# Shifting focus: The changing nature of education in Slovakia and the role of ICTs in driving that change

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**Abstract.** Due to fundamental changes in the world markets and the needs of multinational companies in the context of an economic crisis that refuses to go away, attitudes and approaches towards higher education are shifting dramatically. This paper looks at some of the current educational trends and the role of universities moving forward. Specifically, the shift towards students no longer buying into a long, expensive period of post-secondary education and increasingly turning to alternative means such as MOOCs to acquire foundational knowledge and fostering critical-thinking and problem-solving skills, combined with a labour market where companies are increasingly taking on training and education roles themselves, may make traditional approaches and the role of universities obsolete. This paper looks at where Slovakia stands in this context.

#### 1 Introduction: Eureka!

2:00 am: Lying awake, thinking about what to write for the 8th IWKM. What to do, what to do...?

3:00 am: Thinking of information I looked at yesterday afternoon on Eurostat on IT use penetration rates in EU 27/28. Hmm...

- 3:30 am: Thinking about...
- ...the invitation to the 8th IWKM which states it "has been popular as a forum for productive *informal* discussions."
- ...the conference on education I attended last year that highlighted the critical situation in education at all levels in Slovakia and the dire need for wholesale change.
- ...the presentation I heard in January in Seattle about the future of higher education and the shift away from academics as we know it today.
- ...the "Massive Open Online Courses" (MOOCs) that Vysoká škola manažmentu (VŠM) offered this past summer which attracted over 1400 students in two classes.
- ...an article I read on the Toronto Star app in August, "Is there any point to an arts degree?," which asks the fundamental question, "What is the purpose of a university education?"
- ...how all these trends relate to education in Slovakia.
- ...if change is really possible, and, if so, what role ICTs may have in driving that change.
- 3:35 am: I get up to take my baby daughter to go pee. [ed. note: Make "pee" one of your keywords. ©]
- 4:00 am: Eureka! I'm not in the bathtub and I don't run down the street naked (my neighbours in the village may not appreciate that—and it's a tad cold this time of the morning), but research questions begin to pop into my head:
  - What is the current ICT penetration rate in Slovakia as compared to other EU countries?

- What must Slovakia do to keep up with the changing trends in higher education that other countries are witnessing?
- What are those trends, and what is the future of education—both internationally and within Slovakia?
- Has the economic crisis cut so deeply that it has affected society's view of the role of universities?
- Is Slovakia following the same trends at the same rate of change?
- Just how bad is the state of education in Slovakia and how much in need of reform is the current system?
- How can ICTs drive the change in higher education to meet the needs of post-economic crisis society in Slovakia?
- How can ICTs in education assist in the long-term viability and adaptability of the Slovak economy away from what is essentially a single-industry focus?
- What is the current approach and attitude of academic administration towards change?
- And a fundamental question: What will higher education look like in ten years' time?

When my daughter falls back to sleep, I jump out of bed, rush downstairs and turn on my laptop to get the ideas down before they disappear like a dream...

### 1.1 Introduction: Background and context for this discussion

I saw a presentation in Seattle in January by Alonda Williams, at that time the Senior Director for Education Marketing at Microsoft, entitled, "The Role of Technology in Enhancing Diverse Modes of Learning" [1]. She examined the relatively new phenomenon of MOOCs, where top universities are collaboratively offering free online education in classes of tens of thousands of students. She claimed that because of MOOCs and similar trends that the face of post-secondary education as we know it would fundamentally change by the year 2020. Essentially, traditional universities and academia would become obsolete by that year, she asserted, and listed the drivers of this change as

- the availability of free top-quality online courses offered by the most prestigious universities in the world,
- the changing nature of society and the demands of employers following the economic crisis of 2008,
- and the prohibitive and ever-escalating costs of higher education in general.

MOOCs potentially offer a level of education that is unsurpassable; after all, who wouldn't want to take a full course with a Stanford professor—and for free? The current challenge, already being addressed in a number of ways, is how to validate this learning. At the end of the day, employers are looking less and less for a diploma but rather for someone who can do the job—someone with the knowledge, the know-how, the adaptability and the critical thinking skills that enable them to effectively and efficiently solve problems, and to ultimately do a competent job—and if these things can be acquired for free in an educational delivery mode that is widely accessible, then why would anyone bother spending four years and bucket loads of money for essentially the same thing? There do seem to be major changes in the works, and to paraphrase Sir Ken Robinson [2], we don't know what the job market will be like in five years, let alone in 40 years when the current generation is nearing the end of their working lives, so how can we best equip them for the future?

Higher education has become increasingly expensive, and graduates can spend years—ten and more—paying off student debts. Companies are eager to make talented students their employees ever sooner, and seek to lower costs as well. Organizations invest a lot in training, and in many cases university graduates have to be 'retrained' or 'reprogrammed' since the specifics of a given company and the day-to-day realities are significantly different than a relatively general university education can prepare someone for. Young people are less and less inclined to go into debt, or simply cannot come up with the funds for four or five years of being "unproductive" while at university, and welcome the idea of entering the workforce earlier and earning a decent wage, while employers are happy to have someone they can 'mold' into an employee that is productive a lot sooner. Taking a few top-quality MOOCs can provide a critical educational foundation in engineering or business or whatever field, and after only a short time—

six months to a year—an employer can begin to train/apprentice a young person into a tailor-made employee. What's not to like about that model? But where does it leave traditional universities?

Let's take an even broader look at the role of universities in society and in preparation of young people for the world of work. The traditional university is a centre of research, first and foremost. Occasionally, headlines are made by the obscurity of the topic of a paper or an experiment: "Pressure Produced When Penguins Pooh: Calculations on Avian Defaecation," "A Comparison of Jump Performances of the Dog Flea and the Cat Flea" and "Ovulatory Cycle Effects on Tip Earnings by Lap Dancers: Economic Evidence for Human Estrus" [3] are but three extreme examples. But ostensibly the point of intellectual pursuits at such a level is to explore the minutiae of every-increasingly precise areas of study. Often the broader significance of such research is lost on the general public, and often the purpose of these studies has broader implications in other more 'practical' and practicable areas. It may well not matter that only three other people on the planet are able to use the results of some obscure study, or are even interested for that matter. The process of scientific inquiry may be an end in itself and should be respected as the pinnacle of human exploration, thought and achievement. Or should it? Is some research, quite frankly, a waste of taxpayers' money and a complete misappropriation of time, resources and intelligence?

In the current economic situation, rather not surprisingly, the role of the liberal arts education has come under scrutiny. "While the humanities and social sciences are among the fastest-growing degrees, they offer little in terms of financial reward," states a recent article appearing in the *Toronto Star* [4]. "Over the past two decades," Diana Sorenson, the dean of arts and humanities at Harvard, says she "has seen enrolment" in her department "dwindle as more and more people expect a bottom line to their university education" [5]. The two sides of this discussion—the apparent uselessness of an arts degree when it comes to getting a job, and the broad analytical skills emphasized in the process of acquiring such degrees that foster creativity and ultimately instills a level of adaptability and flexibility in students that equips them for the future—rage in the post-article comments. Increasingly, then, the concern in a post-economic crisis world seems to be whether universities have any relevance when it comes to getting a job and 'contributing to society.' More and more the answer seems to be no.

#### 2.1 Situation in Slovakia

What is the situation in education like in Slovakia? In general, the field of education worldwide is on the conservative side and can be stuck in tradition. Again, Ken Robinson maintains that the current approach of education and its hierarchy of subjects have their foundations in the industrial revolution and are no longer relevant [6]. It may be argued that higher education in Europe is conservative even when compared to other regions, and that Slovakia is even more traditionally structured and slow to change. The legacy of 40 years of communism has also left an indelible mark on higher education—indeed, the highest academic accolade, the C.Sc. or Candidate of Sciences degree, is a Russian designation.

Several years ago, during some workshops offered to teachers by IBM, one of their HR managers pointed out that the number of people with degrees in Slovakia is quite high, but went on to ask the question, "But of what quality is that education?" At many state universities and in many programs, the focus seems to be on rote learning and on regurgitating facts as presented in traditional lecture format onto papers and in oral examinations, only to be quickly forgotten moments after a given course is over. I am generalizing here, of course, but there is certainly a high incidence of such phenomena at state universities within this country, having a significant enough impact on education in Slovakia to present itself as a problem.

I am certainly not the first to point out the shortcomings of the education system in Slovakia. There have been notable efforts of the American Chamber of Commerce in Slovakia to draw attention to such problems by making 2012 its "Year of Education," which culminated in October's conference, entitled "The Future of Education in Slovakia." A number of speakers at this conference addressed what they felt is a critical situation in education in Slovakia, mostly in terms of the style, content and effectiveness of teaching and learning, as well as the system that

supports them. While it may be observed that the level of the highest achievers in Slovakia are among the best in the world, there seemed to be a consensus among the conference presenters and participants that the level of students who are able to pass courses and achieve degrees is rather low, and that the quality and relevance of education in general is sadly lacking. There is also something of a brain drain, with top students and the best research migrating to universities abroad.

Currently a trend where companies are snatching up high school graduates and training them themselves or taking students only after a year or two in an undergraduate degree program seems to be emerging in Slovakia, driven by the reasons stated above. According to Zuzana Kaňuchová, HR Manager for Profesia, an online recruitment portal, many Slovak universities are not adequately meeting the needs of companies and increasingly companies are providing in-house training to meet their specific educational needs [7]. She states that students "cannot rely only on school knowledge and must engage in a number of volunteer-type activities in order to make themselves attractive to employers after they graduate" [8]. Again, the practical applications, relevance and preparedness of university graduates are critical questions in Slovakia. As stated above, there is an important discussion at this time about what the role of higher education should be, and what the balance between preparedness for a life of work/"contributing to society" (whatever that means) and the higher creative and analytical abstract thinking skills traditionally taught at universities. Regardless of where one puts the fulcrum for the balance, it seems to be generally true that the education system in Slovakia is in dire need of reform.

There seems to be, then, a role for MOOCs to provide some basic elements (knowledge, critical thinking skills) of post-secondary education, which could then be "topped off" with a company's in-house education or on-the-job training. This past summer, VŠM offered two free online courses in Slovak, the first time anything was done like this on the educational market in Slovakia. They proved to be wildly popular, with over 1400 students signing up for the two classes. In general, online delivery formats, with frequent activities and interactions with the teacher and among one's classmates, and a wide range of multimedia used in presenting materials, all delivered in an online teaching platform (in this case Moodle), are not common in Slovakia—in fact, VŠM is certainly the only school delivering courses in such a way. The feedback on these two free course offerings was very positive, so it may seem that between the feedback and the number of student who took part in these courses that MOOCs may play a role in the future model of education in Slovakia. While having about 700 students in a single course is not quite the 100,000 in some courses offered by Coursera, proportionately it is a considerable number that may indicate future potential for this type of offering.

## 3 Shift in focus: A new direction for my dissertation

This past March (2013), I had to defend my PhD dissertation proposal. My original thesis looked at the role of ICTs in post-secondary academic administration in V4 nations. The concept was to look at the current state of education in Central Europe and (hopefully) look at some practical approaches to addressing the shortcomings—if I can so euphemistically describe them as such. The panel in front of which I presented my proposal gave me some very helpful feedback that aided me in refocusing my efforts. First of all, the study was too broad: To examine four countries concurrently provides an over-abundance of material and can hardly be examined properly in a reasonable time frame. "Why not focus the study on a single country, and, logically speaking, why not on Slovakia?" members of the panel asked. I also plan to shift my focus to more fundamental concerns and away from just academic administration at universities to teaching, learning and research—but research in a context that is integrated with and supports teaching and learning.

However, one thing that can remain constant during this shift in focus is the role of ICTs in effecting changes in education. As has been stated, one of the "game-changers," according to Alonda Williams, are the MOOCs. ICTs underpin the delivery of these courses, for starters. Information and communication technologies also may have a

role in other areas of educational transformation, such as in facilitating administrative and structural change among post-secondary educational administration. It also may be key in bringing Slovak universities more onto the international scene, both in terms of teaching and learning activities and in research efforts. One frequent criticism of post-secondary education—indeed, in education at all levels—is the amount of cheating that goes on. This is a phenomenon that exists in pretty well every country, and a spate of recent cases of plagiarism featuring top level government officials has drawn much attention to the pervasiveness of this problem. ICTs can also have a key role in plagiarism-checking systems, as well as a preventative means, of controlling this problem.

# 3.1 Methodology for my study

With a shift in focus in my study, there will be some need for some change in methodology. The intent is still to use a variety of research tools to collect data to support the discussion on the current situation in education in Slovakia and to ascertain what changes need to be made and how. Chief among the data-collecting tools will be a survey and a series of interviews, as was always the intention, but the participants will be broadened to include not only educational administrators and policy-setters but people engaged in all levels at universities—particularly students and teachers.

## **4 Conclusion**

Much of this paper was written in the middle of the night, and it shows. But there are some key takeaways that hopefully foster an interesting and worthwhile discussion. The future of education in Slovakia is at stake. Further study will have to be undergone to determine the role of Slovakia on the world educational stage and whether the changes we're seeing in other countries will be embraced or ignored—or something in between. The case of the MOOC offering by this past summer may indicate these sorts of course offerings may play a role the future educational market in Slovakia. However, given the ultra-conservative nature of universities in this country, change and adaptation may be at least five years behind countries leading such change. I would conjecture, for reasons stated above, that there will not be radical change in education in Slovakia and that the country will fall further behind—unless we embrace change now. How we inspire such an attitude change is the subject for a broader study.

#### Literature

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