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A close-up photograph of a hand holding a glass microscope slide. The slide contains a small, rectangular piece of tissue stained with purple and pink dyes. The background is a blurred view through a microscope lens.

# MICROSCOPIC DETAIL

MARKING THE PROGRESSION  
OF CANCER RESEARCH

cover inspired by



**140: Getting to Know...**

**Greg Foot**

# From classroom to marketplace

Lejf Moos, Theo Wubbels, Maria Pacheco Figueiredo and Marit Honerod Hoveid, of EERA, consider the true meaning of education in the 21st Century...



The description of the aims of education as either personal development or employability is a false dichotomy and oversimplifies educational aims. These aims do not exclude each other and have to interplay continuously.

It seems that over the past two decades we have experienced a detrimental shift of the basic paradigm of education: from personal development toward employability. This shift hasn't been explained explicitly to the public or professionals. Implicitly, however, the conditions and purposes of education have changed. We have almost got used to new thinking and procedures without knowing, really, that a new paradigm has evolved or what it consists of. This may have happened because in its origins, these changes were not part of education, but rather a side effect of restructuring state-market relations and of social and labour market policies, and this restructuring has dramatically changed the aims of education.

In the history of education, discussions on the relative importance for schooling have addressed two paradigmatically different aims of basic education: Should education help children and adolescents develop their full potential as human beings, or is its overall goal to prepare new generations for work and to be able to adapt to changes in the labour market? The emphasis on these two different aims not only varies over time, but also over different classes in society. In the 19th and first half of the 20th Century, for example, we traditionally saw the lower working class go into vocational education, if at all, whereas upper and middle class experienced what Wilhelm von Humboldt called 'Bildung' in general education.

## Until 1990

Personal development as an educational aim fully blossomed in a time period in the 20th Century from the Sixties to the Eighties. Everyone was given the opportunity to become who he or she essentially had potential for becoming, and it was in many cases given permission to do and to experiment with identity and behaviour that stood in stark contrast to and opposed many of the norms and values of the society at that time. This led to a reaction that

in the years to come put the emphasis of general education on educating the next generation of citizens to take over the prevailing form of democracy, culture and knowledge, and adjust these according to society's needs.

The main purpose of general education was to support all youngsters in getting to know about themselves, about their relations to other people, and also to the natural and constructed world. In vocational and academic institutions, preparation for the labour market in further education was more like an implicit aim. The main purpose of general education, however, was not related to employability.

## The millennium change

This worked well when individual states were distinguishable from other states and when we could provide for the necessary labour force by pulling people from rural to urban settings and have women included in the labour force. At the turn of the millennium, however, with global competition for market shares and a demand for educated employees, new European challenges emerged. Competition in the marketplace brought a higher demand for the whole population to see themselves as and behave as employees rather than citizens. Thus, education had to change from educating citizens to education for the labour market, for employability. Discourse and social technologies were developed in order to reinforce this educational development, first and foremost through the soft governance tools of transnational agencies like the OECD and the EC.

In education, international comparisons of test results, for example, by PISA as a frontrunner, were being 'sold' to the public as a relevant and complete measurement of student outcome, and implemented as a way of comparing a very diverse set of national educational programmes, therefore operating as a potent competition parameter. The employability aspect of education has been written into national legislation and resulted in this restructuring of schools

at all levels. This shift can be seen in the EU and in national government policy documents. One example is the way the European Commission expresses itself on demands on higher education, when it mentions as an aim: improving the quality and relevance of higher education, so curricula meet the needs of individuals, the labour market and the careers of the future, as well as stimulating and rewarding excellence in teaching and research.<sup>1</sup>

### A problem?

Is it a problem to ask educational institutions to be 'relevant' and to care for the 'needs of the labour market', such as industry and healthcare and for careers of the future, as IT experts, policy advisers, carpenters, bricklayers, bookkeepers and so forth? No, it is not a problem in itself to reflect on the relevance, but it is a problem to focus exclusively on segments of society and life instead of the flourishing of human potential. It is a problem to look at young people only as resources to be utilised, and not as human beings in their own right. When thinking of life and society in connection to education, we need to consider different aspects: family life, working life, community life and life in leisure time, for example. Young people need to be educated to manage a full life.

### A third way

The description of the aims of education as either personal development or employability is a false dichotomy and oversimplifies educational aims. These aims do not exclude each other and have to interplay continuously. It can even be argued that the two aims cannot exist without each other. Developing to your full potential includes qualifying for the labour market, because (for most people) working is an essential aspect of our personal life. On the other hand, preparation for the labour market certainly also includes nowadays important features of the Bildung ideal: helping people to understand their own potential and place in society and to empathise with the views of others.

The 21st Century skills and competencies for the labour market include problem-solving, empathic and reflective skills, and background knowledge of our culture and history. For democracy to operate, a thorough understanding of the history and background of our political system and the malfunctioning of others is more and more important. So in fact, these aims are two sides of the same coin, but it is difficult to include both in an educational system that is focusing exclusively on testing what are believed to be measurable skills.

<sup>1</sup> [http://ec.europa.eu/education/news/20110920\\_en.htm](http://ec.europa.eu/education/news/20110920_en.htm).

### **Science Omega Review comment: AAU**

The revolution in education is reflective of international phenomena, highlighted by changes to the approach of universities in many countries. The Association of American Universities (AAU) represents over 60 leading research universities in the US and Canada, and in July, AAU President Hunter R Rawlings III – together with individual university leaders – sent an open letter to President Obama urging him to close the innovation deficit that they believe the country faces.

“Our nation’s role as the world’s innovation leader is in serious jeopardy,” the letter said. “The combination of eroding federal investments in research and higher education, additional cuts due to sequestration, and the enormous resources other nations are pouring into these areas is creating a new kind of deficit for the United States: an innovation deficit. Closing this – the widening gap between needed and actual investments – must be a national imperative.”

“Ignoring the innovation deficit will have serious consequences: a less prepared, less highly skilled US workforce, fewer US-based scientific and technological breakthroughs, fewer US-based patents and fewer US start-ups, products, and jobs. These impacts may not be immediately obvious because the education and research that lead to advances do not happen overnight. But the consequences are inevitable if we do not reverse course.”

It went on to say that “having witnessed this nation’s success at turning investments in research and higher education into innovation and economic growth, countries such as China, Singapore and Korea have dramatically increased their own investments in these areas. Over the past decade, these other nations’ investments have climbed at two to four times the rate of US research and development expenditures. It is equally troubling that the US has fallen to 12th among developed countries in the share of young adults who hold college degrees.”<sup>1</sup>

Focusing on helping open the pathways required to fill highly skilled positions, the AAU has been a strong voice in the recent budget debate. Since 2011, it has also been driving a five year Undergraduate STEM Education Initiative to improve the quality of undergraduate teaching and learning in these fields, emphasising their importance to ensure graduates are equipped with the relevant skills for their environment.

<sup>1</sup> [www.aau.edu](http://www.aau.edu)

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