thinking, reflective person is the most important thing.

We owe much more to chance in all this business, and I do not believe that the United States has the monopoly. There is too much serendipity about it: you cannot plan lives. You can help people acquire the capacity to make their lives better, but you cannot anticipate where a job will take you. That is why being a thinking person who is prepared to work has got to be our objective.

Thank you for putting up with my "immaculate perception". It has been a pleasure to be with you.