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When, Why and How is Technology Reshaping Management Education?

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CEEMAN Deans and Directors Meeting

Leveraging Education, Marketing, and Internal Processes with Technology

22nd CEEMAN Annual Conference

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CEEMAN Deans and Directors Meeting

Leveraging Education, Marketing, and Internal Processes with Technology

Welcome Address

Catherine Leblanc, General Director of ESSCA School of Management, France

Good morning everyone,

I am very happy to welcome you all in Budapest. I am glad that many of you have been able to come to the capital of Hungary, the pearl of the Danube.

First of all, I would like to greet our president, Dr Danica Purg, who is so devoted to the continuous development and growth of CEEMAN. I also extend a warm welcome to our keynote speaker and our guests from all over the world. I use this opportunity to thank the organizers of this great event in Budapest. This city is endowed with a unique spirit. It is located halfway between the East and the West, displaying many cultural and historical influences accumulated over the past centuries.

We are all involved in teaching or research and we want to improve the quality of these activities so as to achieve our long-term goal: to educate people and help them become better decision-makers and agents of change, wherever they are in their society, in their local community, or in an international environment.

This year, the topic of CEEMAN's conference is when, why, and how technology is reshaping management education. Our business schools can improve the education that they offer, and their research, marketing, and international processes with technology. This can improve their quality and bring financial benefits.

During this conference, we are going to listen to experts. They will tell us about new scientific achievements and practical experiences. After the conference, we can all go back to our own environment and spread the news about what can be done to improve teaching at our schools. I am confident that this conference will provide valuable information and enjoyable meetings. Last but not least, we are going to have fantastic cultural encounters in Hungary's metropolis.

I declare this gathering open and I give the floor to Danica Purg.

Danica Purg, President of CEEMAN, Slovenia

Dear friends,

Welcome to the 22nd CEEMAN Annual Conference in Budapest!

I would like to express my enormous gratitude to ESSCA School of Management, its director Catherine Leblanc, and especially to the Budapest site director Zsuzsa Deli-Gray and her team, for organizing our annual conference this year. We are very grateful for their hard work and warm hospitality.

Before we start with the Annual Conference in the evening, I am very happy to welcome you now at the CEEMAN Deans and Directors Meeting, where we will discuss how to leverage education, marketing, and internal processes with technology.

I believe this topic is highly important to all of us in management education. With rapid changes and advancements in technology, we face many new exciting opportunities for innovation in teaching and learning, new channels for communication and promotion, and tools to help in day-to-day operations. On the other hand, this also creates puts certain pressures and expectations from our customers, employees, and other stakeholders. Some of our members are adapting well in these new waters, while others may not be as fast or as effective in embracing technology as they would like to.

At the Deans and Directors Meeting, we would like to encourage as much experience sharing as possible, and keep it very practical and hands-on. We will receive some food for thought from the keynote speech by Arshad Ahmad and other presentations, including the survey on the use of technology in CEEMAN member institutions which we conducted this spring. All this will provide some interesting material to spark the roundtable discussions, where each of you will have a chance to share your experience on the use of technology in your institutions, discuss challenges, propose ideas and solutions, and learn from each other.

I would also like to invite you to use some of the time in the coffee breaks to listen to presentations from international publishers and technology providers to learn more about their offerings and services for management educators, especially those related to technology.

I hope you will enjoy these two very busy days and discover many new things, ideas, and inspiration for your future work. Once again, welcome!

Now I would like to give the floor to Witold Bielecki, rector of Kozminski University in Poland and a board member of CEEMAN, who will chair the Deans and Directors Meeting today.

Enjoy this meeting and enjoy meeting each other!

Introduction

Witold Bielecki, Rector, Kozminski University, Poland

The topic of today's meeting is "Leveraging Education, Marketing, and Internal Processes with Technology". Our general topic is reshaping education. From my point of view, that is a much better topic. However, the impact of technology on education is also a very fruitful topic. Sociologists have talked about generations "x", "y", and "z" for a long time. I would call the latest generation "f". This "f" stands for "Facebook". These are absolutely different people, with a different mentality.

The weakest aspect of any university is its teachers. They are often old people with entrenched customs. They do not understand young people. The main feature of the young generation is that they are impatient. They want to grab knowledge and skills as fast as possible. If they are interested in something, they can devote a long time to it. They can even forego sleep if they have to solve some important problem. But if they find something boring, there is no force on Earth that can make them work on it. I hope that today's presentations will help us develop better relationships with our students.

We are going to hear the results of some very interesting research organized by CEEMAN. It will be presented by Olga Veligurska. As you know, we have two main topics to discuss here in Budapest: reshaping education and markets, and international processes. The former has to do with teaching and education. The latter is about the management of universities and their operations.

A few years ago, I wrote a paper on the McDonaldization of education. As you know, McDonald's offers fast-food and maintains the same standards across the world: the quality is the same in Shanghai and in Warsaw. They have the same furniture and the same food. When I wrote that paper, I was afraid that the same was happening to higher education. A good university would prepare a module, for instance Marketing, and then the whole world would use it. Fortunately, this did not happen.

Another hypothesis I enunciated back then was that classical universities were disappearing. Why? Because there was such good software that it was replacing traditional teachers. Computers can provide some content, then ask you a question and tell you whether you have answered correctly. This is feasible from a technological perspective. But it has not happened, either.

Our first speaker, Arshad Ahmad, will attempt to answer a vexing question: Is technology disrupting management education? You have received his CV but I know that people go to conferences to relax, not to read. Therefore, I will say a few words about him so as to introduce him. He was recently appointed as the associate vice-president of McMaster University in Ham-

ilton, Canada. He is also the director of the McMaster Institute of Innovation. His current research interest is accelerated learning design, conceptual change, and teaching philosophy. He is president of the Society for Teaching and Learning in Higher Education. He is the recipient of several teaching awards. I would also like to add that he is one of the teachers on the CEEMAN's IMTA program.

Is Technology Disrupting Management Education?

Arshad Ahmad, AVP, Teaching & Learning at McMaster University and STLHE President, 3M National Teaching Fellow, Canada

Fourteen years ago, the British-born Canadian journalists Malcolm Gladwell wrote a book. Its title is The Tipping Point. In Gladwell's view, a tipping point is a moment of sudden change. He looked for trends in everything, from fashion and cellphone usage to crime, and found that tipping points send trend lines up and down. The most important observation is the sudden and dramatic shift in the trajectory of the trend. He compares these shifts to outbreaks of epidemics.

You already heard that a survey was carried out before this conference. In fact, many of you participated in it. At a glance, the preliminary results suggest that we, in CEEMAN, are fairly homogeneous. We have not differentiated ourselves in terms of implementation of new technologies. We are all trying out some new aspects of technology but it seems to me that we are leaving many of the available tools in the toolbox.

Nevertheless, many of us realize that we are already at a tipping point of technological development. All we have to do to see this is look around. If we do that, we will see a proliferation of video-based lecturing. There is online learning and blended learning. Danica mentioned the euphoria, followed by disappointment, caused by massive open online courses, as well as its little brother, called little online open courses. As a result, we have MOOCs and LOOKs and all sorts of variants of those.

If we look around, we will tend to assume that the epidemic has arrived. But if you ask me, I do not think that it has. At least, not yet. We are still moving upward on the S-curve, before the actual tipping point. When that tipping point does arrive, people and institutions who are prepared will be thrust forward. Those who are falling behind will appear to be standing still. My goal today is to help each of us understand this tipping point and prepare for it.

One way to prepare is to remember that this is not the first time that technology has invaded the world of learning institutions. I can remind you of innovative technologies, such as e-mail, laptops, cell-phones, cloud computing, and social networking. All of these have changed various aspects of our business model. Instead, I would like to echo what the world's leading authority on disruption and disruptive innovation says. In fact, I had a chance to meet Harvard professor Clayton Christensen a few months ago in Hamilton when he gave a talk. One of the things that he said was that we need to differentiate or distinguish between two types of innovation. He called one of these "sustaining innovation". The other kind is disruptive. He believes that most of us understand sustaining innovation quite well. The reason is that this sort of innovation has helped us quite well. Sustaining innovations have helped us increase our revenues and market share. This type of innovation tends to

drive prices up. In Christensen's view, sustaining innovations are those that help us make bigger, faster, and stronger products that can be targeted at the best customers that we can find.

If you translate this for universities and the other institutions that we work for, sustaining innovations have meant more buildings, more technology in the classroom, more funding for research, and more administrative overhead. For McMaster, this has also meant more residential and sports facilities. All this has contributed to increasing the price of education.

Christensen noticed that innovation can also cause disruption. He defines disruptions as opportunities to deliver the same educational products as before but at a drastically lower cost and price.

What are some of the sources of the disruptions that we see? I would like to draw your attention to at least two of them.

The first one is becoming quite obvious. It is the access to content. This content comes from some of the most prestigious institutions in the world. As a result, content is no longer a proprietary product. Universities are beginning to realize that there is little justification for recreating the same content, year after year, for the same classes. We see that private outfits, and not-for-profit outfits such as Coursera, are producing this content quite well. As far as these open courses are concerned, there is no real threat. There are actually an opportunity for faculty members to get even more connected by engaging our students with this kind of content. Massive open courses are increasingly being used not to replace interaction but as an opportunity to provide more content to both students and teachers.

There is a second source of disruption: the massification of higher education. This has led to an unprecedented growth in student participation. According to one estimate, three million graduates come out of North American universities each summer. In Europe the figure must be even higher. The estimated number there is closer to five million. What is the result of this massification? In the United States, at least half of those graduates of bachelor's programs are unemployed or half-employed. Graduate students are not faring much better.

Christensen brings up an important issue. He cites two Gallup polls that highlight this finding. Ninety-six percent of senior managers in academia believe that they are doing a very good job in preparing their students for employment. However, only 11 percent of business leaders agree that graduates have the necessary skills for success. There is a huge group here. Is it a perceptions gap or a real gap?

There is another opportunity for disruption. There are organizations that are dealing quite well with this gap. They are coming up with educational products based on skill and competency. Most important, they are targeting nontraditional consumers of education. These are probably the institutions that will attract the students of tomorrow.

Universities resist the idea of training. They say that they are not here to train students for jobs. They say that they provide a much more enriching experience that changes people's lives because it impacts the way that they think, grow, and mature. A more practical look suggests that it is ultimately employers that are the real consumers of degree-holders. If they have specific needs, they cannot be ignored.

So, is technology disrupting management education? My simple answer is "no". The process does not involve disruption as much as it involves evolution. It is an evolution in a Darwinian sense: continuous change for the better. We see a market place that stimulates the survival of the fittest - those that can provide entirely new services at a much lower cost. Evolution does not favor the genetically lucky but those who are willing to change. If we are willing to engage with the technological epidemic, we will survive and even thrive.

I would now like to shift the discussion from this philosophical perspective to a more tactical argument and give you some examples of proven practices, as well as suggestions for next steps. Before I do that, I would like to ask you a question. What is the most effective approach to encourage faculty to teach blended or online courses? Senior management vision and support? Significant resources? Training and development? All of these together? Or something else?

The results of my poll suggest that most of you think that it takes all of these together. You are absolutely right. I would love to hear from the 12 percent who chose the last option. What else could help?

Some of you have suggested that we can challenge the whole idea of faculty tenure. But there are countries that are moving precisely in the opposite direction. That is an interesting angle as well.

As you see, I am showing you the pedagogical benefits of poll-taking. Suppose most of your students provide an unexpected answer. You can ask them to turn around and convince their neighbor that their answer is the right one. There is evidence that if you give them a few minutes for a discussion of this kind and then take this poll again, opinions shift in the direction of the correct answer. With this kind of peer teaching, you do not have to explain much because students explain these things to each other.

I want to share some good news with you. The news comes from schools around the world that are achieving fantastic results. Engaging faculty is a major responsibility that we have. I would like to mention some proven practices. Let me share some of my own experiences at McMaster. Before the last 14 months I had been at another university in Montreal. I would like to tell you about an experiment that we have run and the practices that work for us.

It was easy for me to move along this technology road because we had a road map. It came from the top. Nothing transformational happens without a vision and without the involvement of the school's top leadership. At McMaster, it was our president who had a vision. It was elaborated in a document called Forward with Integrity. The principles of that document laid the foundations of the institute that I am managing. This institute is now doing all kinds of different things.

The second step is to build multi-teams. There is a famous psychologist by the name Dan Pink. He says that the most important prefix of our time is "multi-". Think about it. We have multimedia, multi-tasking, multinational, multicultural. At our institute, the most important one is "multi-skills" and "multi-skills teams". The best technology approaches are built on very diverse foundations: teams that can solve multiple problems.

Multi-teams should involve good leadership. In our case, we have a group of directors who are leading the pedagogical, research, and technology groups. They work with diverse groups, such as instructional designers, and digital media specialists. Students are some of the best members in our teams. We also have faculty who have embraced the idea that they must accept change.

I must tell you that the idea of these teams sounded quite scary in the beginning. But I assure you that it worked out fine.

Let us now talk about injections of strategic resources. Everybody wants money but it is always in limited supply. Therefore, you have to choose the right things and then ask for support. This needs to be done very early on in the technology adoption process.

Another point is grass-roots innovation and implementation. If you want initiatives, they should not come from the top. They have to come from the grass roots. We have supported initiatives from faculty who have launched and championed particular projects.

We decided that we would focus on large, first-year classes that generate value for money, allowing teachers to give more personal attention to the students than in other classes. Of course, there is some revenue generating potential here as well. The choice that we made is that bigger is definitely better.

Let me know talk about evidence-based practices. One of the things that we insisted on was data gathering. We want to analyze every part of the initiatives that have been taken. Why are we doing that? Obviously because we want to insure quality. It is all about quality. Our students detect technology that is not based on quality very easily. The competition is relentless about quality. We simply cannot compete for students unless we set the bar very high.

I have a few final words about risk-taking. This is particularly hard at an institution where you want to allow some failure. If you are going to have innova-

tion, you have to accept some failure. We have decided that if you want to teach a new course with a radically new design, you are not going to have a course evaluation for the first year. This means that you can take a risk without being punished by your students who might say that this is a lousy course.

We have also asked students to design courses and become academic partners. We also encourage interdisciplinary partnerships so that we spread the risk.

Given these lessons, what are the next lessons in preparing for the tipping point? I think that they are about developing your teaching and learning environment through the strategic use of technology. I would like to translate this into six action items.

The first one reinforces a point that I have already made. We have to have senior management muscle. That means that you must have support from your president, your provost, and your budget committee chair, or whoever will provide the resources for your endeavor. It is actually not too hard to show that these investments in pedagogy are quite cheap relative to the traditional bricks and mortar investment and other traditional investments that consume a lot more resources.

Number two is collaboration. This point is underscored by this conference. The reason that we are here is to collaborate and establish partnerships with organizations that have done what we want to do. Of course, we want to set up our own niche, so that we are stronger and better together.

Number three is identification of champions. These could be your department chairs or respected faculty members. There are folks who are very concerned about teaching and they are not necessarily young people. There are also older and more mature people who are very much interested in seeing their students succeed. If we get these people on our side, we can achieve a multiplication effect and our chances of success will increase at least tenfold.

Number four is establishment of a center of excellence. This can be an institute or whatever structure your organization can manage. The reason for this is that you want to localize responsibility. You want a name. You want somebody to engage and excite potential donors who will fund this endeavor. This also creates more efficient use of resources because you will have a concentration of talent that generates economies of scale across the institution.

Number five is picking some low-hanging fruit. I am talking about visible high-impact projects. Do something that is visible and produces a high impact. Maybe a large-class design. Maybe a student e-portfolio as this has become very popular. In our case, we did a MOOC. In any case, the goal is to do less and achieve more.

Finally, we have to provide incentives. You remember that according to classical conditioning theory, if you want a certain behavior, you have to reward it.

The big question for this conference is whether we can do this if we work together. I would like to quote Margaret Mead to give an answer to this question: "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has". Change begins in rooms like this, with people like us. Pioneers imagine a new reality and we get obsessed with it. Then, we leapfrog forward. It gets easier with every innovation that provides proof with evidence-based systems. If new technology can erode the didactic delivery model that is prevalent in most business schools, I think we are going in the right direction. I believe that this is one of the great evolutionary moments or opportunities in our history. It is certainly the best opportunity that any of us will have in our careers. Let us be the ones who push the evolution of technology to a tipping point. Let us be at the front of the wave. Let us be the small group of thoughtful committed citizens.

How to Use Technology to Lever Teaching and Learning – New Challenges and Opportunities for Management Schools

Stéphane Justeau, Professor and Head of the Centre for Pedagogy and Educational Support, ESSCA School of Management, France

I would like to remind you a couple of points about education that you certainly know. First of all, education is not a mechanical system. It is a human system. It involves people who want to learn. But it also involves people who do not want to learn. There are people who are studying something even though they think that learning is boring or irrelevant.

We know that all students have their own learning styles. Consequently, we have to personalize our courses as much as possible. We have to recognize that there are conditions under which people can learn as well as conditions under which people cannot learn or do not want to learn.

Today, we have an opportunity to offer personalized learning strategies. I am going to talk about e-learning and classroom design.

Motivation is a very important topic in pedagogy. The motivation of learners can affect their perception of what they are studying. It has also been shown that it is an essential factor of academic success. We also know that students' motivation falls over time, year after year, and minute after minute as they sit in class. Hopefully, there is evidence that motivation can be enhanced my means of the technological and physical environment.

Motivation can be described in three dimensions. It is a function of the consequences of the action. It is also linked to people's needs. Third, it is proportional to the sense of perceived personal competence with respect to a given task.

It has been shown that pedagogical activities should be significant from the viewpoint of the students. They should also be diverse and challenging. They should be authentic and connected with reality. They must require collective involvement, allowing the students to interact and collaborate. Finally, they must have clear guidelines.

I think that e-learning meets these requirements. Virtual classrooms, chat sessions, interactive online whiteboards, and suchlike are just some of the possible examples.

A few words about classroom design. You can hold the attention of your students for no more than nine or 10 minutes. Twenty minutes after the start of the class their attention has fallen by 50 percent. What can be done about that? After the first 20 minutes, the teacher should change the classroom activity. There should be discussions and various exercises. In this way, the students' attention can be engaged again.

Decades ago we thought that students learn only by listening. There are people who still believe this. Naturally now we know that students should be actively engaged with a hands-on approach. They should be allowed to do things and make mistakes. They should construct and reconstruct things. We used to hope that the topics that we teach are interesting enough to captivate the students' attention. I am sorry to say that this is false. We also thought that students would tell us if they did not understand something. This has also proven to be an incorrect assumption. We also hoped that the students could put to practice what they hear. This is another incorrect belief.

There are students who want to listen and participate. There are also those who are willing to listen but without participating. There are students, usually sitting in the back of the classroom, who do not listen and do not participate. If you have a lot of students of this kind, you have a very serious problem. You can deal with this problem by setting up a so-called intelligent classroom design, in which the students and the teacher are not separated by rows. The students sit around round tables and the teacher can move freely around them. This facilitates interaction with all students.

How to Use Technology to Lever Teaching and Learning – New Challenges and Opportunities for Management Schools

Nikos Mylonopoulos, Associate Dean and Associate Professor of Information Systems, ALBA Graduate Business School at The American College of Greece

I thought I should share some of the experience that I have had in the past few years at my school. ALBA is a graduate business school offering graduate programs and executive education. I have been the associate dean for academic programs since 2009. My background is in information technologies and I have had a significant role in the development of the information technology systems that we are using at our school.

Since 2008, Greece's gross domestic product has declined tremendously. We hope that the decline has bottomed out and we will see some recovery next year. As for enrollment on our programs, 2008 was a record year in our history. After a subsequent slump in our revenues, things have improved and we hope that we are soon going to break our previous record.

We have made strong efforts to contain the drop in enrollment. For example, we offered more scholarships without reducing tuition fees. This resulted in a continuing decline in revenues. Nevertheless, we were able to turn things around and exceed the previous historical record. Technology was an enormously important instrument in this turnaround exercise.

Another very important factor was marketing. We have optimized the marketing and sales funnel and made it a tightly managed process. One key element of it is a database with prospective applicants. Another one is our website with a flexible structure where we launch lots of new initiatives with great agility, in order to attract prospective candidates.

What are some of the key strengths of our infrastructure? First of all, we have a full data-and-process integration. We do not just bridge systems. We have a single, unified database and harmonized business processes. This gives us a single source of truth, as we say. The technological infrastructure allows us to carry back-end data to the front end. The website contains data such as schedules, course descriptions, and more. A good example of that is a service called "be our guest". It allows potential candidates to sign up for a class before even applying to our school so as to get a test-drive experience of what it is like to be a student at ALBA.

We have comprehensive analytics that play an enormous role in understanding how the market has been shifting throughout these years. Our open architecture is not exactly an open source but is rather a very flexible platform that enables innovation and gives us tactical agility: we can deploy new initiatives in a matter of days. Our collaborative governance allows us to maintain a high level of service to students at the administration level, while at the same time maintaining tightly integrated management across our pro-

grams as well as full collaboration with the marketing department and other departments at the school.

For the purposes of our discussion here, I have identified some management dilemmas related to the management of IT, and our response to those dilemmas. I realize that these are our specific choices whereas others may prefer a different solution. The classic dilemma in IT is whether to buy the best-of-breed system available or a common platform that may not be the best. For example, you can use Blackboard, which is the global leader in these systems. We decided to develop our own system that we call Melete. Our students and visiting professors tell us that they like it a lot. It also gives us enormous operational benefits. For example, it does not require any administrative oversight as it is fully automated and fully synchronized with the back-end student information system.

Another dilemma is whether to choose a custom-made or off-the-shelf platform. We have decided to develop customized solutions on top of a single Mirosoft Sharepoint platform. It is not ideal for all our purposes, but it strikes the right balance for what we do. It is a single platform and it is very flexible. It helps us a lot.

Do you develop your technology in-house or do you outsource it to information technology companies? We chose the first option. It is extremely difficult and costly. There is an enormous shortage of experts with good information technology skills. We had done some outsourcing in the past but we could not find the special skills that we needed. Therefore, we thought that it would be better if we developed our own technical talent. This is our way of ensuring that we understand our business model and that we implement business rules and everything else in the way that we want it to happen and we create maximum value for the school.

Yet another dilemma involves the opposition between process discipline and innovation. From the viewpoint of academic administration, you need discipline. You want to make sure that all programs are managed in the same way and that regulations are enforced consistently. That kind of mentality tends to support a conservative organizational culture but in a turbulent environment you need to be innovative and agile. You need to launch new initiatives every few weeks. Therefore, we try to do both. I am not saying that it is easy but it is feasible. Having a flexible technology platform helps a lot in this respect.

The final issue is how to control your information technology resources. Do you have centralized control - a department or a group of people who do that - or do you allow everybody to control that resource? One classical debate is about websites. Who maintains its content? Our website is enormous, with a huge amount of content on it. In this case, do you appoint a group of people who manage every page? We took the risky road and we have been on it for many years. Each department manages its own pages whereas the marketing department makes sure that there is some coordination between them. This is risky because we know that some departments will race ahead whereas others will be left behind. This means that our website has the potential of presenting an inconsistent image. We realize this but we made a conscious choice to promote competition within the school.

The same applies to analytics. We do not have a centralized unit that takes care of data analysis and reporting. We train all users to be able to conduct their own analyses for their own purposes. Of course, this creates all sorts of problems. On the upside, it is an enormous learning opportunity. In this way, everybody understands what the data mean and can ask whether we are measuring the right things and drawing the right conclusions.

Witold Bielecki

I agree that a university's webpage is an extremely important marketing tool. Students choose schools mainly through the Internet. I remember our first Peruvian student three years ago. I asked him how he had found our school. He said that he had drawn up a set of criteria: the school had to be accredited, the cost of living in the country should be affordable, etc. When he entered all these criteria on the Internet, he found Kozminski University in

Warsaw, Poland. He decided to come and he was very satisfied after studying with us. Of course, most students use much more sophisticated tools. They collect opinions and all sorts of information about the school.

I am talking about this because marketing costs account for a large portion of our budget and I believe that this is true of all schools. We produce brochures and leaflets that are practically useless. Perhaps, the students' parents read them and use them to decide whether they should encourage their children to go to a particular university or not. However, young people do not read brochures. They read only what is on the Internet and I am absolutely convinced that this trend is getting stronger.

Andrey Kolyada

In our experience, we see a long-lasting effect of the social media. On the other hand, we see that social media campaigns are totally useless. What is your experience? Do you conduct any marketing campaigns in the social media?

Nikos Mylonopoulos

You have a point. We have seen mixed results with the social media as well as with the other tools of digital advertising. Two years ago we eliminated all other forms of advertising almost completely. By advertising only on the Internet, we have been able to become much more effective at the fraction of the previous cost. Now, some campaigns work, some do not. We monitor our data very closely and we try to learn our lessons.

I do not think that we can draw a universal conclusion that the social media do not work. Each country is different from the rest. In North America and Western Europe the effect is not the same as in Greece. In the United States, Facebook is declining. In Greece, it is growing. You also have to look at specific demographics and industry sectors and you will see different behaviors.

We are monitoring our analytics very closely and developing the capability to cross-link data from Google Analytics with the data that we collect from our own sources. In that way we amplify our datasets so that we can monitor behaviors on an individual level. It is an on-going learning process.

Our international marketing efforts are not well developed yet. We have done many experiments but we have not been able to reach a conclusion concerning the most cost-effective way to approach international markets. We are not investing in the social media for the purpose of targeting international markets. We expect to do so presently but we still have a lot of work to do. We developed our first customer relationship management system in 2003-2004 and we are in the process of migrating it to a new platform with far greater capability.

We also have a mobile application for prospective students and the general public. Of course, we also have to develop mobile services for our students and the international community. We are probably going to do it through adaptive web design rather than a dedicated smart phone application.

CEEMAN Survey Results: The Use of Technology in CEEMAN Member Institutions

Olga Veligurska, Head of Projects, CEEMAN, Slovenia

First of all, I would like to explain why we did this survey and how we did it.

We ran the survey in the spring of this year. Our idea was to take a quick snapshot of how our members use technology in their teaching, learning, marketing, operations, and support processes, but not to go into too much detail in the questions about technology.

We sent out our questionnaire to CEEMAN institutional members: business schools and universities. We have 145 of them and we received 65 responses from 30 countries all over the world. The questionnaire was addressed mostly to deans and directors. Knowing that they are very busy people, the questionnaire provided mostly predefined answers, inviting the respondents to choose some of them.

About two thirds of the filled-out surveys that came back to us were from Central and Eastern Europe. Ten Russian schools also responded. About 25 of the responses came from Western Europe. The rest were from other countries around the world - from North America, Africa, Asia, and Latin America.

We found that almost 70 percent of the schools have some kind of online element in their programs. It was also interesting to see that some of them had deliberately chosen not to have an online component.

We also looked at the types of programs that the schools have: graduate, undergraduate, in-company, executive education, and PhD. We tried to find the share of fully-online programs, as well as hybrid or blended learning programs. We found that most of the schools had undergraduate, graduate, and executive education and it is the graduate programs that use technology the most, followed by executive education. They were also those that used blended forms more than other types of programs. PhD programs and in-company programs are least likely to use technology. This can be explained by the character of these programs and the type of participants that they have. We also looked at the subjects that our schools tend to teach more often with the help of technology. We discovered that marketing, finance, and strategy relied more on technology than other subjects. Some respondents indicated that they use the online format also for courses such as corporate social responsibility. Most of the respondents used technology in at least three subjects.

Most of the respondents were undecided about the use of massive open online courses (MOOCs) on their programs. They have been thinking about this issue but have not made up their minds yet. Some have already decided against using these courses. About one-fifth use them as additional reference material. Very few of our schools develop MOOCs themselves or use them as a significant part of their course offerings.

Some questions asked about specific technology tools that are used in teaching and learning. One of the commonly used tools is collecting student feedback. Computer simulations and online quizzes and exams, as well as recorded lectures, are also popular. The least used ones are cell-phone and tablet applications. Gamification is not used much either. It seems like a very complex technology and the schools may not be quite familiar with it. We are going to discuss this issue at the conference.

One of the questions that we asked was what kind of technology the schools used to promote and sell their programs. We also asked how frequently those tools were used. We found that Facebook was the most frequently used platform as well as online registration for courses and programs, followed by online banner advertising and YouTube videos. Some other social media and advertising were also mentioned.

We discovered some national differences. In the United States, schools use LinkedIn much more than Facebook. However, most of our schools are from Central and Eastern Europe and, as a consequence, we see Facebook very high in the ranking.

We also asked about the use of Google AdWords, webinars, blogs, video channels, mobile applications, and tablet applications. While Google AdWords and webinars are quite popular, mobile and tablet applications are the least used also for marketing. The reason for that is that it takes significant time to develop them, maintain them, and make them part of a marketing campaign. The schools might also not have enough knowledge in this field.

Another question was what the most effective tool was. We looked at the same items that had been listed before. online advertising appears to be the main tool that attracts students. Google AdWords and display advertising were rated as the most effective, followed by Facebook and Online banner advertising. LinkedIn and mobile applications scored lower. On the other hand, webinars were mentioned as the most effective tool for interaction with potential students. Deans' blogs are not used by many and are not viewed as effective as other tools.

We also asked a series of questions about operations to find out what kind of system the schools use to support their marketing efforts, accounting systems, learning management systems, connectivity, and human resource management. Most of the schools use several tools at the same time. Connecting different devices was reported as most frequently used, as well as intranet and customer relationship management systems. The rest is not used very much. It appears that some of the schools are not very familiar with those tools.

We are going to have all results in report format after this conference, with best practices descriptions that some of our members provided.

Witold Bielecki

I think I have to add a few explanations of some of the concepts that Olga discussed.

Concerning the massive open online courses, known as MOOCs, I have to tell you that they are extremely time-consuming and difficult to organize in their original format. I have had some ideas about such courses but I have found that they require very considerable resources.

I also must explain the concept of gamification. It is a new word, denoting a new approach to teaching. It is based on the idea of simulation games.

Danica Purg

Massive open online courses are not a new thing. They have been around for some time and they became a big hit a couple of years ago. Many schools were very concerned about that. At the latest EFMD deans meeting, a dean from Exeter presented a financial analysis, showing that these courses are terribly expensive, without delivering satisfactory results.

Witold Bielecki

In my view, the future is in finding teaching and learning methods that engage the students unconsciously and help the educators achieve their goals. We expect some new knowledge or skills as a result of every course. But students hate traditional teaching methods that lead to these goals. They do not like to read cases or do exercises. Consequently, we must engage them in a more subtle way. That is what our success as teachers depends on.

Summaries of Roundtable Discussions

How to Use Technology to Lever Teaching and Learning – New Challenges and Opportunities for Management Schools

Marek Gruszczynski, Vice-Rector, SGH Warsaw School of Economics, Poland

We talked about the proximity of academia to management practice. We observed a discrepancy. Ninety percent of us think that we are doing fine in that respect, although only 10 percent of those outside the academic world agree with us. We need to do something about that. However, we must not forget that we are thought leaders. We, as professors, need to equip younger generations with knowledge.

Technology is changing continuously and new applications are appearing all the time. Students are ahead of us in keeping track of this trend and we can never hope to be better than them. They will always surprise us by bringing something new to class that we are not familiar with.

The same can be said of business companies. It is they that will always lead us. We cannot hope to lead them. We need some kind of balance between being a good professor who can provide the right answers to relevant questions and being savvy about technology. I think that this remark can serve as a start for a discussion.

Amyn Lalani, President/Director, Montreux University, MSB Montreux School of Business, Switzerland

Education has two different sides. Students get value from what they learn and then there is the technology, which is a vehicle. These are different things.

Franck Thomas, Academic Pépinier Incubator at ESSCA School of Management, France

We discussed accounting at our table. It is an unexciting subject. Students need special motivation to come to class and follow what the professor is talking about. We had a very good idea about how to show them what is at stake: creating a mock organization, such as a startup. You can explain to the students some of the success factors in the development of a startup and point out the risks if they do not have at least a basic knowledge of accounting. For one thing, you can go to jail if you do not submit the accounting reports that you are required to produce by law. In other words, this simulation would illustrate positive and negative rewards. I thought that this was very interesting.

Karen Voolaid, Director, Head of International Programmes, Tallinn School of Economics and Business Administration of Tallinn University of Technology, Estonia

We also had a very interesting discussion at our table. We had deans from Kenya, Romania, Ukraine, and Estonia, all of them teaching very different

subjects: strategy, law, environmental economics, finance, and leadership. In our view, technology is just a platform for teaching. We need a balance between classical methods and modern technology. Also, different academic subjects should use different technologies.

New technology is not well known among teachers. This gap exists not only in poor countries but also in wealthy ones. As a result, schools sometimes do not satisfy the needs of the business community. This means that we need to reduce the gap between what we teach and what the business community needs.

Our Romanian colleague pointed out that teachers must not teach from the perspective of their past but from the perspective of the students' future. Every 20 years, there is a complete generational change. We must learn to speak the language of the latest generation.

Alec Wersun, International Business Policy, Strategy & Management, Glasgow School for Business and Society, UK

I do not know how many of you are familiar with the 50+20 initiative from the Globally Responsible Leadership project. The 50+20 initiative was launched in Rio de Janeiro in 2012. It has a simple motto, capturing what has been said here: Management educators need to move mentality from being "the sage on the stage" to being "a guide on the side". I would encourage everybody here to reflect on this.

How to Use Technology to Lever Marketing and Operations

Amyn Lalani

We discussed all sorts of technology such as Google AdWords, Facebook, LinkedIn, and Twitter, as well as blogs. We also discussed human word-of-mouth. We found that Google AdWords was the number one technology to promote academic programs.

Natalia Makayeva, Deputy Director, IPM Business School, Belarus

Our group also discussed different tools that can be used in advertising. The group decided that I should share my own experience with you. Although our school has a Facebook page, I do not think that it is enough for selling our products. I look at the comments that we receive. I spend an hour every day to see what people have to say. I also try to respond to some comments and post material from Harvard Business Review or McKinsey or Sage that can be useful, for example in the information technology sector. I think that we can enhance our sales by adding a more personal element to our Facebook posts. In my view, as the world gets increasingly digital, we need to pay more attention to individual personality in our discussions with clients. We are all tired of the technology and we all need a personal touch. We need to show that we are not only deans but also human beings. I have noticed that this attracts clients.

Karen Voolaid

A survey in Estonia asked young people about the most important factor when they selected a university. It was found that first of all they wanted some information about the university. Prestige was next. Program content came in third. This means that we must first of all promote the institution.

Of course, students would also like to know who teaches there and how successful the alumni are. Another important factor is opinions about the university in the media, as well as the opinions of alumni. These are the best marketing tools. Parents' opinions also matter but not always.

It is also worth visiting the school's premises and getting a feeling of what it is like to be there. Is it the right place for you or not?

We also discussed what graduates receive. Of course they receive new knowledge, information, experience, and skills. They make new friends and get business contacts. Some of them get married.

One group member mentioned that it is important to share the results of PhD research with companies so that they can use them for practical purposes in their business. Another interesting observation is that famous professors can be used as effective marketing tools.

Franck Thomas

We were in agreement that referrals are an excellent way to attract customers.

Another observation that we made is that it can take up to four years for somebody who knows about a program to make up his mind and enroll.

Also, ours is an industry with a lot of content. Downloads of this content in exchange for a simple registration is a great way to get new leads on prospective candidates.

Of course, there are also many other ways to advertise. One of these is targeting a very small group of people for a long time. This is not what advertising is conceptualized for. It is a short-term process and it is a mass process. I am talking about re-marketing: repeatedly targeting the same people who might be interested in your offer. This seems to be effective.

The bottom line is that we have to think creatively so as to get the most out of these investments in advertising.

Arshad Ahmad

I am not quite sure what we said because there were so many comments coming from all sides. I do remember however that we talked about technology as a tool to target certain groups that we would not be able to reach otherwise. Technology should serve us rather than us being its slaves.

Another question is how the adoption of a particular type of technology affects our revenues and costs.

These are some of the things that I remember but there may be more points that other people might like to make.

Financial and Other Implications of Investing in Technology Versus the Benefits

Panel Discussion

Jorge Talavera, President of ESAN University, Peru

We have some very knowledgeable speakers on this panel and we also have listened to the previous presentations. Therefore, I do not have much to say by way of an introduction.

There are two major trends that are affecting the way that we do business in the educational sector. These are the development of technology and globalization. Both of them impact the value chain of our organizations. However, our sector is quite conservative. We do not change very quickly because that is very difficult. Still, we are feeling the pressure of technology and globalization and we are forced to implement some change. We have to accept the fact that disruptive technology is with us and is here to stay for a long time.

Without much further ado, I give the floor to the first speaker. Each panelist will have 10 minutes for a presentation. Then we will summarize and the floor will be open for questions and answers.

Sergey Myasoedov,
RABE President, Rector of IBS-Moscow,
First Vice-President of RAGS, Russia

I am going to speak as the Dean of the biggest Russian market driven business school working in the high price\quality segment of the Russian market - on behalf of IBS-RANEPA.

I have several observations concerning the financial implications of investing in technology. We all have to deal with the challenge of high technology. We are aware that newly emerged busi-

ness schools in Russia are getting ahead of us by selling their product with the use of high technology. It is a new marketing niche. And it has an enormous potential and clientele. We – the representatives of traditional business schools with the stress on small group in class training have to come up with a response to this. However we have to keep in our memory that we are under certain objective constraints.

And I would like to share some experiences and observations with you.

First of all, there are some axiomatic observations. It is well known that the long-term massive investment in technology, faculty, and staff is just the beginning of regular use of any high technology. If a business school wants to get some tangible result, by definition it must be ready to spend money. Results take a lot of money and time.

I hear colleagues say that high technology can provide knowledge production at an affordable cost, plus access to new groups of clients, plus increased revenues. I have also heard a lot of talk about MOOCs - massive open online courses. I participated in the discussions on them at the latest AACSB conference, the EFMD conference, and the AMBA conference. I am now at a CEEMAN conference and everybody is talking about those courses.

However I have to recognize that I am not quite excited about their potential. I shall try to sound more precise. I am excited about the MOOCs opportunities theoretically. But I realize that so far they have had absolutely no impact on my customers.

May be it is so because my business school operates in a Russian language large scale regional market that is shielded from external competition. Whatever the case is, so far I have not felt that massive open online courses impact our market in any way.

However I think it is not only the problem of regional peculiarities. It is to the great extend the problem of market niche your business school tries to occupy. And the problem of your values and corporate culture.

As you shift from in-class interactive education, especially in the case of executive education, to the high-tech market, you have to change the culture of your business school team. From my viewpoint, this is a very big threat to lose your achievements and to obtain the phantom of high tech fashion only.

Second, you have to be ready to accept that your image and reputation may suffer. Of course, I can speak only about the situation in Moscow. In my city, the potential clients of expensive programs have strong subconscious reservations about high-technology online distant-learning education. They think that this is something of lower quality. And I have to recognize that in the majority of cases they have all the reasons to consider so.

If you are in the high segment of business education, you are like the people who produce Rolexes. Do you want to stop producing Rolexes and switch to Swatches? You would be dealing with a completely different type of customers. You would have to move to a totally different market niche. You would need a completely different culture. You would have to change or retrain your team, too. That would amount to a radical change of your whole school, which would be the same as starting from scratch and setting up a new school. And I am not sure that moving from the market of educational Rolexes where I am working to the market of educational Swatches would be of benefit to my business school.

The programs that we run stress experience sharing. They do not stress knowledge transfer, or to call a spade "a spade" even information transfer which is what high technology provides. Our programs emphasize lateral communication. People establish contacts and informal relationships with their peers and learn from them. Later, this also helps them do business. This highlights another constraint of technology.

Now I want to outline my vision of the solution. We are all innovators and entrepreneurs in business education. I assume that if we would like to catch up with the development of high technology we have to consider several things.

One thing is that franchised programs may be a better solution than high-technology investments. This would save you time and money. This year, we are trying to launch a new product to the market. We call it iMBA or Integrated MBA. A large segment of it will be taught online, using high technology we franchise from a professional high tech provider in the field of education. This is first meaning of "I" or Integration in our case.

However we do not plan to leave the top level market niche of prestigious business school. We plan to integrate the in class strength of our professors and education with the high tech opportunities. And this is the second meaning of "I" or Integration in our case.

We do not plan to change Rolexes to Swatches and to leave the top price market segment challenging our cash flow. We do not plan to invest a fortune of money and time developing high tech assets of our own. We want to franchise, to develop our brand and our traditional competitive advantages and simultaneously propose our clients part of the product in high tech form.

MOOCs look great for BBA level programs and for learning managerial hard. However when you deal with top-executive retraining programs based on managerial soft and tacit knowledge, when you use music, art and theater to develop creativity and leadership the present day MOOCs possibility can add value to the limited scale.

Let us not speak about technology, its financial and marketing applications in education in general. Let us be more precise. Every product of business school portfolio is unique and special. And so from case to case the possibility of high technologies application may vary to the great extent.

Franck Thomas, Academic Pépinier Incubator at ESSCA School of Management, France

I have majored in corporate finance but although I have been trained to be a financial expert I have never worked in that field. Instead, I moved into the world of technology right after I finished my education. I looked for an innovative company that was changing the way that things were done. Finally, I was hired by Google in 2006. That is how I learned a great deal about adoption of technology and leading the way. That means thinking in terms of what users will want in the future, not in terms of what they want at the moment. It is quite difficult to figure out which way we should go if we listen to the users.

As we heard this morning, technology comes with a price tag. However, it needs to be weighed against the return on the investment. A better educational experience is one of the potential benefits. We also learned that it can be a very effective marketing tool. Technology can deliver a lot on that promise. Additionally, it can enhance your image. If you are seen as a technology-minded organization, that can boost your business.

When you teach something like technology entrepreneurship or technology management, you need to walk the talk. In other words, you have to adhere to the principles that you are teaching. To get these effects, you have to part with some of your money. First of all, you have to invest in people. Technology creates vast amounts of data. These data do not mean anything on their own. You need people to analyze them, tell you what they mean, and make them actionable. If you invest in data collection and end up with a lot of data that nobody can interpret, you have made a rotten investment.

You need people who are skilled in a new field, called learning analytics: extracting key performance indicators for a high-quality learning experience, interpreting the data, and explaining them to the faculty. There are also a lot of marketing data that you can collect and interpret so that you make sure that customers prefer your brand over another. Marketing creates a lot of data. And if you want to be sure that you are sending out the right message, somebody needs to look at it from the perspective of the data.

You also need to have people who are knowledgeable in information technologies. You have a choice between doing this in house or outsourcing some of this activity. You can for instance partner with another institution.

You also need to invest in the community. Technology does not exist to be used in isolation. When adopting technology, you should not be on your own. There are other users using the same technology and facing the same problems. You have to link up with them and devise the best possible solution. I am talking about extracting value from a network. If you have a good network and if you use it properly, you will get extra value. Therefore, do join a network and be in sync with what is being said about the technology that you are using.

I would also advise you to invest in growth. Technology has an interesting specificity: it can scale very well. Teaching is not a scalable activity by definition. But technology is. Can you extract the best from both domains? In that way, you can extend the boundaries of your organization beyond its initial market. For example, blended learning and distant learning provide entirely new opportunities. If you invest in growth, the return on your investment can be quite significant.

The next type of investment that you might want to consider is investing in marketing. There was a film in which a character played by Kevin Costner dreamed of building a baseball field in the middle of a corn field. There is one line from that movie that is worth considering: "If I build it, they will come". He expected that the players would come and so would the audience. But that was a false expectation. It did not happen in the film and it does not happen in real life. Things never sell on their own. You have to do something to attract customers.

Google is probably one of the few companies that does product development as a marketing tool. It takes many developers and a lot of effort to be able to use your product as your main marketing tool. Be sure to invest in marketing and make sure you do that properly. You have to get a decent return on every investment that you make in content and in technology. By now it is possible to calculate how much money you get from each marketing channel that you have invested in. When you know that your investment has brought you more business value, new prospects, and new registrations, you have won the game. You need to get to the point that your marketing investment is fully efficient.

The last type of investment that I would advise you to make is brand investment. Once you have mastered your technology properly, it is an easy sell. And it associates well with good brands. Telling your customers that your institution is using high technology can be a powerful message. This can get you technology-minded customers. To get that wow effect, you need to put your brand in the front row. Technology should not be your main proposition. It should play a supporting role with respect to your brand.

These are the expenditures that can affect your base line. But it does not have to be dramatic. We saw earlier that you can find inexpensive tools for your needs. You can also start small. This is what we are doing at ESSCA. You do not need to make a massive expenditure to launch something. It is a good strategy to launch something small, acquire some best practices, and then move on to something bigger. Your investment need not increase 100 times in three months. You can invest gradually. That is the right way to do it. And make sure you learn as you go through that process. Finally, ensure that your next investment is a consequence of every step that you took previously.

Every technology has its early adopters. Other people look at them and decide to follow them right away. Still others adopt only what has been checked and double-checked by advanced users. That is how technology is usually adopted. The main value proposition for an institution is content.

But if you decide to invest in technology and be an early adopter, you had better stand on the shoulders of giants. Do not reinvent the wheel. If a certain value-creating model has already been invented, you do not need to start this all over again. Rather, try to gain a technological edge through things that have not been explored yet.

There are many technological platforms out there on the market. Always consider whether you could add your expertise to a particular platform. That is probably the right way to do it. But if you have the resources to go further and be part of the development of that platform, that is even better because you would be part of the ecosystem, pushing the boundaries for the whole group. I am referring to the open-source philosophy here. You can always invent new applications and plug-ins that have not been used anywhere else because you have your specific needs. So, I am telling you: yes, you can lead the way but do not waste resources on what has already been invented and developed elsewhere.

Arshad Ahmad, AVP, Teaching & Learning at McMaster University and STLHE President, 3M National Teaching Fellow, Canada

It might be useful if I gave you two perspectives on the financial aspects of investment in technology. The first is the perspective of the faculty member that I have been for most of my career. But recently I became an administrator and saw the other side of the coin.

As a faculty member, I can share two stories with you. The first one is from my early years, when I was a young faculty member. I was full of ideas and energy, very close to the students, always looking for new ways to do things, experimenting a lot and trying to use tools as much as possible. Whenever I tried to implement a new tool, the question of resources would come up. Where do you go for resources? Usually you go to your chair. And the typical answer that I got was "Great idea but maybe you should give it some more thought". This created frustration. It made many of us think that there would never be enough money around for the interventions that we had in mind. There were always other priorities. Of course, the money was spent for good reasons. I am not saying that it was being wasted. But for some reason, there was never enough money for the kind of technology that we had in mind. Back then, in the 1990s, if you decided to prepare PowerPoint presentations of all your lectures, that would have seemed like an insane thing to do.

The second thing that I want to share has more to do with good luck and serendipity. In 1999, I wanted to run an experiment for research purposes. At that time, we had a dean who was a visionary in the sense that he wanted to embrace the emerging technology. My experiment consisted in taking an off-line course online. I told him about my experiment. I said that we could be the first school at the university to do an online course. At that time, the people who would support this project were typists, photo-copiers, and other technicians who would support faculty members.

My dean responded positively. He said that we would train all these people and prepare them for a transition to the Internet. I was hoping to get about 50 students for a course in personal finance that I had designed. Instead, I had an enrollment of 560 students right after the course was offered. Of course, we had no idea that this would happen. We had not been prepared. We were even visited by a television crew who came to find out why the students

were so excited about this course when they did not even have to go to class. That did not make any sense.

We prepared for the interview with the television crew for a long time. And when they came, the Internet went down and we had nothing to show except a blue screen. Luckily, we had a few slides and we showed them through an old overhead projector to save ourselves from total embarrassment.

The legacy of that particular course is actually quite heartening. It led to a series of innovations by other faculty members and the enrollment kept going up. We achieved big economies of scale. We had an average enrollment of 1,000 students, all from our university. This was not marketed externally.

I do not know if it was the technology that created this success story or the subject matter that became accessible to different students who wanted to learn personal finance. Anyway, I congratulated myself on the design of the course but the success probably had to do more with the subject matter and the excitement of the students over that course.

Now, I am going to talk about allocating money for technology-related projects. It has become clear to me that different departments and chairs have very diverse needs. Let me give you an example. The humanities dean told me that he wanted to make an online course in history. The total budget that he could give me would not be more than 10,000 Canadian dollars. The day before I had had a conversation with the engineering dean who also wanted an online course and he would give me 100,000 dollars to set it up. Neither of the two deans could tell me more about their projects except that they wanted online courses. I imagine that they had very different things in mind.

As the word got around that courses were being funded very differently, the central administration tried to create some economy of scale. It said "If you start creating these courses, the average cost should go down and more people would be encouraged to adopt the best practices that you have learned from offering these courses". To make a long story short, the average cost has indeed come down. We are producing 35 courses as we speak for different faculties and for very different purposes. The average cost per course is about 35,000 Canadian dollars.

It took us a record time - about five-and-a-half months - to produce a massive open online course. We enrolled close to 20,000 students on it. That cost us over 100,000 dollars. However, we have funding for that from an external source and it is not a big financial drain for the university.

A massive open online course always has a champion behind it. At our university, the first champion was the dean of engineering. He is new to our university and he happens to be an American. His vision was something like an MIT open course. He wants to showcase some of the best teachers and make rock stars out of them. He has stated that publicly. He says that his goal is to bring the best out and create a standard, attracting people to come and do a master's degree because of the high quality being offered. But having said that, I think he has some other goals. It has more to do with reputation building and marketing than with creating a learning experience. He did not really ask good questions about pedagogy. He was more interested in making a name and branding. I think that he realized at some point along the way that you cannot have a good brand unless you have a high-quality product. Even if you have resources and very talented people, it is easy to fail if you do not have good quality.

We are still wondering how an institution like Coursera will make money because they are not. They have eight million users, which is a lot of people. Now they are beginning to combine courses so that a student can complete a program. I do not think that this story has been told fully.

There are some important question that I would like to bring up. Why do you want to do an online course? Why do you want to launch a massive open online course? Why do you want to have a learning management system? Why do you want to have some particular software? What is behind this technology that you are really trying to achieve? These questions are much more important than whatever choices you end up making concerning platforms and suchlike. It is the context of your institution that will dictate the choices

that you are going to make. There is no template and no formula that everybody should be using. There are important differences that will remain. The common theme is the need to reflect on what creates a necessity to adopt a particular technology and what will enable its adoption and use. Some of the questions that I hear in this context are "Do we want the students to have a flexible learning format?", "Are we creating a course to generate revenues?", "Are we trying to build capacity?", "Are we trying to be innovators or followers?", "Is the idea to get more students by tapping into different markets?", "Are we going for branding and reputation?" Each of these questions involves very different financial implications.

I am going to leave you with a very practical thought. We face a practical challenge created by the implementation of almost any technology. That is the human factor. Faculty members who come to work with us are usually very enthusiastic. We sit around a table and have lots of coffee. And we talk a lot. And I find that these people have exorbitant aspirations. They want to go to the moon. Their imagination knows no boundaries. That is very interesting but also very impractical. They want to do so many things in such a short time that our conversation turns into a negotiation.

The language that you have to use when talking to a professor of science is very different from the language you use to talk to a professor in the humanities who wants to set up a course in fine arts. You just cannot use the same language to convince these people what it is that they want to achieve. Enabling them to realize their goals is a reality check that we have started to perform. We will draw up a memorandum of agreement to define upfront the expectations on their side and on the university side, so that both parties find that this is a happy journey.

I agree with Franck that most of us are playing a catch-up game. We cannot go boldly where nobody else has trodden before. Still, I would phrase this question differently. The most important thing is not the technology but the idea that you are trying to showcase through technology. That idea is bound to be far more important than technology itself.

Danica often says "We are high-touch, not high-tech". That is a very powerful summary of the power of her institution. We, at McMaster, are famous for inventing problem-based learning. This occurred at the medical school in the 1070s. That pedagogy is probably far more valuable than any technology that could be used to present some version of it. Therefore, we must always think in terms of the big idea that technology can propel into places that it would not reach otherwise.

Jorge Talavera

If you are going to make a decision about technology, you have to remember three important considerations. You have to decide what part of your resources you are going to invest. Then, you have to think of the benefits that you are going to get. Another element is the risk that you are taking. What is going to happen after you invest? Will there be a return on your investment? Sometimes we are quite impulsive and make rash decisions. I could give you a lot of examples of that. For example, people buy 3-D printers without knowing what they will do with them. It may take them several years to come up with an answer.

The technology is available and it is going to improve constantly. The question is how to use it. How do you teach using technology? How do you deliver your programs? At my university, we experienced major changes in this respect. We started out with a full-time MBA because that was the tradition. Now we also have a part-time MBA.

Another important question is how to choose a good partner for the purpose of technology use. Some organizations are very successful in this respect. There is no reason that we cannot be successful, too. I think that we need to share experiences. I can tell you what we need in our country. We were not the first ones to adopt modern technology. I think Monterrey Technical University was the first one to set up a virtual university and use high technology to deliver programs.

I visited MIT and the University of Michigan almost 20 years ago. I was shocked by the huge labs that they had. We did not have a fraction of their resources. They asked me if we would be interested in setting up a partnership and delivering the same programs as at MIT. I said that I would love to do that. But how much was that going to cost? They said it would not be expensive. We would need to buy some small equipment. We did that and became quite successful. A partnership with MIT sells very well.

After that, I approached other American universities. One of them was in California. They were interested in a partnership with us but asked us whether we had the necessary technology for it. I told them that we did and wanted to show them how it worked. But it turned out that they did not have that technology.

You have to decide what you want to do, for what purpose, and what your strategy will be.

We have a partnership with a university in Carolina. We formed a network of 26 schools and we share courses every semester. This term, we have a connection with India and South Africa. Next term, we have a connection with Birmingham, Utah, and Japan. It is a good experience for our students and we achieve want we want: a multicultural, multidisciplinary program.

Sergey Myasoedov

I just want to make two general observations concerning Coursera and massive open online courses. I remember something that Derek Abell said at one of the previous CEEMAN conferences. He was speaking without slides and somebody from the audience asked him where his slides were. He said, "I do not have slides. But I have thoughts". He was delivering them in a traditional way but he had the main thing: the content.

This summer I flew to Cyprus to go on vacation with my son. We were sitting next to each other on the plane. I was reading a paper book, whereas he was reading an electronic book. I asked him why. He said that he did not like paper books because they were dusty. Besides he could store hundreds of books on his electronic device.

I was brought up on paper books. When I teach an executive MBA group whose average age is 43, I expect to see a lot of high technology in class. And on a BBA program, they immediately compare whatever I say with their electronic sources. I asked them once if they knew where Rwanda was located. In case you do not know, it is next to Burundi, I said. Just a little later, they had all found the location of Rwanda. They have gadgets in their hands and use them every second.

My point is that we need to pay a lot of attention to the specificities of our clients and customize our offer as much as possible.

Chin Tiong Tan

In our educational model, the most expensive component has always been professors. At all universities, faculty account for 60 to 70 percent of costs. We are all very expensive people. In order to make education more accessible to a greater number of consumers, particularly in developing countries, we need to depend on technology. If I had a choice, I would have professors teaching face-to-face in all classes. But professors are so expensive that this is becoming unsustainable. Therefore, we are using technology as a way to educate more students.

My second point is that we must make sure that our graduates are ready for the future. They need to understand technology as well as the global landscape. However, getting an education through technology is not a must. These are two separate things. There is research evidence showing that graduates that have been outside their home country to study or do an internship get better job offers and are employed faster than those who stay in a single country. It is as simple as that.

Why is there so much unemployment in many parts of the world? Up to 50 percent of graduates cannot get jobs. Why is that so? Largely because these

people have not been exposed to the world. The solution to this is to send them somewhere abroad early on in their education. Send them to Africa. Send them to South America. Get them exposed. When they come back, they will be more competitive and will be able to get jobs. We send our Singaporean kids to what we call the "hardship nations"; for example, those of Africa. They work there for three months and when they come back they get job offers right away. There are jobs all over the world, although not necessarily in Spain or Portugal. There are jobs in Africa, in South America, and in Asia. We need to expose our kids. Unfortunately, technology cannot do that for us. It takes face-to-face interaction with people from different countries. That is what will educate our kids for the future. We need them to be ready for the future. We need them to be ready for the globalized world.

Concluding Remarks by the Chairperson

Witold Bielecki, Rector, Kozminski University, Poland

As the chairman, I have the duty to close this session with a few notes.

My main observation is that we tried to tackle a great many questions and all of them were difficult. I do not think that we can give specific final answers to any of them. We have to keep our minds open.

Technology has changed, but teaching methods have not. We used to write with chalk on a black board. It was replaced by a white board and we used markers on it. Then, we got overhead projectors. These were substituted by PowerPoint presentations. Now we have the Prezi software although it has not gained much momentum yet. I did not see anybody use Prezi here. Still, all these are new technologies, not new teaching methods. I think that we should try to create new methods of teaching.

There are other new things, such as the speed of access to sources or data. The story that Sergey told us was very illustrative. I can share another one. I was once sitting on the supervisory board of a business company. We were discussing the volume of foreign investment in Poland. There was some disagreement among the discussants. Several people suggested absolutely different figures. Then, one of the participants took out his cell-phone and gave us the right figure right away. This means that it does not make much sense to teach knowledge to the students because they can access it very easily from one source or another. We should teach them how to use that knowledge. Students do not need to know how much foreign investment there is in Poland at a given moment. But they need to understand the impact of this investment on our standard of living, employment level, and our gross domestic product.

At the end, I would like to share with you a categorization system of entrepreneurs. The first category are real entrepreneurs - those who create something real. They invent new products and services and they develop them. The second group consists of imitators. They scan the market and notice that there are new products and services out there and they try to imitate them. The last group consists of idiots. Those are entrepreneurs who decide to do something that is old hat and the market is saturated with it.

Be real innovators in education and never be in the third category.

22nd CEEMAN Annual Conference

When, Why and How Is Technology Reshaping Management Education?

Welcome Address

Danica Purg, President of CEEMAN, Slovenia

Dear Excellences,

Dear friends,

I am greeting some of you for the second time today but since many people have just arrived, I would like to welcome everybody again. Welcome to CEEMAN's 22nd Annual Conference.

Since some of you do not know much about us, I would like to introduce you briefly to our association. CEEMAN was established 21 years ago, in 1993, by a group of deans from Central and Eastern Europe with the aim to enhance the quality of management education in our region, which was going through a historic transition to a market economy. By now CEEMAN has become a truly global association with 200 members from 54 countries around the world. We have always had members from Western Europe and North America, but now we are constantly getting new members from Asia, Africa, and Latin America. This is logical because our focus is still on emerging economies, which we call "dynamic societies".

We want to build strong relations with our members and maintain a very unique, family-like feeling that is characteristic of CEEMAN. We also develop strong connections with other management development associations around the world. I am glad that many of them are represented here, including the Russian Association of Business Education (RABE), the Baltic Management Development Association (BMDA), the Association to Advance Collegiate Schools of Business (AACSB International) the Accreditation Council for Business Schools and Programs (ACBSP), the Association of MBAs (ABMA), the Consejo Latinamericano de Escuelas de Administracion (CLADEA), the European Forum for Entrepreneurship Research (EFER), and the Society for Teaching and Learning in Higher Education (STLHE). We also have guests from different African countries even though the president of the African Association of Business Schools excused himself.

As time passed and institutions from different countries kept joining us, we realized that we had outgrown our initial remit and our name - Central and East European Management Development Association - had become obsolete. Nevertheless, we have kept the CEEMAN acronym. Since we are interested in accumulating significant expertise in management education from countries in transition - the so-called dynamically changing environment - a couple of years ago we decided to call CEEMAN an international association for management development in dynamic societies. This describes our focus and activities.

Our annual conference is our main event. Each year it takes place in a different location and is hosted by one of our member institutions. We have been twice in the Baltics, in the Balkans, in Germany, Russia, Ukraine, Turkey, Italy, and Georgia. We went even to South Africa two years ago since we have a member in that country.

I am very thankful to our host in Budapest, ESSCA School of Management, led by its director Catherine Leblanc, as well as to ESSCA site director Zsuzsa Deli-Gray and her team who did a truly fantastic job in organizing this conference. This is our second time in Budapest. Our first conference here took place in 1999, hosted by the Central European Business School, whose representatives are present here today, along with colleagues from Corvinus University, another long-standing CEEMAN member.

Our conferences usually combine several interconnected events and are centered around topics of particular interest to our members. This year we chose the topic of technology and its influence on management education. Earlier today, at the Deans' and Directors' Meeting, we had some interesting discussions on how to leverage education, marketing, and internal processes with technology. At the annual conference tonight and tomorrow, we will move on to a bigger topic and invite more insights from international experts as well as from business. Tomorrow night we will conclude the conference with a gala dinner and an award ceremony at which we will present certificates to our new members, awards to the winners of our case-writing competition, and CEEMAN Champions Awards for outstanding individual achievement in teaching, research, institutional management, and responsible management. Our hosts have also organized a sight seeing program so that we can learn more about the history and culture of Budapest and enjoy its beauty.

We also had some sessions on Wednesday, including the new service that we offer for the first time this year - individual dean-to-dean advisory meetings - as well as an information session on CEEMAN International Quality Accreditation, led by Professor Jim Ellert, IQA director.

Every year we also hold a CEEMAN annual meeting at which we present a report on the activities of CEEMAN in the previous year and discuss plans for the future. That meeting finished an hour ago. At it, we decided that the next CEEMAN Annual Conference is going to take place in Almaty, Kazakhstan.

Now I would like to invite our host, Zsuzsa Deli-Gray to say a few words and introduce our first keynote speaker. I wish you a fruitful conference and I thank you very much.

Zsuzsa Deli-Gray, Director of the Hungarian Site, ESSCA School of Management, Hungary

Dear participants and guests,

On behalf of the ESSCA School of Management, the host of this event, I would like to welcome you to the 22nd CEEMAN Annual Conference. We are delighted to be hosting a conference on technology because our school is an example of an institution that has been investing a lot in the development of technology and technological solutions and their application in education and research. We are happy to show you what we have done and eager to learn from your experiences. We would like to discuss with you the possible ways of cooperation and improvement.

I would like to give you some examples of our devotion to technological innovation. Our school has created an incubator for startups. We have launched 18 companies and ten of those are already operating successfully. Naturally, we are very proud of them.

The General Director of our school created the Institute for Pedagogy and Educational Support as well as the Institution of Digital Marketing at our school.

These are just some of the examples that demonstrate how interested we are in incorporating new technologies in our teaching activities.

Let me say some words briefly about our school so that you know who we are. Our school was created more than 100 years ago, in 1909, by the Catholic University of the West, in Angers, France. At the moment, our school has four campuses. The headquarter is in Angers, a French city of art and history located in the Loire valley. We also have a campus in Paris, located in Boulogne, next to the Seine. Our internationalization started in 1993, the year that CEEMAN was born when ESSCA came to Hungary and set up its Budapest campus. Then we moved on and in 2007 we opened a new campus in Shanghai.

We are educating current and future business leaders at undergraduate and graduate levels. We are also involved in executive education. Our university has a very strong network of collaborators. We have more than 170 academic partners in the whole world and we work together with many national, international and multinational companies. 50 percent of our students begin to work before they have graduated. Three or four months after graduation, all of our students find good jobs and keep them for a long time.

We are also very proud of our accreditations. We are accredited by the French Ministry of Education and Research. We also have EPAS accreditation and AACSB accreditation.

Now, I would like to thank the General Director of our school, Dr Catherine Leblanc who is the main sponsor of this event, for all her support. I also thank CEEMAN, and Dr Danica Purg personally, for their support and sponsorship. This event has also been supported by Exim Bank, K&H Bank, Peregrine Academic Services, Turning Technologies, Zwack Unicum, and Magyar Termek. We also have four media sponsors. I would like to thank all of them for their contribution to the success of this conference.

We have been waiting for this event for a long time and we are very grateful that you have come to it. We have put our hearts in it and I hope that you feel that. I wish you a very successful and fruitful conference in a professional sense and also in terms of social networking.

Innovations and Competition in Hungarian Higher Education

Ádám Török, Secretary General, Hungarian Academy of Sciences, Hungary

Ladies and gentlemen, I must apologize for having to cut this presentation short as I must leave in a few minutes. Therefore, I will just dwell on the most essential elements in it.

In the first part of my presentation, I wanted to talk about general competitiveness issues and how they are related to innovation. There is one important point: the European paradox. Most of you must be familiar with it. The United States, South Korea, and Japan perform much better than Europe in terms of innovation. The European Union spends a lot on research and development and even tries to increase this spending. Its objective described in the Lisbon Agenda is to spend three percent of its budget on research and development by 2020. But I am skeptical of this target because simply spending a lot of funds on something does not necessarily guarantee a high-quality output. The European Union spends a lot on science and research and development but this has a limited effect on competitiveness as the output is mostly in publications, not in patents. Europe is not doing well in innovation measured in terms of patents.

The output of scientific publications in North America has seen a slight decline in recent years. The same trend is observed in Western Europe. Meanwhile, two regions have improved their performance recently: Asia and Eastern Europe. In terms of patent production, we observe the opposite trend. The output of United States and Asia has been rising, whereas that of Europe has been slightly declining.

In my view, this does not necessarily suggest a difference in performance capability but a divergence of interests. Europe seems to be less interested in patents than it is in scientific publications. All this is related to the problem of higher education competitiveness and is part of the explanation that we are looking for.

International higher education is strongly dominated by the United States. There has been a long debate on worldwide university rankings: are they really good indicators of university competitiveness? Of course, we know that the leading American universities are always at the top of the international rankings. Let me share some interesting facts with you. The University of Michigan spends about the same amount of money on research and development as Hungary, whereas Harvard University spends more than Slovakia. American universities may be good in marketing but let us not forget that the financial resources that they have at their disposal are similar to those of entire small countries in Europe. We are talking about competition between universities but it is actually competition between universities and entire countries.

There are a couple of other factors that benefit the United States and make its universities competitive. One is the role of the English language, the lan-

guage of scientific publications. In addition, the United States is a single market of scientific publications whereas Europe is fragmented. Also, there are some important institutional differences.

In terms of public expenditure on education as percentage of gross domestic product, we see the Scandinavian countries and the Netherlands at the top of the ranking. The southeast European countries bring up the rear. Interestingly, Japan also spends a very small percentage of its national wealth on education.

Spending on research and development is strongly correlated with university performance. Conversely, the highest percentage of higher education financed by industry is observed in emerging economies, such as China and Russia. Hungary is also doing well, although the investment is concentrated in a few fields, such as information technologies and pharmaceutics.

Let us now try to assess the international dimension of competition in higher education. Are international rankings of universities good measures of universities' competitiveness? I am one of those who do not agree that these rankings are very informative. Yet, we do not have anything better at the moment. They do provide some illustrations but we also need to understand their limitations.

The first university ranking was published by Carl Koristka in 1863. Its title was The higher polytechnic education in Germany, Switzerland, France, Belgium and England. It provided a very simple analysis of one segment of higher education. Since then, we have seen all sorts of attempts to rank universities, such as America's Best Colleges by the US News and World Report, the Times Good University Guide, the Academic Ranking of World Universities by the Shanghai Jiao Tong University and the Times Higher Education World University Rankings.

Centralized super-universities seem to be among the best in the world. There are examples of these in Russia and India. Hungary is a special case. Recently, some politicians came up with the idea that if they integrated most of the universities of the country into one big university with 200,000 students, it would be among the top-200 in the international rankings. This would violate the main principle of international university rankings. They are supposed to measure quality but one does not create quality by simply aggrandizing an institution.

Now, we come to the main question. How do we measure the performance of universities? In terms of research output? Or innovation output? Or perhaps we should measure graduate students output? If we measure how many PhD holders they produce, are we really measuring quality?

Currently, there are six well-known international rankings of universities: Shanghai University's Academic Ranking of World Universities (measuring quality of education, quality of faculty, research output, and per capita academic performance), the Times Higher Education Supplement (THES) (measuring teaching quality, research, citations, international mix, and funds from industry), U21, Quacqarelli Symonds (QS) (measuring academic peer reviews, employment reputation, faculty/student ratio, citations per faculty, proportion of international students, and proportion of international faculty), Multiranking, (with scores based on individual weighing), and Webometrics (a ranking list without scores).

Looking at the ranking criteria, we see very clearly that there is a strong bias toward quality of research. Of course, we could decide to put more emphasis on quality of education. But how would we do that? Should we add up the students' grades? The reality is that we have more reliable indicators for measuring research output than quality of education. In that case, research institutions are privileged and find themselves at the top of the ranking. There are such institutions in the United States that have only ambitious PhD programs and nothing else. In this way, it is easy to become a highly-ranked university.

Shanghai University's Academic Ranking of World Universities relies on a complex set of criteria. Quality of education is measured in terms of number of alumni who have won Nobel prizes and Fields Medals - a prize given for outstanding discoveries in the field of mathematics. Quality of faculty is similarly assessed in numbers of faculty members who have won a Nobel prize

or a Field Medal as well as highly cited researchers in 21 broad subject categories. Research output is another indicator, measured in papers published in Nature and Science, as well as papers indexed in the Science Citation Index and Social Science Citation Index. They also look at the per-capita academic performance of the institution.

The methodology of the Shanghai University's Academic Ranking of World Universities raises a number of questions. A pure research center, called "university" could perform better than many real universities. The size of an institution often depends on policy decisions, not necessarily on quality. It is not clear how co-authored publications should be counted. In some sciences, there are publications with 1,000 authors that consist of five pages of text.

Finally, are Nobel prizes and Field Medals really good measures of academic excellence? There is one Hungarian university that has been doing well on these rankings because it had a Nobel prize winner in 1937. Because of that achievement a long time ago, the university is still considered to be very good. I do not need to comment on this.

The Times Higher Education Supplement also uses a complex methodology. Quality of teaching is evaluated in terms of the learning environment. Research output is measured in terms of volume, income, and reputation, including citations. Industry income is also an indicator, as well as international outlook, assessed in terms of faculty, students, and research.

Quacqarelli Symonds looks at some subjective criteria, such as academic reputation and employers' reputation, based on a global survey. They also measure faculty-student ratios, citations per faculty, percentage of foreign students, and percentage of international faculty. The most controversial element in this methodology is its reliance on questionnaires for the purpose of data collection. Most respondents throughout the world probably think that Harvard is the best university in the world without really knowing much about it. This reputation gives a dubious advantage to well-known universities like Harvard.

Interestingly, despite the divergence in the criteria, the rankings that these different approaches generate are highly correlated. This means that the rankings are somewhat reliable.

There are also a number of national rankings: Austria's FORMAT-Ranking by the Technical University of Vienna, the Bulgarian University Ranking System by the Bulgarian Ministry of Education and Science, Germany's Higher School Ranking by the Centre for Higher Education Development (CHE Hochschulranking), Hungary's felvi.hu, HVG, Romania's Ad Astra, and Slovakia's ranking by its Academic Ranking and Rating Agency. The problem with these national rankings is that they are designed solely for local universities and there is no basis for comparisons between them. It is not possible to compare Hungarian and Czech or Slovak universities.

The rankings of the world's top-500 universities demonstrate that there is one superpower: the United States. There are also a few other great powers: the United Kingdom, Germany, Australia, Canada, China, and Japan. There are also a number of smaller powers. It is interesting to note that China is developing very fast in this respect.

We have analyzed the results of a competitiveness analysis. We are dealing with a very special market and we should look at the demand side and the supply side at the same time. The supply side reflects human capital and financing. The demand side is about market performance; for example, a university's percentage of the total output of graduates in a particular country. We need to combine the supply side and the demand side. For example, market share - an element of the supply side - is completely missing from currently employed ranking methodologies. We also have to approach human capital from different angles. Again, some of the current methods need to be revised. Let us consider citations. If you get entangled in a debate with another scholar and you cite each other in a series of publications, that does not necessarily make the two of you great scientists. Unfortunately, this does happen and it affects the validity of rankings.

My presentation was short but I hope that my message has come across. Thank you very much for your kind attention.

Global Online Education Meets Global Online Work

Juan Andrei Villarroel, Assistant Professor at Católica-Lisbon School of Business and Economics, International Faculty Fellow at MIT Sloan School of Management and Visiting Scholar at the MIT Center for Collective Intelligence, Portugal

It was a pleasure for me to accept the honor to address this audience.

You (Deans, Professors, and fellow Academics) all know a lot about what is going on in the field of education.

I am speaking as a concerned father of two young children, one of whom has become an avid chess player on the iPad. Very soon, he went beyond the level at which "I" was capable of beating the machine. When that happened, my wife and I decided that it was time for us to send him to elementary school even though he was only five years old (this is, in spite of the government mandated requirement to wait another year until the age of six for admission at public schools where we live).

After his first week of (private) school, we asked him how much he liked it. He said it was awesome. He had found a chessboard and new friends (of his same age) with whom he could play chess. As far as the classroom school experience was concerned, he just gave a deep sigh (he was asked to repeat some basic things which he described as "things I knew when I was four..."). This, among other observations I will share with you today, gives me concerns regarding our education system.

Our Higher Education Institutions need to urgently adapt to a new reality our youngest generation is growing in.

I would like to invite you to consider the experience of this young man, Charlie Marsh (shown on the screen), who dropped out of high school twice. He was among the lowest performers in math and science. Would you accept him at your universities? (facing the Audience of Deans and Academic Professors who respond with shaking heads: a unanimous "no")... This young man enrolled on the Khan Academy and eventually became a computer science student at Princeton University... Today, he is absolutely passionate about math and science (showing a video testimonial from Charlie Marsh himself, who concludes by thanking the Khan Academy "for changing people's lives").

Quite a few people have heard about the Khan Academy but not very many are closely familiar with it (prompting the Audience for their actual experience taking a course on Khan Academy proved that only one person had). In fact, this kid made it to Princeton thanks to the Khan Academy -founded by Salman Khan, not at all an "academic" in the traditional sense. It is the creation of a man who envisioned that he could set up a new world-class institution that could teach anything to anybody anywhere. And free of charge.

The Khan Academy is more than just a set of video-lectures put online. Students can take a test in a particular field so that the system can find out how advanced they are. Then, as the students interact with the platform, the system builds a statistical model of what they know and do not know. In the process, it also develops an understanding of how they learn most effectively. The system prompts the students with exercises featuring game mechanics, and lets them learn at their own pace.

Analog to biology's "tree of life" (a taxonomy describing the relationships between organisms), Khan Academy's system is developing the "tree of learning" (illustrated on the screen as a graph of a network of interconnected dots representing "knowledge elements"). The connections among the dots are based on how people use such knowledge elements as they try to learn, and the graph is updated based on how effectively (or how ineffectively) people prove to have learnt (or not learnt).

Analyzing these data, the Khan Academy dynamically adapts the graph to design a statistically-driven learning model. On the one hand, it allows to enhance the average effectiveness of learning for all students. On the other hand, it allows to increasingly adapt to the unique learning requirements of each individual. While the model is currently most effectively applied to math and other exact sciences, it is also being used in the growing number of fields that the platform supports.

If you use the Khan Academy platform as a teacher, you have access to a dashboard where your students are listed (showing illustration of the dashboard). The skills that you are trying to teach appear on the dashboard. Dark blue squares indicate skills that have been mastered, whereas lighter-blue squares indicate less strong mastery of the skill. Conversely, red squares mean that something has been tried but is not well understood. Everything in gray squares has not even been tried.

This statistically-driven adaptive approach to teaching and learning is something unparalleled in education. (Adapting to each individual's learning style, tracking progress at the level of each individual, while making learning a truly engaging, interactive, and personalized experience that is enhanced over time in a reliable way.)

To bring this unique concept closer to the traditional classroom, the Khan Academy has been conducting experiments in collaboration with schools. In one instance, they worked with a school where their ninth-grade class ranked in the lowest 20th percentile in the state of California when they started in 2010. A year later, the class ranked in the 76th percentile. By 2012, they were in the 94th percentile. In 2013, they were at the top, in the 99th percentile. In practically no time at all, students who were once considered the lowest performers in society, climbed to the top, demonstrating they could actually be the best. (Who is then not performing well?)

The Khan Academy states that there is only one thing that you need to know (when you start studying there): "You can learn anything".

And they really mean it. The Khan Academy platform is multi-lingual; therefore knowledge can be accessed in the native language of the student. It is also multidisciplinary. Apart from math (from where it started), there are natural sciences -biology, chemistry, physics, etc.-, and social sciences -economics, finance, entrepreneurship, etc. There are arts and humanities.

The Khan Academy is building the "trees of learning" for everything that is known; confounding all levels of education (multi-level).

By virtue of being multi-level, the Khan Academy is challenging the idea that everybody needs to slowly progress (e.g. learning math) from first grade to second grade (one year later), -and wait for another ten years- to 12th grade to then get a diploma that says you can figure some things out. For example, in another experiment, the Khan Academy conducted a summer camp for seventh-graders (this is, working with kids 12-years of age) teaching them risk models for assessing financial securities. Then getting other kids to use the results from those assessments to trade securities (e.g. stocks).

Think about it. Understanding accounting (a useful practical skill) requires elementary mathematics. Yet, most people never learn that until they go to college or grad-school, when they forgot many things they once mastered.

So, when it comes to understanding something more sophisticated, such as trading securities, the mechanics required seem out of hand to most people; you need to know statistics and all sorts of other things (a traditional professor would say).

However, the Khan Academy has realized that –by virtue of traversing the "tree of learning" in a more effective way than currently done through the traditional curriculum- it can teach these seemingly complex subjects far better (because they know how the required knowledge elements are interconnected, and how they can be learned most effectively). We are missing the opportunity to teach accounting to kids that have just learned arithmetic when they master the topic at their best –among other missed opportunities to keep them engaged in the learning process by having them apply their knowledge in useful ways.

Most recently, the Khan Academy is becoming multi-certificate. Certification organizations that run standard assessment tests, such as SAT and GMAT, realized that the Khan Academy has far better knowledge –and continues to building even better knowledge- of human learning performance than them and thus they need to work together with them. As a result, SAT –in what they announced as a "historical" development- is going to be run in partnership with the Khan Academy from 2016 onwards.

The Khan Academy is already having an impact on our society worldwide.

Google has been collecting information concerning our search behavior online in order to determine how prevalent some things are in the minds of people across the world (the tool Google made available online to present these data is called Google Trends). Looking at Google Trends data, we can see that "Harvard University" has always been very prevalent in people's minds (certainly more than most education institutions).

However, we can also see that, given the growing body of things competing for our attention, "Harvard University" has been dropping in terms of how much attention we pay to it globally. Looking at Google Trends data for the "Khan Academy", we can see that the attention devoted to it has been rapidly growing -despite the existence of so many other things that demand our attention.

By now (showing a graph of Google Trends data from September 24, 2014), the "Khan Academy" is as prominent in people's minds as "Harvard University".

I referred to the Khan Academy because we (Academics from Higher Education Institutions) speak so much these days about Coursera (a global online education platform), yet this latter is much less prominent (than the Khan Academy) in people's minds around the world. This may be so because the massive open online courses (MOOCs) offered on Coursera largely replicate what we do at our universities: they simply put quality content together packaged as one course (more specifically, without establishing a link among the "knowledge elements" covered in the courses).

The Khan Academy goes beyond that; it adds new value through the adaptive use of the "tree of learning" behind it. It has 10 million users each month, which is more than twenty times more students than Harvard University has had in its entire history. The Khan Academy has users from more than 200 countries and it has had them solve over two billion problem sets. Some day they may be able to introduce real-life problems amongst those and have their students solve them as part of their education process.

(An online language learning company, Duolingo, already does this: having their language learners -who study on Duolingo for free- actually work on real-life translations that Duolingo's paying customers request).

As we can see, a lot is going on in education (that was new to many in the Audience), but what about work?

Let me introduce Alessandra, a marketing major from Canada with a bachelor's degree in business administration (displaying a description of her professional profile). Consider her asking 100,000 US dollars a year for a part-time job at 40 percent (introduced as an illustration of the point I make later about the value of online work). Would you hire her? (facing the Audience who

respond mostly with shaking heads, and a few eventually raise their hands in approval)... It is a tough decision to make, isn't it?

Have you heard of oDesk? (the Audience responds with shaking heads; except for one individual, nobody had heard of it)... Not very many of you have. (showing a video introduction to oDesk, an online marketplace for professional work) No matter where you are, oDesk can help you find the kind of talent (no matter where they are!) that you are looking for.

Alessandra went to this platform -that few people seem to know of- and put her profile on it. She advertised herself as: a marketing mastermind, a captivating content-creator, and a strategic guru. After she delivered the first results of her first projects on oDesk, her employers gave her feedback. They rated her five stars, which means that they were completely satisfied with her performance. One of her employers wrote that she exceeded his expectations and delivered exceptional work; further stating that they would definitely hire her again.

Several projects later, Alessandra has a score of 4.95 out of 5.0. This is good because this creates opportunities for her. She is currently working on three projects for which she is paid a higher hourly rate than when she started working on oDesk. With these three ongoing projects, she is on track towards making 100,000 US dollars this year. And (judging from the number of hours she has recorded on oDesk to this date) she's been working the hourly equivalent of two days a week.

This sounds interesting, but how can employers trust the skills of geographically distant contractors (with otherwise similar educational backgrounds)?

In fact, there is a whole testing platform behind oDesk (in partnership with professional testing companies). oDesk uses proprietary tests to prove to the world that their contractors have the skills that they advertise. In the example case of Alessandra: marketing methods, business strategy, internet marketing, online article writing, and so forth. She is not top percentile (not among the absolute best performers) in any of these fields, but she is really good in some of them.

Anyone (e.g. a prospective employer) can check Alessandra's test performance in a particular field –e.g. email etiquette certification for illustration in this case, and find that Alessandra ranked 5,735th out of 104,119 people (from around the world) in that test. That is an unprecedented level of transparency: comparing her skills with those of 104,000 others. Furthermore, you can look more closely and see what exactly she was tested on; notice also that she finished the test in only 15 minutes out of the 35 minutes allowed for taking the test.

This transparency creates trust in those who may want to hire Alessandra. With six projects in her portfolio, her employers written comments, and her 4.95/5.0 rating, she is now able to ask for 194.44 US dollars per hour. That is her current hourly rate (on September 22, 2014, nine months after joining oDesk).

Based on the latest OECD report on the average number of hours that people worked in OECD countries in 2013 (1,770.48 hours per year on average for all OECD countries), Alessandra would be making 344,000 US dollars a year. This is, if she worked that average number of hours at the rate that she currently asks. Given her skills, this is her actual value on the market. What if she worked twice the average number of hours? (medical doctors in the USA work about twice that average, according to the National Institutes of Health in the USA). That income would change her life.

But the question for us (Higher Education Institutions present in this Audience) is: what about (the value of) Alessandra's formal education (degree credentials)? She holds a bachelor degree in business administration. Does that justify her income (on oDesk)? It is hard to make sense of that (relative to the distribution of salaries typical of business school graduates).

What (value) does the online world create (for working individuals) that others (employers) trust and pay for?

oDesk has been growing (relentlessly for the past decade). They have more registered contractors (8 million registered contractors in 2014) than the whole professional workforce in many countries. oDesk shared some data

at a Symposium I organized at the Academy of Management conference in 2011 (showing a graph). Back in 2004, they were primarily a US endeavor designed to help US employers to outsource staff. Over time, people began to outsource staff from India, Australia, the Philippines, Pakistan, Bangladesh, and other places.

The whole world of work gets mixed and remixed on this platform. They are looking for talent to match the skills that are needed. Besides the eight million registered users they have today, two and a half million employers use oDesk to hire personnel. Over a billion US dollars are being channeled through oDesk this year. Its use is growing fastest in four categories: legal services, engineering and manufacturing, sales, and marketing. These are the services for which the Higher Education Institutions present at this conference are training people!

When online education meets online work: traditional campus-based organizations may get disintermediated.

Consider another example (displayed on the screen). Tim is an oDesk contractor from Okeechobee, a small town in Florida where the average household income is 41,000 US dollars. He took three online tests with oDesk, where he made the top 10 percent in two categories. He also developed a nice portfolio working on 396 projects. His asking price is 148.89 US dollars an hour. This is, based on his work experience on oDesk and his rating of 4.91/5.00. As a matter of fact, his profile reveals that he is currently an undergraduate student in business administration.

Tim is enrolled in an online program in business administration -at an online-only business school, a top one according to US News rankings. According to the oDesk records, he started studying online and working online in 2009. By now, at his asking price on oDesk, he would be worth 264,000 US dollars a year if he worked the OECD's average number of hours per year referred earlier. Remember that he does not have a degree yet. All he has is real work experience and the certifications that the online work platform tests provide.

This is "when online education meets online work". This arrangement bypasses the traditional approach to professional validation: namely, obtaining a traditional academic diploma that proves that you are a capable professional (in a broad sense, often emphasizing breadth of knowledge at the expense of depth of expertise). People (e.g. Alessandra, Tim, and eight million others on oDesk) are now building portfolios of real work experience that proves to the world that they are capable professionals (taking tests in specific areas of expertise, where in-depth expertise seemingly makes a difference). They do not have to wait for the moment of glory when they obtain their academic diplomas to begin making a living for themselves.

(Contrast this, to the college graduation rates published by the US National Center for Education Statistics. Their 2014 report reveals that 4-year college graduation rates after six years are only 56 percent throughout the country. For-profit colleges have the stunningly low graduation rate of only 32 percent after six years. These statistics are especially worrisome when we consider that until now, obtaining a college degree constitutes the entry ticket for better paying jobs.)

Of course, there are areas of professional education in which this does not work quite as effectively. Not all subjects are amenable to complete virtualization of the learning experience. For instance, if you have to train someone on how to build a bridge, you need to offer real-world construction experience. (Yet, how often do Higher Education Institutions offer their students the real-world experience they need? Most Higher Education Institutions do not!)

A lot of education these days happens through conceptual and simulation training. We have flight simulator programs to train pilots, we have Computer Aided Design (CAD) programs to train designers, etc. There is a lot of education that can take place in interactive virtual world simulations that can enhance the learning experience. But ultimately, you will have to take the deep dive and swim (namely, get to doing work in the real-world). The observations I shared today suggest that this should better take place earlier rather than later.

(Not only are the tools available, but the evidence presented shows that tens of millions of people are already effectively embracing them! Remember the Khan Academy? There are areas, such as finance, in which seventh-grade kids already proved they can do quite well -without a college degree and without waiting until adulthood to be able to develop expertise on this.)

Likewise, oDesk is not an answer to all employment issues. There are people who love to work online, but there are others who prefer to be in a real company, meet other people, chit-chat with them and have coffee. There are people who want to get away from their kids or spouses for a little while. online employment is not for everybody. Still, an increasing number of people are discovering the opportunities that it offers and more and more talent is found online. The examples that I presented to you today were not limited to the very best professional performers that one could find online. Rather well-performing individuals in the top 20th percentile.

There is a gap between Academics and Industry when it comes to assessing the value of online education and online work.

It would be interesting for us, Academics in this Audience, to talk to Industry practitioners and ask them what it is they value in their recruits. There must be something employers know that academics ignore. We actually inquired with both Industry practitioners and business school Academics. I am running a global online education survey, where we currently have data from 54 countries. The respondents are: industry professionals working in 44 industries, fellow academics who showed interest in attending a session on this subject which I co-chaired at the Academy of Management 2014, and current students.

A sub-set of questions asks respondents to compare traditional face-to-face education (i.e. on-campus courses at different levels) to online education (i.e. virtual courses of different types). Which is better? On the one hand, the responses from academics unveil that they believe traditional education is better for adapting to individual learning styles. On the other hand, the students' responses unveil that they find that online education addresses their individual learning styles much better.

As far as immediate employment opportunities are concerned, we found a similar story unveil from this research. On the one hand, academics believe that traditional education offers a better means to better employment opportunities. On the other hand, industry practitioners find that online education offers better recruitment opportunities. This may explain why they are so keen to hire people online even if they do not have a formal academic degree.

This research unveils that students are straddling somewhere in between.

When it comes to the specific setting of massive open online courses (MOOCs), our survey respondents agree on average that MOOCs allow for better adaptation to individual learning styles (than traditional education). And, the student group, who should be well-positioned to assess this, is the one who is far more assertive. Furthermore, there is also widespread agreement that MOOCs offer good employment opportunities, although academics are the ones who are less convinced –in spite of them not being involved in the recruiting process.

At last, we asked what percentage of management education they expected to be offered online by the year 2020. The responses unveil that academics strongly prefer face-to-face interactions. By contrast to industry practitioners who believe that online education should play a significantly more important role. Of course, we need a bigger sample to gain a better understanding of this phenomenon. Yet the statistically significant findings from this research suggest the existence of a very real gap. The world of practice finds more value in online education and online work than the world of academia is willing to accept.

We, professors at business schools, like to ask our management students to find answers to really tough questions.

"Think of the self-driving car", we tell them. "How would you sell insurance in that case? It is a car that never crashes. Think! This new world is already happening, now!". People get excited about thinking of problems of this kind, finding untapped opportunities in addressing the challenge, and conclud-

ing that we need to come up with new business models. We teach them that business model innovation is all-important in our changing world.

Yet, when it comes to dealing with the self-learning individual, Higher Education Institutions are not (yet) thinking about innovating their business model. But they should! We should be asking: "How do we sell education to a self-learning individual? It is a person who does not need to go to school. Think! It is happening, now!". What is your (new) value proposition?

And, in direct relation to that, what about the "self-employed entrepreneur"...?

The structure of the knowledge economy is fundamentally evolving. Beyond the digitization of information goods. We are facing the dematerialization of the knowledge-based organization. This brings about challenges and opportunities (cf. MIT Press book "Leading Open Innovation").

Back in 2011, I led two Symposia at the Academy of Management conference where we discussed the topics I brought to your attention today: "The Global Ecology of Crowdsourcing" and "Online Distributed Organization". We are indeed witnessing the emergence of the Online Distributed Organization, which is inherently global in reach and decentralized in structure. We need to learn how to organize around a new set of concepts, a new set of constraints, a new set of possibilities, in order to extract the most value out of it. For ourselves, for society. It enables unparalleled new efficiencies, and new business models yet to be invented.

Peter Drucker famously said that the greatest danger in times of turbulence is not the turbulence itself. The greatest danger, he said, is continuing to act with yesterday's logic. It is no longer business as usual (certainly no longer the business of the education model of "chalk and blackboard", or "powerpoint and laserpointer", that most of us have been brought up in).

The business model of education is in great need of innovation!

We need to think about that together (as in this conference), so that we (and our many ideas put together) can make a difference. The world is globally connected, and our global society is increasingly acting as one. As a result, we have to reinvent education -with the premise of a globally interconnected society in mind- to enable the new possibilities that upcoming generations will be able to grasp and build upon.

I am not saying that everything could be or should be virtualized and that we do not need human interaction. Quite the contrary, we need greater – and higher-quality- human interaction. More than it is currently the case in physical classrooms of 500 to 1,000 or more students facing a single professor in (brand new) auditoriums at certain universities in advanced economies. More than it is currently the case in traditional Fortune 1000 companies with 10,000 to 100,000 employees or more, led by a single person expected to speak for them all.

What I am saying is that the online world of education provides (global) opportunities to a whole host of people who never had a chance to learn –or never found a system that could adapt to his or her learning style to be able to reach their individual potential. It also provides (global) opportunities to people who could not find a job –or never found an employer who could offer the interesting work he or she was hoping for. It also provides (global) opportunities to companies who could not find workers within their geography –or never could find a great talent who shared a passion for the work they do!

Over time, a system like the Khan Academy (and other platforms like it) will certainly cover more areas of knowledge so that more and more people will be able to develop their individual potential. Potential that might otherwise have been difficult, if not impossible, to reach through the traditional education model that is prevalent today.

Ultimately the whole playing field will rise, globally.

Think of illiteracy 50 years ago. There were countries in which very few people could read and write. Nowadays, most young people in nearly all countries are literate (In June 2014, UNESCO reported that more than 95% of the world's youth were literate). Although, computer literacy is the new concern. Data from a recent OECD survey indicates that only about 30 percent of people in

those countries feel comfortable using a computer. By 2020 this percentage (in OECD countries) will most likely exceed 50 percent as the younger generation takes over and computer systems become friendlier.

In 50 years from now (which many of us will live to see), 100 percent of the youth around the globe will not only know how to read and write, but most of them will also be 100 percent comfortable using computers. People will certainly engage in "self-learning" online: not limited to the geographical availability of schools where they live, nor the budgetary constraints for hiring quality local instructors, nor penalized by the imposition of inadequate standard program curricula. They will be on a quest to realizing their full individual potential, while contributing towards one global society: creating new knowledge (at a rate that no individual could ever master) and new economic value (across boundaries of many countries), by engaging with others from across the globe.

This latter is the world we – academics of our generation – need to devise a good education model for, today.

Introduction to the Second Day of the Conference

Danica Purg, President of CEEMAN, Slovenia

Welcome to the second day of our Annual Conference. I have the pleasure to introduce our chairman: Professor Arshad Ahmad, vice-president of McMaster Unversity, Canada, and director of the McMaster Institute of Innovation. He is a specialist in finance but he has many other interests as well, such as teaching methodology, particularly accelerated learning designs, conceptual change, and teaching philosophies.

Yesterday Andrei Villarroel told us a lot about the Khan Academy. I heard about it for the first time two years ago in South Africa. It was Arshad Ahmad who mentioned it. He was talking about Coursera and the development of massive opened online courses, the so-called MOOCs. I would really appreciate it if Arshad could use his rich knowledge and tell us more about that today. I think that all our participants should learn about these trends. Some of them do not attend all conferences devoted to these issues but they might benefit from hearing what is going on in this field.

The first time that I listened to debates about MOOCs, I noticed that some people in the audience were very excited about them whereas others were scared. They did not understand how these courses were set up and did not have the means for them. It is very expensive to make your own massive open online course. The cost can easily reach about 100,000 euros. At my school we also wanted to do a massive open online course. For example, something in the field of art and leadership because we are very good in that. But when you find out how prohibitively expensive this can be, you back down. We decided that we could go ahead with this plan when we find a wealthy sponsor, such as a bank.

This spring I attended the EFMD conference of deans and directors. Many of the participants wanted to set up massive open online courses but they did not have the financial means. Besides, the statistics show that a lot of people take these courses but only a small percentage finish them and get a certificate. I think that the majority of the CEEMAN members believe in a personal touch in education although we would not mind using more technology. We must find a way to blend the two methods so that the students can have both at the same time and each of the two methods leverages the other.

Yesterday Arshad said that we practiced high-touch, not high-tech at our school. When I told some of our students that we might include a massive open online course in our offer, they reacted very negatively. They said that they had come for face-to-face interaction with our faculty. They wanted to become great leaders who make an impact and they wanted to be impacted likewise. They wanted to feel the impact of experiential learning, not the impact of technology.

We experimented with a small group of students who took a massive open online course on innovation by a Stanford professor, accompanied by face-to-face interaction. We had meetings at which the students discussed the course contents. It was a great experience and it makes us eager to contribute something in the field of art and leadership that nobody else has done so far.

When we decided to devote this conference to its topic, we realized that we would have difficulty finding good professors in this area. CEEMAN is not rich and we cannot pay 50,000 euros for a speaker. We knew we would have to look for speakers within our circle. We knew it was not going to be easy. Nevertheless, we felt that we must grapple with this challenging topic. We are happy that we have Arshad today with us because he is very knowledgeable about technology and education. Besides, he has valuable practical experience that we can learn from.

Introduction by the Chairperson

Arshad Ahmad, AVP, Teaching & Learning at McMaster University and STLHE President, 3M National Teaching Fellow, Canada

I am extremely happy to be here today. We have a very special spirit of collegiality at CEEMAN that we do not find at many other conferences. Since there are so many people that have come here for the first time, I suggest that we take a few minutes to introduce ourselves. Please shake the hand of your neighbor or - even better - exchange hugs. It is too early in the morning but you can do it nevertheless.

This is great. We have already exchanged cards and the conversations have begun. That is fantastic.

As Danica said, we started off with a Deans' and Directors' Meeting yesterday. I was struck by the wealth of different views that we heard from the panelists. They talked not only about what we can learn from the past and the lessons that we can draw but also about what kind of world we are living in right now. Some even ventured further and told us about the future that we can expect to unfold before us.

Today's main topic is when, how, and why technology is reshaping management education. That is the broad question that we are trying to address from various angles. I am sure that we will once again be exposed to a wide spectrum of different views. We are going to hear corporate views. We have providers of technology who are going to talk to us. We also have colleagues from academia.

We had a very provocative introductory plenary. Andrei Villarroel energized us with his vision. He talked about the Khan Academy and its great achievement. He also told us about a talent recruitment website that hardly anybody knew about - oDesk. Although I think that I know quite a lot about what is going on, I must admit that I learned something new from Andrei's perspective. Yet some people may have felt detached. Perhaps "surprised" is a better word. They were probably surprised to find out how life was unfolding online. People studying online find jobs brokered online through institutions like oDesk.

This is an opportunity for us to realize that technology can make us think very differently. It can create a lot of divisions as our own imagination may differ from the imagination of those who are carving out the brave new future. But I remind you that technology can also have the power to bring us together. It might be important to have a conversation on what kind of future the development of technology is preparing for us. We are united by those that we serve. Our raison d'etre, the reason that we do what we do, are our students. Whether you are a technophobe or have embraced new technologies, we are all united by the fact that our students possess incredible talents and abilities and it is our duty to make sure that they succeed. We all care for

them very deeply and we are as students-centered as we are devoted to our research.

This is the kind of gathering at which we can speak frankly about our views. We can respectfully agree to disagree. We can chart different ways in which we can help our students. I cannot think of a better place for that than this venue.

Now I have the pleasure to invite our morning keynote speaker to take the floor. Chris is the education director of Microsoft. He is covering a lot of territory. The brief that I read yesterday mentioned 33 countries. That is about 17 percent of the world. I do not know how you manage that, Chris, but good luck to you. It is amazing that you have such a rich geographic perspective.

Chris has a North American perspective as well, having been educated there. He earned an MBA degree from a US university. He has a lot of work experience since he has been in the industry for two decades.

Without much further ado, ladies and gentlemen, please welcome Chris.

Technology Trends in Education

Christodoulos Papaphotis, Education Industry Director - Public Sector, Microsoft Central and Eastern Europe Headquarters, Greece

Before, I start my presentation, I would like to thank CEEMAN for this invitation. I know that CEEMAN is active in Europe, which is the area where I work. I am very grateful for the opportunity to be among you today.

When will technology impact management education? I think that the answer is obvious. It is already impacting it just as it is impacting every single aspect of our lives.

I am responsible for Europe, including all of Russia. In fact, I have been in Vladivostok. Recently, I came from Moscow, where I had a meeting with innovative teachers. This vast geography gives me a unique opportunity to talk to people like you - teachers, educators, professors - and learn about the challenges that you are facing. More than 500 people at Microsoft work exclusively in education.

I like to quote John Kennedy on education: "The goal of education is the advancement of knowledge and the dissemination of truth". This philosophy has been in Microsoft's DNA since the very beginning. Obviously it comes from our founder, Bill Gates, who has now moved into philanthropy. His main goals are to combat diseases in developing countries and to support education in the developed world. Therefore, education permeates everything that we do across Microsoft.

I would like to discuss some major trends that are happening worldwide. Let me first quote an educator whose statement shocked his colleagues when he made it. He said "Our students today are using technology to learn without us". We should think about this.

Danica Purg talked about "high-touch" versus "high-tech". I could not agree more about the role of educators in the classroom. They are the centerpiece that makes education happen. In my view, it is not "high-touch" or "high-tech". What matters is how we blend these two. There is no doubt that we have plenty of educational tools at our disposal but educators still play a central role. At the end of my presentation, I will show you how we support educators across the world.

Obviously, the current trends affect societies and economies. One of these is the advance of technology in the 21st century and its growing impact on learning. In this century, the most important element of learning is not knowledge but skills that will enable people to be successful in the workplace.

I come from Greece. You know that my country was hard-hit by the recession. Many other South European countries have fared in the same way. This year, McKinsey published the results of an interesting study that included Greece, among other countries. The study revealed that although there is a lot of

unemployment across Europe, employers cannot find the right skills to fill their vacancies. I am currently hiring three people for my team and the recruitment process seems to be taking forever. It is something to think about: we have a lot of unemployment but we cannot find the right people for us.

Another trend is the shifting workforce. The workforce of today is far more dynamic than it used to be in the past. This is reflected in the way that people work and learn.

Interconnected outcomes are very important in education. When we discuss education with institutions, we always start with the outcomes that they want to achieve. Unfortunately, educators do not always have a clear idea of the outcomes that they should produce. I am convinced however that the right sequence is to identify a desired outcome and then work backward from there: find out what technology, processes, and culture you need to achieve that outcome.

How does technology influence those trends? The first issue that I would like to discuss is the evolution of what is known as user interface. It goes beyond the ability to use a touch-screen on a smart phone or a tablet. It is an ability to use this technology in a way that makes it immersive and changing the whole context of technology-based teaching. An immersive environment unlocks new potential, including the potential of children with disabilities, such as autism. That is one of the ways in which technology can provide "high-touch" rather than be "high-tech" for its own sake.

The second thing is the role of the device. I was recently in Moscow, traveling with our director of education. He is located in Dubai. He told me that many schools there get devices that allow them to infuse their day-to-day activities with technology. One of the reasons that they are doing this is that they understand that their oil will eventually run out and they would like to have the best-educated people in the world.

Similar attempts are being made in Thailand. They are weaving technology into everything that they do: learning outside the classroom, communicating, and engaging in professional development. They are creating a rich environment in which "high-touch" is combined with "high-tech". In that way, technology enhances the role of educators, making them facilitators and coaches.

The next advance in technology is the move to the cloud. This is relevant even at research institutions that need a lot of processing power to do many of the tasks that they are doing. The processing and storing capacity of the cloud is practically unlimited. This enables institutions that do not have resources to have a super-computer at their fingertips. It goes without saying that this is changing our lives.

The so-called 21st-century learning creates new paradigms. We are witnessing an evolution of the skills that are necessary for the 21st century. First, the formal and the informal are blending. Where and when are you learning? In class or at home, reading Wikipedia or doing an exercise for a Khan Academy course? Or perhaps when you are chatting to a friend over your phone? There are no longer clear boundaries around a learning environment.

It is not digitization per se that matters. It is not the fact that a paper book can now be read as a pdf document on a computer. It is the way in which this enhances our understanding of the world and our learning outcomes. For example, technology allows educators to adapt the teaching process to the individual learning needs and capabilities of every student.

We have conducted a survey across the world, called Microsoft EDU Tracker Research 2012. We asked educators about the main educational priorities at the moment. They identified three main priorities: creation of jobs and economic growth, enabling innovation, and transforming education. Taking a deeper look, we found that 79 percent of the respondents say that ensuring students have 21st century skills to be globally competitive is an important priority. Also, 73 percent state that providing world-class education to support future economic growth is an important goal, whereas 69 percent chose "providing training opportunities that allow people to learn the skills that they need to succeed in life".

Our vision of education is formulated as "Anytime, anywhere learning for all". We strongly believe that education democratizes society and gives opportunities to all. What are we doing as a company to reach this goal?

We are making significant investments to help transform education by engaging with ministries of education and different bodies around the world, such as UNESCO and the European Union. We also provide direct support to educators. We would like students to be inspired and think that education provides unlimited opportunities. This is the key to everything that we should be aiming for in education. That is what will unleash the potential of this generation. Finally, we believe that it is important to empower schools and universities to run their business.

Microsoft has invested significant amounts in education, without expecting a financial return on its investment. Our goal is to produce an impact on society. In 2013, Bill Gates said, "So many of us have a great teacher to thank for our achievements. That's why I'm so proud that Microsoft in Education continues to support innovative teachers around the globe".

We are delivering services and experiences that bring learning to life in and out of the classroom and allow education leaders to reimagine how technology can modernize learning and improve learning outcomes. We consider accessibility very important and make efforts to enable students with accessibility challenges to use our technology. I have some moving stories about students with visual impairments who were able to study through the use of technology. Only a generation ago this was unthinkable. Microsoft is creating public-private partnerships to put technology access in the hands of students and educators throughout the world. This unique program has helped us provide digital access to 16,000,000 students in over 55 countries.

We are empowering educators with the training, communities, technologies, and experiences they need to succeed and to help every student achieve his greatest potential. How do we do that? Microsoft has invested in a global initiative, worth 750 million US dollars, aimed at improving teaching and learning. Since 2003, we have led the way in partnering with education, helping nearly 11 million educators and reaching more than 207 million students in 139 countries in our first 10 years alone.

We have an IT Academy. Many of you are already using it at your university. It provides a curriculum for teaching information technologies from a basic level to an advanced one. There is a high school in Miami that has introduced this training in the ninth grade. Interestingly, after graduating from that high school, the alumni can get jobs that pay 50,000 US dollars a year. They skip college education altogether. This is food for thought.

We also have a teacher education initiative and we support innovative schools. We also have a Global Forum at the end of October.

Although we believe in the use of technology, we do not think that it should be used disruptively. For example, it is not a good idea for students to sit in the classroom and do something on their phones or computers that is not related to the educational process. We have technology that enables control of every single digital device in a given environment. We believe that we need to allow teachers to be in control of the situation. With our technology, teachers can see what the students are seeing and allow or ban access to specific sites. We also have a technology called Parental Controls. It is by far the number-one technology that parents with children are interested in. It tracks all the sites that a child has opened and all the games that he has played. It also tells you how long that lasted. I approve of this type of control because I am a concerned parent. I want to give my children access to technology because they cannot live like 50 years ago. At the same time, I want to make sure that they do not open detrimental websites. If that happens, I have to sit down with them and explain why they should not do that.

Of course, we also want to inspire students. We are providing the technology skills and support programs that can help students get prepared for their next step in life, in the workforce or in education. We are running a program called Imagine Cup. Teams from the whole world work on various tasks, such as preservation of the environment, and we bring them together so that they compete. We have discovered that there is a lot of young talent throughout

the world. That makes us feel that it is our responsibility to help them develop their potential.

We have been told that the biggest impact of technology is on the underachievers in the classroom. At the outset of puberty, some children simply disconnect from the educational system. Through the use of technology, educators were capable of getting them reengaged in the classroom and improve their performance. I agree that we need to encourage more human interaction. But the digital world does just that and it creates better educational outcomes. Of course, everything should be used in moderation. It is the teachers' responsibility, but also the parents', to set some limits to the use of technology. It has a huge potential but we need to understand it and assess it properly. I have a friend whose child plays Minecraft all the time. I told him that he should spend some time with his child and find out what that game is about and what skills it develops. We cannot judge something that we do not understand.

We empower universities. This means that we help educational institutions meet the evolving needs of educational infrastructure by offering cost-effective IT products and technologies that help secure and manage the business of education, in the cloud and on premise. Our goal is to make universities better run and more efficient. They should be able to do more with less. We have a full range of solutions for that purpose. We have found that 97 percent of all universities use Microsoft technology. We are true partners in learning. We seek to understand your challenges, as well as those of your students, and help you overcome them. We have made a lot of investments and we are always aiming to improve. I would like to invite all of you to reach out to us. Send me an e-mail and I will connect you with the right people in your country so that you can see how Microsoft can help you better on your educational journey.

Panel 1: When, Why, and How Is Technology Reshaping Management Education – Business and Corporate Universities' Viewpoint

Peter Roebben, Senior Managing Director, Member of the Executive Committee, K&H Bank, Hungary

The topic of this panel is interesting and it keeps us quite busy at our company. We are facing an existential question in our business: How will we deal with our clients. Digitalization has an enormous impact on that. We have adopted a hybrid model because we believe in keeping the physical branches of our business. But we also want to enhance the click side of it and we have worked out a strategy.

Concerning the training of our employees and managers, I admit that our strategy is quite clear. Nevertheless, we have seen a faily rapid evolution in the past few years. I think that we are adopting a hybrid or blended model. Looking at how we spend our money in education, I would say that there are two segments. One of these is content-driven education. We teach specific knowledge concerning products, regulations, legal changes, accounting changes, and suchlike. A lot of time and money goes into that kind of education. It has rapidly become almost complete online, relying on videos, webinars, and other similar methods. There is less in-class study and more individual learning on the Internet. In fact, we will not use in-class teaching for this purpose unless it can be combined with some other goal, such as motivating staff for selling some product.

In the field of management education, it is a bit more complicated. We were very traditional until recently. We worked together with business schools, such as Vlerick Business School, INSEAD, and IEDC-Bled School of Management. We also sent people to tailor-made corporate universities. Until recently, we used very little online training for this purpose. That has changed a little in the last couple of years. We have started using webinars and inspirational videos from You Tube so as to draw people's attention to certain things. By now, this accounts for roughly 10 percent of what we do in management training. The bulk of that training is still traditional.

The goal of these trainings is not just to transfer content. They are built into our corporate strategy. We are trying to get our managers linked so that they start and maintain a dialogue. We also expect people to use what they have learned and apply it in actions. The experiments that we conducted with online courses were not very conclusive. We had a well-known professor deliver a course to our key managers in Brussels, Hungary, the Czech Republic, and other places. We were able to join the course online. The colleagues in Brussels had a great experience but those in Hungary were pretty bored. When the course ended, we left the room with the feeling that we had

wasted our time. The reason for that was that although we used a platform that enabled us to type in questions, the connection simply was not there. People in the room did not have the feeling that they were part of the debate. We also had the feeling that the teacher reacted physically to the audience that he had in front of himself in Brussels, whereas the audience that was following online was invisible to him. I have done some webinars and I know how it is. You do not see your audience except those in front of you. All you see is people logging in and logging out. The latter does not make you feel very good as a speaker and you start wondering how well you are doing. In a nutshell, our first experience of this type of education was very mixed. I think that the delivery of the course should be done in a different way if you want to have the same dialogue and the same impact everywhere.

If the idea is just for people to study some interesting content, we can encourage our employees to enroll themselves on a course and do it on their own time whenever they feel like it. However, this requires a lot of free time and managers do not have it. Therefore, we need to stimulate them so that they devote time to their development.

Alexander Oganov, CEO, Uniweb, Russia

Peter raised a very valid point. It is about ensuring that online education is as efficient and as effective as it can be. From that perspective, instructional design is the answer. It is just as much a science as pedagogy in a classic off-line community. At the same time it is an evolving science and it has been evolving for a couple of years now. There are a lot of early adopters where I come from but there are many more in the United States and Canada. I am sure that our keynote speaker will confirm that because he is knowledgeable about these things. That is what he does for a living.

When you are in a corporate environment like Peter, you have to pay very close attention to the structure of a course when delivering it to your consumers. It does not matter what delivery platform you choose because there are a number of delivery platforms. The technology is already there; it has been invented. What matters is how you structure a course and what tools you use to make sure that your key message reaches your audience very efficiently. That is something that we know quite a bit about because that is what we do for a living. We enable the universities that we partner with to ensure that their product is either as good as an off-line product or sometimes even better.

Peter talked about teaching legal reforms and suchlike. Those are known as hard skills. As for being able to get a message across, that has more to do with motivation and leadership. Those are soft skills. Soft skills are a lot more difficult to teach in an online format. That is what you need to pay very close attention to.

I attended all discussions yesterday and took notes. There seemed to be a coherent agreement among everybody that technology is reshaping management education. That is the reason that we are all here. But Arshad said something very important: technology is not disrupting education. On the contrary, it is creating opportunities for it by complementing it. Still, there seems to be an underlying assumption that I would like to challenge. We keep speaking about bringing technology into the classroom. We should be speaking about taking the classroom out of its comfort zone and bringing

it to the end consumer. That is where the scale is. If I know anything about online education it is the fact that online education can create scale.

No matter what you want to do - an open online course or an online degree program - you need to understand where you want to end up. That will impact not only what technology you use but also how much it will cost you.

Somebody said yesterday that online education does not have to be expensive. Unfortunately, it is very expensive. I know that because I invest in it. If you want to roll out a fully online degree program, you had better believe that it will cost you a lot of time and a lot of money. The assumption that it can be cheap is just wrong.

Right now we have 16 academic partners that we are working with in Russia. We have rolled out 30 online programs with a currently enrollment of 5,000 people. We have reached a completion rate of 98 percent. online education gives you a full experience and a full educational process. We are not talking about massive open online courses or scaling through various marketing instruments. We are talking about a whole experience. That costs a lot of money. There is no way around it.

János Vecsenyi, Executive Director, EFER – European Forum for Entrepreneurship Research, the Netherlands

A completion rate of 98 percent is extremely good. I used to be a trainer and there was a prerequisite for my course: completion of an online course. When we started, I asked the participants two basic questions and they had no clue. They could not recall anything that they had read for that online course, despite the fact that they had obtained certificates of completion. How about that?

Alexander Oganov

It is a matter of how you measure the effectiveness of an online course. There are technologies that we use currently to analyze customer behavior. When they are on a delivery platform, we know what they are doing every second. Once we have gathered enough statistical information about how our students are doing, either individually or as a group, we can modify and optimize the course structure in such a way that it accommodates learning patterns. If you have an understanding of how you are going to measure cognitive behavior, effectiveness, learning patterns, and how you can make it more adaptive to the learning patterns that you have been able to identify, you will be able to produce the most desirable effect. That is how an online course becomes more effective than an off-line one.

Peter Roebben

When we do a training session, we want an enrollment and completion rate of 100 percent. We train our people because we want them to be able to do their jobs properly. For that reason, their motivation is high. But I must tell you that despite our great interest in developing soft skills, I have never seen a proper online training offer. All the tests that we have done are the ones that we have initiated because we have somehow seen that something is changing. We can access some more higher-quality content in a way that

we could not afford at all our different subsidiaries. If you pool your resources, you can achieve better quality because you have a bigger group. Obviously, you also cut costs and that is important to us. But we have never received any proactive offer from any business school.

We are in the process of redesigning our group-wide corporate university and we are not finding anything available. This is food for thought for all of you who work in education. Suggest something that could work and we would be glad to consider it. It is possible that we are doing something wrong. We are not aware of all the opportunities that technology is offering. Our top management does not consist of youngsters. Perhaps our receptiveness to new technology is a bit lower than the receptiveness of the younger people who are now joining the company. Perhaps these younger people will push us to deliver more training in more modern ways. I see some of my younger managers using webinars internally within their own departments.

Our human resource management department is very conservative in terms of technology and not very advanced in that respect. Therefore, I am not absolutely sure where the main part of the problem lies. Is it on the demand side or on the supply side? It might be somewhere in between.

János Vecsenyi

Let us ask the audience about the perceived benefits of the use of new technologies in education. What might these be?

One reason for the use of new technologies may be the perception of the new generation of students. If they expect to be educated in a high-tech environment, we may simply have to accommodate their expectations. Also, some of you indicated that the new technologies provide richer content, flexibility, and scale. And they may just be more fun to use.

Now, let me ask those of you who are skeptical of new technologies. What arguments do you have against them?

One argument is that the personal touch is missing. There is no eye contact. There is no exchange of experience. And they can be very expensive.

When you go back to your schools, you will find that some of your colleagues will be skeptical of the use of new technologies, whereas others will be very enthusiastic. You have to learn how to defend your position and argue with the other party.

Alexander Oganov

I see that people in this room are almost evenly divided into a group of skeptics and a group of adopters. I heard some extremely valid arguments in the course of our conversations. After a bit of a debate, everybody seems to end up being on the fence.

We have been discussing how to transfer some skill of content into an online format and ensure that it is delivered as effectively as it would be off-line. The answer to that is actually quite simple. There are a number of disciplines or skills that you can label as you wish, all of which require a personal touch. If you look at the composition of the audience in this room, you would see a perfect mix for a degree program: 75 percent online, 25 percent off-line. That is how we design our programs. That is how we have designed the program that we will be launching next month with one of our academic partners that may be present here today. That would be an appropriate answer that should alleviate a lot of concerns that I heard in the past. If you want to make sure that you are engaging your students with something beyond knowledge and content that is transferable via various online instruments, you just have to add some live interaction. It is as simple as that. That should not be a concern. There is an instrument for that and you have to integrate it into the online education formula to ensure that everything is working smoothly.

Going back to my initial point, it is all about instructional design. It is all a matter of how you design your program. You have to use whatever tools are available to ensure the quality of that program.

Peter Roebben

As a customer, I want it all. If you can provide a solution that gives me the best of both worlds, I will buy it. Arguments such as flexibility and scale really matter. I have been running a transformational leadership program for a year and half. We are a multinational group. Once in a while we have to bring large groups of people together - a few hundred people in a large auditorium for a day or two. That might help a little but it does not give you the same look and feel as what you get from a more in-depth approach. This is a problem that we have not been able to solve properly. Perhaps technology can help us with that. I would be very eager to have that kind of mix. I am not sure that the mix should be 75 to 25, but if we can have 25 to 75 that would be a step forward, considering our situation at the moment. I think that whoever comes up with a good blend and a good solution will find clients for it.

János Vecsenyi

Thank you very much, everybody. I really appreciate your enthusiastic involvement. Is there any conclusion that we can make?

Alexander Oganov

I want to make a very important point to demonstrate something. Chris, can you outline the key message that this conversation emulates?

Christodoulos Papaphotis

Change is coming. We have to perceive it properly and deal with it adequately. The arguments that we heard against the new technologies are quite valid. There is no technology that can replace the eyes of the customer and the personal touch. At the same time, the interaction and all the things that we can do through technology are unparalleled. The reason that I am here with you today is that I was able to do some research on the Internet. Colleagues from Slovenia, Hungary, and Thailand sent me some information and I collected it. This would have been impossible without modern technology. It is not replacing human experience. It is enhancing it.

Alexander Oganov

So, change is coming and it is enhancing human experience.

We spent the last 45 minutes debating the pros and cons of the use of modern technology in education. That was not very different from what happens in a classroom. All students follow what the teacher says and take notes but each of them interprets the message in a specific way. That is just the nature of the teaching process. Through the online method you can find out whether everybody understand the message correctly and in the same way or not. I think that this is very important.

Arshad Ahmad

For me, the most important lesson from this discussion was that we should not worry too much about the right solution. Instead, we should think of the right questions to ask. I think that this is something that we can all walk away with because we all have questions that we would like to discuss further.

Panel 2: When, Why and How is Technology Reshaping Management Education – Management Schools Viewpoint

Danny Szpiro, Dean of Executive Education, Jack Welch Management Institute, USA

I was not able to join yesterday's debates because I was teaching. But this morning I heard some important comments on how people learn. This is central to our missions as academic institutions and what we should focus on. I assume that this was a central theme in yesterday's discussions as well. But since this panel is focused on the business schools' view, we are going to take a little shift in perspective. What are some of the challenges that we face administratively in creating the educational experience that we provide to our students? We are not going to leave behind pedagogical and learning issues but we will also start talking about organizational issues for business schools. What do we need to do to deliver on our promise and meet the needs of our customers in various places and various formats?

Joining me on this panel are Andrea and Zabid. You have their bios. Both are directly involved in teaching and both have a lot of experience. They also have very senior roles in the administration of their organizations. Their job is to put together the resources and find opportunities to integrate technology into the educational process.

Andrea Tracogna, Deputy Dean, MIB School of Management, Italy

In the previous session, I sided with the technology "Luddites". That is not because I do not like new technology. On the contrary, I am actually an experienced user of it. Yet, it seemed to me that there is too much emphasis on technology in education, as if it were considered an end in itself rather than just one of the available tools to better serve the needs of a market.

In our view, technology is everywhere around us and business schools need not be an exception. In this respect, we share the views that were expressed earlier in this room. Technology is enriching our experience of life. Why should this not be true also for learning experiences? Learning is a social experience and takes place everywhere, not only in the classroom. Technology assures continuity in this process, helping integrate in-class and distance activities. Yet, on the other side, we believe that learning can be much richer and sophisticated than navigating the web, watching a movie, or being immersed in a virtual community.

Before explaining further my viewpoint, let me spend a few words about my organization. MIB is a not-for-profit consortium of academic and business partners, founded in Trieste (Italy) in 1988, with the mission of delivering managerial education and carrying out applied research in all areas of business. The school only targets the post-graduate, post-experience segment of management education. The portfolio of activities includes three program lines: MBAs, specialized masters, and executive education. MIB's main focus is on the financial and insurance sector.

As you may know, Trieste is a well-established financial center in Italy. So, it is just natural that MIB's key partners and customers include, among others, Allianz Spa, Assicurazioni Generali, and Intesa Sanpaolo.

We offer the following programs:

- MBA in International Business, accredited by AMBA and ASFOR
- Executive MBA, accredited by AMBA and ASFOR
- Master in Insurance and Risk Management, accredited by EPAS and ASFOR
- Corporate Master in Insurance and Risk Management, accredited by ASFOR
- Executive Master in Insurance and Finance, accredited by ASFOR,
- Executive Corporate Master in Biomedical Technology and ICT

In the last 10 years, we have been facing a growing demand for executive and corporate master programs, targeted to the specific needs of companies. As a consequence, the main part of our revenues comes today from executive education programs validated the by corporate sector. These programs have different positions in terms of proximity to the school and seniority of the participants.

Focusing on such programs, we had to consider the needs that we have to serve. Companies always try to extract the highest possible return on their investment. Sending employees on such programs involves a huge cost in terms of logistics and opportunity. Time is of the essence; therefore we have to keep delivery time as short as possible. Also, we need to be able to customize programs without being able to attract a huge number of participants. Another expectation is that we will be able to provide working tools that can be applied the day after the program. Finally, the executive educa-

tion process involves a very rich and informative feedback that sometimes resembles coaching. To summarize - compared to the open courses - our executive education programs address the needs of the customers better in terms of reduction of logistics and opportunity costs, fit with participants' work agendas, customization of contents, feedback and coaching services, and on-the-job application of new knowledge. As a consequence, an increasing proportion of our training activities are not taking place on our premises.

We had to relocate our learning activities completely, redefine the composition of the whole process and decide how much should take place in the classroom, how much in a virtual classroom, how much in online tutoring, and what proportion should be self-based training. This was a very challenging task. It took us almost a whole year to redesign our programs.

We and the human resource managers agreed that the workload of the participants should overall be reduced. Also, residential activities should account for no more than 10-15 percent of the total learning process. This was a big challenge for us that compelled us to consider technology as a means to compensate for the lack of physical interaction.

Indeed, some of these programs can last for two years and be an equivalent of a degree-level program as they are not very different from an MBA program. They simply have a different flavor as they focus on a specific topic or are designed for a specific industry. This substantial length of our programs creates a challenge: how to maintain the commitment of the participants. This is not a matter of pleasing the teachers. It is a key expectation on the part of the corporation. Dropout rates simply could not be discussed. We are required to carry 100 percent of all program participants through the whole educational process.

We set up a customized learning platform to support the delivery of our programs. As a result, teaching materials were made available and easily accessible to participants. Lecturers can easily launch and manage distant, virtual classes and tutoring sessions. Discussions occur spontaneously, at a distance, within the community of teachers, tutors and participants. We use an original bundle of open software, standard hardware, and social technologies. The school has decided that the development and management of the learning platform must be fully in-sourced.

By way of example, let me briefly describe a specific program. Launched in 2009, the Corporate MIRM program is a two-year, part time, post-graduate program, targeted to new recruits of Allianz in Italy. It is mostly based on the conceptual and pedagogical framework of the school's open MIRM full-time program. One learning objective is to complete and integrate the university education of participants who come from diverse graduate programs and hold different degrees, providing them with technical and industry-specific knowledge and a general, cross-industry, and cross-functional mind-set. Another objective is to deliver a set of effective work tools, to help participants perform their job duties better. A company internship, running throughout the program, is formally part of the Master's curriculum.

Another example is our Corporate Credit Culture program. It targets the foreign subsidiaries of a leading Italian bank. The main purpose of the project is to provide the basic concepts and techniques for a correct analysis and evaluation of the creditworthiness of the client companies. The project is delivered to more than 350 participants in six different countries and local languages: Romania, Egypt, Bosnia and Herzegovina, Ukraine, Albania, and Russia.

What is the impact of technology in these programs? There is a stronger focus on the whole learning process versus classroom activities. The number of contact hours is reduced and there is more self-paced study. The learning process is also prioritized by means of a work plan definition. Also, there is a richer provision of formalized feedback, tutoring, and support.

There is also a considerable impact on the school's business model. Programs become more customized in terms of contact hours, time-length, location, and delivery modes. We see a higher emphasis on content production versus content delivery. We pay more attention to the growing market of

corporate programs and the volume of residential activities on the school's premises falls.

In conclusion, technology is instrumental in addressing the needs of corporations for different types of programs that do not physically take place on the school's premises. While it is generally believed that technology is going to have a deep and potentially disruptive impact on traditional business schools, our experience testifies to the promising role of technology in increasing the level of customization of training and in enriching the social dimension of the learning experience in our educational programs. We envisage a new approach to learning, involving frequent use of modern technology and the Internet, while tying management education more closely than before to the participants' work needs, and giving birth to a new generation of employer-validated training programs.

Md. Zabid A. Rashid, President & Vice Chancellor, Universiti Tun Abdul Razak, Malaysia

I worked at a conventional university for more than 20 years. Then, I decided to take early retirement and take a job at a distant-learning online university. I have worked there for almost three years. This is quite different from my previous experience. I am now changing the format of our programs from distance learning to something in the middle.

Most people do not remember Malaysia although they know Singapore very well. I came here after a 20-hour trip although the time difference is only six hours. Our country's territory is small: only 330,000 square kilometers. It is a federation of 13 states, 11 of which are in peninsular Malaysia and two in Malaysian Borneo. There are also three federal territories. Since the country is a federation, its governance is divided between the federal government and the 13 state governments.

Malaysia's system of governance is parliamentary democracy with a constitutional monarch: Duli Yang Maha Mulia (His Royal Highness) Yang di-Pertuan Agong Tuanku Abdul Halim Mu'adzam Shah. We have nine other kings but he is the supreme one for the moment. Every five years we elect a new one. The current supreme king held this position 40 years ago. He is aged 85. The current prime minister is Yang Amat Berhormat (the Most Honorable) Dato' Sri Mohd Najib Bin Tun Haj Abd Razak. Interestingly, e was prime minister also when the present supreme king held that position 40 years ago. This is a real coincidence.

The population of Malaysia is 29.3 million people. The main ethnic groups are Malays, Chinese, Indian, Kadazans, and Ibans. The official language is Malaysian. English, Mandarin, and Tamil are also spoken. The main religion is Islam. The other main religions are Buddhism, Christianity, and Hinduism

Malaysia has a tropical climate: warm and sunny throughout the year, with frequent and abundant rainfall. Daily temperatures range from 33°C in the afternoon to 22°C during the night.

Malaysia's currency is called "ringgit". It is divided into 100 sen. The ringgit exchange rate operates on a managed-float regime against a trade-weighted basket of currencies.

Malaysia is a developing country with a gross national income per person of 9,800 US dollars in 2012. The Internet penetration rate in 2000 was 15 percent or 3.7 million people. In 2013 it reached 64 percent or 19.2 million. About 15.6

million are Facebook users, whereas 20.3 million are broadband subscribers. On average, they spend five hours daily in the social media. Also, 31 percent of the population use mobile data, whereas 42 percent use mobile voice, 16 percent use fixed data, and 11 percent use fixed voice.

As you see, although Malaysia is an emerging country, it has a high rate of Internet users. What is the impact of this technology usage on education?

When we started using information technologies some 15 years ago, everybody was very excited. I was asked by the president of my university to find out how we could benefit from information technology systems. It enabled various communities to obtain a higher education. Because of the Internet, the demand for higher education increased. In 2000, we had about 500,000 people studying in higher education. Today, we have more than a million.

We have also discovered that working adults are increasingly interested in studying. Twenty years ago, working individuals did not think of going back to school. Today the landscape is changing. People who have only a high-school diploma wish to continue their studies.

The use of modern technology results in many benefits.

It provides easier access to higher education. There is a greater demand for higher education qualifications and a stronger desire on the part of working adults to improve their skills and competencies. Access to information and knowledge also becomes easier.

Student-teacher communications and relationships become easier. We see improvements in creative and innovative pedagogy and learning. Students' learning modes become more mobile and diversified. Students' lives becomes easier and students develop a more positive attitude toward learning.

However, there are also a number of causes for concern. Young people think that because they have access to the Internet, they have knowledge. Actually, what they have is information. That is not the same as knowledge. Unfortunately, many people misunderstand this.

As a teacher, you are supposed to be a great actor. You have to play your part in a play. You have to be a great facilitator. When modern technology is introduced, teaching and learning become more demanding for academics. When I worked in distance education, I had no Saturdays and Sundays because there were classes on those days. Can you imagine spending three years without weekends? They were all devoted to the working adults who wanted to go to classes as part of the blended learning model. They wanted to see the teachers on weekends. This was very challenging for the academics that were involved in these programs. Some of them quit. They said that they could not have a life like this.

Plagiarism and cheating are increasingly common. Developing writing, analytical, and critical skills is a challenging task as is the preparation of modules for e-learning. Just before I came, my blood pressure went up because a student of mine submitted a poorly written paper. How do you deal with that?

Sustainability is another issue. Attrition rates are very high. Once I started a semester with 50 students. At the end of the semester, I only had half of them. By the end of the whole MBA program, there were only five or six left.

When the education takes place online, academics experience difficulties marking student assignments. It is a tough challenge. Finally, Internet communication is not fully reliable and disruptions do occur. Once we had a student who wanted to take an exam in China. One hour before the exam, I was informed that it could not take place because of power disruptions. You can have a nightmare trying to manage technology at a business school.

Although modern technology creates new opportunities, we cannot discount the importance of cultural values. Perhaps, these new arrangements work in an environment where people like to read. The present generation has a different perspective. What is reading to them? They do not read. They surf. They think that surfing is the same as reading. How do you get these people to do their academic work? How do you make them write and submit assignments? All this makes your blood pressure go up. I think that many students are becoming increasingly lazy these days.

Danny Szpiro

I would like to ask a couple of questions. Andrea, you talked about the needs of corporations and learners in general. I am the dean of executive education at the Jack Welch Management Institute. We have a two-year old executive MBA program that is 100 percent online. It enrolls 800 people. If you ask them why they selected this program, they would say that they could not earn an MBA degree in any other format.

This brings up an interesting question. What is our role ultimately? Is it to draw lines and say, "If you cannot learn this way, we do not want to teach you?" Or should we accommodate the needs of people whatever the format that this takes?

Andrea Tracogna

This is a very challenging question. We all know that full-time MBA programs are suffering because of the high opportunity costs. People are reluctant to leave their jobs, devote themselves to a program, and then re-enter the professional world. This model is not sustainable for the participants. Nevertheless, we still believe that we should have a full-time international MBA program. That is our flagship program, attracting people from different countries and different professional backgrounds. But how can we run such a program in our physical environment? That is a challenge for us. Perhaps technology can help us blend face-to-face education and distance education. In that way, instead of having only an online experience to offer, we could avail ourselves of our physical presence and provide a human touch. This can be the main difference between us and a provider of purely digital education.

This generates another interesting question. Who should lead this process? My perception is that business schools are currently a bit slow in reacting. This applies to big business schools as well, with some exceptions. We all know what is going on in the United States. Technology providers are coming up with new options all the time. We heard the Microsoft presentation this morning. Of course, this is an opportunity for us. But we need to reflect on it carefully. We are the inventors of higher education, so to speak. However, the trends are set by other types of institutions - the technology providers. This is scary.

Danny Szpiro

Rabid, you mentioned the professors' reactions to accessibility 24 hours a day, seven days a week. In my own personal experience in the last 15 years at different institutions that were trying to promote educational programs and be leaders in that field, I walked up and down the hallways and talked to faculty members. What I heard a lot under the umbrella of reluctance was teaching preferences. That is not the same as learning preferences from a learner's point of view. I am talking about teaching preferences - faculty liking what they do and not necessarily wanting to adapt. And you observed that some faculty did not want to be accessible all the time. What are some of the other challenges if we are to meet the needs of a growing demand? How do we meet that demand if our faculty members have teaching preferences that we need to deal with?

Zabid Rashid

I think that one of the most important criteria when you are looking for a faculty member is passion. The person must be passionate about a particular subject matter. That is number one. Number two, he must like to interact with students. There are academics who do not like to meet students. They are very good in research and publication but they do not want to have a heavy teaching load. That is a problem.

I have my own experience from the time that I started an MBA program at a distance-learning university. It was very irritating when somebody did not answer e-mails. I enrolled on an online PhD program. It was very frustrating because I had to write seven pages of instructions for my first face-to-face class. For example, for the first assignment we had to do a literature search.

Now, define a literature search. Imagine that the person is not in front of you. You have to choose the right words to make sure he understands what you are talking about.

What do you do when students come for a face-to-face session and have not read what they were supposed to? They say, "I am sorry, Sir. I was traveling". These are some of the frustrations that you experience.

During my three year-involvement with the PhD program, nobody passed because nobody got beyond the research proposal stage. Why was that? Because nobody could read and write what I wanted them to read and write. It was a learning experience. These were not young people. They were mature working people. Some of them were even close to retirement or had already retired and wanted to get a Master's degree or a PhD. I accepted the challenge but it was very difficult.

When I was at the Open University, we had 10 hours of face-to-face sessions out of 42 conventional hours. Then I increased this number to 15 and 18 because I felt that 10 was not sufficient.

My university was started as a distance-learning institution. I have transformed it into a fully conventional university, with an online component of only 10 to 20 percent in selected subjects. I think that this is reasonable.

Danny Szpiro

I can add something about the availability of lecturers 24 hours a day, seven days a week. I have just wrapped up a six-week online course for an in-company program. We had 27 participants. At the Jack Welch Management Institute, we do not usually have more than 25 people in any section of an online course. By the end of those six weeks, I had received 1,000 e-mails.

Andrei Villaroel

I have the impression that most of the participants in executive education are not widely distributed geographically and do not come from a wide variety of companies. On the other hand, there are successful MBA programs that require the students to spend time in remote countries. How do we see this in the online world?

Danny Szpiro

Certainly the executive MBA program at the Jack Welch Management Institute has a global footprint despite the fact that it is only two-years old. This impact is due to the initial marketing effort and the general state of awareness and acceptance of online education in the United States, which differs from education in other parts of the world. Most of the program participants are from the United States but there is also some global participation. We do not work with specific corporations that might send in participants. We seek to attract individuals.

János Vecsenyi

In your view, how strongly motivated are your students to learn? And - since there exist different types of motivation - what is the main driver of their efforts?

Danny Szpiro

Most of our students are pragmatic. They connect their learning experiences to their career success. That is a good motivator. And I do not think that there is a difference between the motivation of those who choose an online setting and those who prefer a traditional setting. It is the logistics that push them in one direction or the other.

There are faculty members who speak in favor of a particular teaching method: traditional versus online. They say that either one may be more effective in terms of learning. In fact, these are most often individual teaching preferences and they tend to prefer what they already do. Change scares everybody.

Andrea Tracogna

If we want to have motivated students, we have to guarantee relevance and applicability. There must also be an element of enjoyment. This is a significant challenge.

Teachers represent another challenge. We had to change a lot of faculty because some of them were not good outside a classroom. Some of them were not even willing to learn how to use modern technology or develop a new pedagogy. We are talking about teaching people who work at different paces and at different places. There is also quite a lot of work to be done outside the classroom, such as provision of feedback. It takes time to contact participants and tell them what they are supposed to do in order to improve.

Zabid Rashid

I think that there are two basic questions. The first one is what students you are teaching: undergraduate or graduate? The former are more challenging. They do not listen to you and are less disciplined. They do not do what you expect them to do. Graduate students have a different agenda. Most of them have five to 10 years of work experience. They have come to your school because they want quick results in business. Now, the same professor is often asked to teach undergraduate and graduate students. This is a challenge.

At my university, we teach entrepreneurship and one of the courses is called Create an Enterprise. The students must set up a business to get their Bachelor's degrees. But one of the challenges that we have today is that academics do not talk the same language as practitioners. It is about time that we made an effort to understand both sides.

Arnold Walravens

I would like to challenge the statement that there is more cheating and plagiarism now than in the past. As a sociologist, I am never satisfied with the first explanation that I hear. There is an alternative explanation. We think that there is more cheating now because we have better tools to discover it when it happens, whereas it went unnoticed in the past.

Danny Szpiro

Thank you very much, gentlemen. Now, I give the floor to Arshad Ahmad for some final comments.

Arshad Ahmad

I was struck by two thoughts that I would like to share with you.

One is the question about motivation that János raised. This question keeps coming up. How do we make our students passionate just the way that we are about our subjects? I would like to mention a study that a lot of people have not looked at although it is a seminal publication. It was written by Martin and Saljo and published in 1976. The title of the article is Deep and Surface Approaches to Learning. The researchers gave reading passages to some students and tried to find out what approaches the students employed to understand the material. They found that some students took very superficial approaches because they just wanted to pass the exam. They tried to find out what the professor was going to ask at the exam. That was the important thing to remember. As a result, they did not understand the real meaning of those reading passages. Other students did just the opposite. They did not care what the exam questions might be. They were more interested in the deep meaning that the author provided.

If you look at your own students, you will find that those who prefer surface learning are increasing in numbers. This is so because we have more and more people in the higher education system. They do not really care about the subjects that we offer them but they want to obtain a degree and participate in the economics of higher education.

The good news is that students that take the surface approach are also capable of deeper approaches. However, they do that under certain conditions. I think that many of you are trying to set up such conditions by making your students more motivated. We have to ask ourselves what are the key factors that enable the students to become so passionate and excited that they can take a deep approach.

It is not only students who do not like reading. There are also many busy administrators who do not read. They do not even open their e-mails. It is not that they are lazy. They just do not have the time to read. If you are not a reader but a watcher, I would recommend a nice film featuring Ken Robinson, a famous education expert. He offers a view on how paradigms have changed from a factory model to a more personalized model in which emotional intelligence plays just as big a role as content acquisition.

Parallel Workshops: Challenges and Opportunities for Technology Use in Management Education

Workshop 1: Online and Blended Programs

Drikus Kriek, Director of the Leadership Development Centre and Associate Professor in Human Resource Management at the Wits Business School of the University of the Witwatersrand, South Africa

Welcome to the session on online and blended programs. Our topic makes me think of an interesting experience I had when I visited the London Business School. I took some executive education students from South Africa to join a class at that school. A professor started with some introductory remarks, talking about some of the changes that are occurring across the world. The first of these is globalization. How do you spell that word: "globalization" or "globalisation"? What does that indicate? If we cannot agree on how it should be spelled, how can we agree on what globalization is?

In a way, this applies to the way in which we look at blended learning and online learning. How do we define these concepts? They can mean different things in different places. It might be valuable for us to consider these differences. If we have online education, we need to think about the psychological implications as well as the marketing implications. When is education blended? We hope to define some of these or at least raise some questions.

We have two esteemed speakers. One is Olin Oedekoven, president and chief executive officer of Peregrine Academic Services and the Peregrine Leadership Institute in the United States. We also have Andrea Tracogna, deputy dean of the MIB School of Management in Trieste, Italy.

Many years ago, when I was a young man full of energy, I started a business. As all businesses, it had to be audited. One day, the South African Revenue Service came for an inspection. I did not mind because what an auditor basically does is sit and nod wisely. I see my role today very similar to that. But I hope that we are also going to have a vibrant discussion.

Olin Oedekoven, President and CEO of Peregrine Academic Services and the Peregrine Leadership Institute, USA

I think that my colleague and I will complement each other very well today. I am going to cover the statistics, if you will, of online and blended programs. Then we are going to explore the building of an online program and a blended program to deliver content effectively and reach the desired learning outcomes.

About a year and a half ago, my vice-president and I attended a conference outside the United States. We were sitting at a small table, discussing how to grow management education given the constraints of Internet penetration in some countries, as well as the constraints of geography and time or faculty shortages. During the course of that conversation, one of the participants said that we should develop more online education because it can reach out into the most remote areas in developing countries more effectively than sending a professor there to teach. One of the participants, who was from a traditional school, said, "That will not work". I asked why not. Her response was, "We all know that online education is not as good as traditional campus education". I said, "How do you know that?". Her answer was, "It is a well-known fact that online education is inferior in quality to education on a traditional campus". Then I said, "What well-known fact are you citing? I am not aware of any." I think that she got a little mad at me. I explained that our company provides exam services to schools around the world. We currently have about 245 universities using our services in 27 countries. The majority of these are of course in the United States. Among other things, we record the delivery modality of the program. This means that we know if the program is online, on-campus, or blended. The results do not suggest a big difference. If anything, online students actually do a little better. After I explained this to that person, she dismissed me and said, "It is still a well-known fact". As an old mentor of mine used to say, "Everybody is entitled to his own opinion". But you are not entitled to your own facts.

The purpose of this presentation is to provide some facts to this discussion about the applicability of online and blended programs in the delivery of content effectively to students. I will present a comparison of traditional programs and online programs for the purpose of the discussion after our presentations.

Let me start with some definitions.

Most of a traditional program is delivered at a campus location at an established college or university. The majority of the students are recent high school graduates, typically 18-22 years old. Courses are taught on a semester or quarter basis, typically Monday through Friday.

A blended program is delivered to students using a combination of online and campus-based instruction. The program is delivered in an accelerated format. The course term is typically four to eight weeks, sometimes 10. Campus-based instruction tends to be either in the evening or on weekends, with generally longer sessions. The student population tends to be non-traditional, meaning that they tend to be older, probably close to 35. The students may have some college credit prior to starting their program, and are often working adults completing their degree program.

Most of an online program is delivered online to students and there is little, if any, requirement for the students to go to a campus location at any time during their college or university experience. The majority of the students are

considered non-traditional, meaning that they tend to be older, may have some college credit prior to starting their program, and are often working adults completing their degree program. It is possible to complete a degree online without ever setting foot on campus.

I understand that definitions of traditional, blended and online may be different in other parts of the world. But for the purpose of the analysis that I am going to share with you, I am using our American definitions.

Some of our clients have all three delivery modalities in the same institution. Most of our clients have one or the other, whereas some have two. For example, some will have a traditional campus, as well as an online component or perhaps a blended component.

The exam that we are talking about is standardized. We have one variant for the United States and another one for the rest of the world. The exam assesses the students' retained knowledge upon graduation from an academic program that is most often used for learning outcomes evaluation, accreditation, and academic benchmarking. A common professional component (CPCs) focuses on 12 topic areas (15 with sub-topics) for business education as defined by the IACBE and the ACBSP and referred to as knowledge competency areas by the AACSB.

We administer this exam twice for most of our clients. The inbound exam is administered early in the student's program, usually during the first or second core course. It measures the student's knowledge level at the beginning of the academic program. You can think of it as a pre-test.

The outbound exam is administered at the end of the student's academic program, usually within the last course. It measures the student's knowledge level at the end of the academic program.

We measure percentage change based on the difference between the inbound and outbound exam scores. Percentage change is calculated using the following formula: (outbound score / inbound score) - 1.

You probably have pre-tests and post-tests for some of your courses. This is the same except that it is at the program level. There are a couple of years between the two exams.

In the United States, one of the most hotly debated topics in higher education is the effectiveness of online education. Is it as good as traditional education? According to a Gallup Survey of October, 2013, only a third of the respondents rated online programs as excellent" or "good", while 68 percent gave excellent or good ratings to four-year colleges and universities, and 64 percent gave such ratings to community colleges.

Researchers have found that although nearly half of employers said online-only programs require more discipline, 56 percent said they still prefer applicants with traditional degrees from an average university over those with an online degree from a top university. Overall, most employers (82 percent) said that a combination of in-class and online education would benefit the majority of students.

The reason that this is such a hot topic of discussion in the United States is that much of it is about money. On average, it is more expensive to go to a traditional campus-based program. There is a cost not only in money but also in time.

The only literature that I found that addresses this topic was a speech given at Princeton University according to which there is a lack of evidence. A lot of people think that they have anecdotal evidence. A lot of people have opinions. But there is a lack of hard evidence. There are no data out there that compare these two modalities. Consequently, nobody has been able to answer the question quantitatively.

In our own literature review, we found no peer-reviewed articles that compare the two modalities. The reason for that is that it is very difficult to carry out a study. One would have to apply the same assessment instrument across multiple institutions. Within an institution, it is easy. You can compare two different programs. But things get more difficult across institutions.

Our program-level assessment exam was customized by topic selection to align with the programs of study. Different test banks were used for under-

graduate and graduate exams. The exam was administered either as a homework assignment or as a proctored exam within a classroom. Outbound exams were incentivized to motivate the students to do their best on the exam which is graded on a normed scale. Summative and comparative reports were used for internal program evaluation and externally for academic benchmarking.

For the purpose of the study that we carried out, our research question was "What, if any, differences exist with student exam results using a normed business program assessment instrument based upon the delivery modality (traditional, blended/hybrid, and online) of the academic program?". The total sample across the US schools consisted of about 60,000 exams.

At the Bachelor's level, traditional programs most often perform less well than online programs. I will probably manage to make somebody angry by the end of my presentation because I realize that some people do not like to see this. But that is what the data tell us. In all 17 areas that we tested, the mean scores of students who attended traditional Bachelor's programs were significantly lower those from online education.

If we compare the Master's programs, we see a little more parity between traditional and online. The former do better in some instances but overall it is the online programs that tend to have higher scores.

I told you that schools do inbound and outbound testing. In addition to the scores on the outbound tests, we can calculate percent gain, which is the ultimate goal of higher education. How much do students know when they come to your institution and how much do they know when they leave? That is the ultimate measure of success in higher education.

Students on traditional Bachelor's programs tend to start with a little lower level of knowledge than their counterparts on online or blended programs. This is not a surprise. Traditional students come right out of high school and you can expect their level to be low. Students on online and blended programs are a little older. They have probably worked a little and have some business experience. This means that they start from a higher level.

As for Master's programs, this trend is reversed. Traditional students tend to start from a higher level than non-traditional ones. The reason for this in the United States is that most traditional graduate schools of business require an undergraduate degree in business. Most online and blended schools do not have such a requirement.

The results suggest that traditional Bachelor's programs do better than online programs in terms of percent gain. A few areas are exceptions to this rule, for example Statistics and Quantitative Techniques. Traditional programs did better in nine of the assessed areas and worse in six of them. There was no difference between the two types of education in the two remaining areas.

For Master's programs, the situation is the opposite. The percent gain of online programs is higher in all areas of assessment. It appears that online education teaches the Master-level students a lot more. Remember that they start out with less knowledge. Therefore, the results are significant at two levels.

In conclusion, online education, when properly administered, is clearly an academically appropriate delivery modality for most students. Students show both a higher knowledge level and higher percent gain in knowledge from online business education programs compared to both traditional and blended program counterparts.

Traditional program administrators may want to consider instructional and educational techniques used by online programs to facilitate learning in order to achieve higher gains and higher knowledge levels. Some of these techniques are flipped classroom approaches, individual mentoring, and more.

Yes, online education can be a very effective teaching methodology. But it has to be done right. You cannot just take a traditional program, copy it, and call it online. If you do that, you are doomed to failure. online schools have been around for over 20 years now. They have developed teaching techniques that make adult education very effective.

I think that the resistance of many schools to online programs comes from the fact that they cannot decide how they can deliver a professor-based course

as an online course. It cannot be the same thing. Therefore, it must be inferior. But this is an invalid argument.

Those of us who teach at traditional schools should take a look at how online schools are teaching. They typically employ the flipped-classroom concept. The homework is the lecture, whereas assignments become the application. I think that this has a lot of value.

I taught online for several years. I knew all my students because I corresponded with them. I also had speaker-phone conversations with them. Also, I led some webinars during the course. Some people argue that online education is impersonal. My experience is that it is not. In fact, it is very intimate because you deal with students one on one.

Andrea Tracogna, Deputy Dean, MIB School of Management, Italy

The test results that we saw show beyond any doubt that online education is effective. It is at least as effective as tradition education. We have to be aware of this when we reflect on the future of our institutions and the programs that we are going to launch in order to satisfy the demand for higher education in the market.

The test results show that if online education is the cure, it seems to work. It even appears that traditional education is less effective but this is probably going to be a subject of future discussions.

I think that there may be some bias in the sampling method. In other words, the samples are not from the same population. Perhaps those who attend online programs are somewhat different from traditional students. This is very important food for thought.

We have only a limited experience with online education at my school but we can confirm that the learning outcomes of our online students are at least equivalent to those of the traditional students. This is very encouraging for us because we are increasingly aware of the fact that we cannot expect people to come to our campus. We have to be prepared to search for opportunities outside, perhaps even far from our city and our country. In this way, we will probably be able to redefine our business model.

I would like to share some of our experiences with you. I am going to tell you how we managed to satisfy a need that seemed impossible to satisfy at the outset. For the last 15 years we have been running a very successful Master's program in insurance risk management. It is an open enrollment program. To take the program you have to reside in our school. Now, companies have been asking us if we could reformat the program so as to target working people. Some of these would be very busy people with very tight agendas. They may be so busy that they work weekends and even nights. We felt that this was a challenge that we should accept. When a company like Allianz comes to you and asks you to do something, you try to respond. Even if you are not confident, you have to try.

At that time, they had a program with another school. That program was fully online and all of the study material was already on a platform. However, Allianz was not very pleased with that program because it did not satisfy their expectations. In particular, they were not happy with the content because it was too broad. We had an opportunity to develop something more customized.

By that time, we had had a long experience in the field and we knew everything about the content but we knew very little about the process. We started to study what online and blended programs were. In the beginning we thought that these were mainly about transforming our teaching materials into cartoons. We also found that the development of the program was extremely expensive. It was probably too expensive even for a company like Allianz. Therefore, we had to think differently.

That is why we decided not to use the term "online". We felt that customers associate "online" with training people through cartoons. We had to revise our approach completely. We started from our syllabi. They were designed for students who do 80 percent of their activities in front of you and under your guidance. Now this was impossible because the company wanted almost all educational activities to take place off campus. We had to revise the online-to-off-line ratio completely. We arrived at 90 percent online versus 10 percent residential.

Then, we had to consider the content. Should we change it or not? If we keep it, what do we teach in class and what do we transmit online? Which activities should be led by a teacher in class and which should be part of the students' self-study? All along, we had to remember the fact that the students were extremely busy people, working at least 30 hours a week during the period of study. This means that they can spend no more than a couple of hours a day physically with us. We had to revise the role of the teacher completely. We had to replace a number of teachers who could not adapt to the new situation. This was necessary because of the importance of the customer.

We ended up with teachers who manage only classroom activities and others who manage only distance-learning activities. Most of the time a teacher does two things. One is a help desk for the students. Sometimes this means a technical help desk. Of course, the information technology experts are also there to provide support. When you use technology, inevitably you have crashes, bandwidth problems, and suchlike. There are sessions that take place when a student is on a train, using a cell-phone to get connected to a web conference. Sometimes the signal is good, but sometimes it is not. You have to be prepared to manage this situation.

The teacher is also supposed to provide feedback. Sometimes they first present the theoretical content of a topic and have the students apply it. Sometimes they start with a case discussion and the students take an inductive approach to build their own theoretical knowledge through the use of handbooks and other teaching materials. In any case, the role of the teacher is to provide continuous feedback to every single individual.

Interestingly, in the end teachers feel quite close to the students. How long does it take you on a traditional program to learn your students' names and remember their faces? If you have them in front of you all the time you may not pay much attention to their names and faces. You remain at a distance and it may take you months to learn who is who. But when you manage an online program you have to pay attention to every single individual right from the start of the program. As a result, you learn all names in a matter of a few weeks. You have individual sessions with them during which you provide formative feedback. That is probably the most important part of the training.

Because plagiarism is a widespread problem, it is safer for us to have the students take exams on campus even though we can sometimes manage this quite successfully with the help of the companies that we partner with.

Let me give you another example. How do you launch and run a business accelerator with this kind of education? You select business ideas and teams of entrepreneurs or would-be entrepreneurs. Quite often, they are scientists or experts in high technology who do not know much about business. You can provide them with business training and coaching and mentoring services, as well as financial support. In that way, you have them try out their business ideas. We have been running such programs in the past few years in partnership with a venture capital fund in Italy. We have to accept a particular constraint: entrepreneurs do not have time to come to our campus. Only the launch of the program takes place on campus.

Here is my last example. The foreign subsidiaries of a leading Italian bank needed training. Most of these are in Central and Eastern Europe but some are in the Middle East and other Mediterranean countries. These subsidiaries have become part of the bank group through mergers and acquisitions. The Milan headquarters decided to build a common credit provision approach throughout its subsidiaries. This refers to the principles that a bank follows when it lends money to a company. This was deemed necessary because, surprisingly, the approaches were found to be completely different. As a first step, we had to develop this approach with the bank. Then, it had to be made transferable across different countries and in different languages. We were not able to deliver training in languages other than English and Italian. Because of that, we had to select trainers in all those countries. We invited them to our campus and trained them, not only in the subject that they were expected to teach, but also in the use of technology.

A last comment on technology. What kind of technology do we need? There are many technology providers trying to convince us that we must be very sophisticated. This means that we have to pay a lot for setting up a learning platform. But this is not consistent with our experience. We had a provider but what we got was not what we needed to satisfy a particular customer. For that reason we decided to go it alone. We developed the platform on our own and we manage it by ourselves. We combined available hardware and software that is not expensive at all. What makes a difference in our case is not the cost of the technology but the way in which it is employed.

Arnold Walravens

I saw that in some cases the number of schools in Olin's research was small whereas the number of students examined was very high. For example, 20 schools with 10,000 students. But I would like to know another important number: what percentage drop out? Did you take dropouts into account in any way? I have heard that distance education produces a higher number of dropouts. If that is true, the case for online education loses some of its luster.

Olin Oedekoven

No, my numbers do not account for dropouts. There is no way for us to track that because not all schools administer both inbound and outbound exams. Some do only outbound testing. The numbers that I have reflect only completed exams.

Concerning your comment that online education has a higher dropout rate, I only know from several of our clients that it depends on the program and the school. Two weeks ago I was facilitating a strategic planning session at a traditional school that has an average graduation rate of about 65 percent. Compare that to the situation at Ashley University, an online school. The last time I talked to the dean about this, he said their graduation rate was about 80 percent. I do not have data from across the United States. I can only cite a couple of examples from specific schools.

I would like to clarify something. Despite what the data show, I am not saying that you should get rid of traditional programs. Do not misread what I am saying. I actually think that traditional programs have tremendous value. I myself went through a traditional program. Among other things, it helps you develop social skills and various life skills. online education is not necessarily an appropriate substitute for that. All I am saying that there are students who cannot afford to have a traditional education because they have to work and put food on the table for their families, but that does not mean that they cannot get a good education through a non-traditional approach. When they do that, do not underestimate their knowledge. Do not assume that they are not good because they went to an online school.

Why do online students outperform traditional students? In the United States it has to do with money. If I am going through a traditional university, who is most likely paying for my education? Most likely it is my parents. But if I am studying at an online school as a 35-year old, who is paying for it? Myself. My motivation to learn would be much higher. That is why degree completion is quite high online, at least in the United States.

Of course, we must also acknowledge the fact that the online students and the traditional students are two different populations. The former are 18-20-year olds whereas the latter are 30-year old or more. This can account for differences in motivation.

We have a couple of dozen schools that offer traditional and online programs at the same time. Thus, it is possible to compare the outcome of these two types of programs at the same institution. I cannot show you the results because of confidentiality issues. But I can tell you that online students typically do better. The online programs have higher retention rates and higher exam scores. But this may be so because they are older and they are paying for their education, not necessarily because online education is inherently better.

Arnold Walravens

Scots will tell you that you can start blending your whisky only after it has matured. I doubt that all the products that we have been talking about are so mature that it is a good idea to blend them at this stage of their development.

I think that the blending process is the most difficult thing to manage. It is not enough to combine classes with some Internet sessions. I think the result should be something entirely new.

Olin Oedekoven

This is a good point and I can prove that you are right. Before I do that, what is your gut feeling? Would a blended program be as good as a purely online program or as a traditional campus program? Or would it be better?

The answer is that it depends on the audience. A blended program is not necessarily appropriate for 18- year olds but it is fine for corporate education. The statistics reveal that Bachelor's blended programs are close to traditional programs in terms of average success scores. Traditional Masters' programs do a little better than blended masters programs in many of the assessed areas.

Many of the blended programs in the United States are very compressed. I wonder if they are compressed too much. Are eight hours of accounting on a Saturday not too much? I think that there is a balance that the program needs to strike.

Drikus Kriek

I think that how we define a blended program depends on the material. Blended education can start from a traditional program. Then, we can infuse it with online elements. But we can do this the other way around. We can set up a fully online program and then start thinking how and when to include some traditional teaching.

Olin Oedekoven

I think that there is tremendous value in getting graduate students together to think through problems. Whether you do that in a seminar or a webinar, there is value there. The challenge for us in higher education is to choose the right model. It is the same in executive education. There is value in bringing some managers together to debate a business problem. That is how their learning takes place.

Workshop 2:
Massive Open Online Courses

Stéphane Justeau, Professor and Head of the Centre for Pedagogy and Educational Support, ESSCA School of Management, France

The first concept that we have to discuss today is the expansion of the connection between learners and teachers. The second concept is licenses, contents, and learning objectives.

Massive open online courses (MOOCs) involve videos, reading, problem sets, and interactive forums for teachers and learners.

I think that e-learning was the precursor of massive open online courses. These courses are not the same as e-learning. The first MOOC appeared at Athabasca University in the United States. Since then, several well-known providers have emerged, such as Coursera at Stanford University and edX at MIT. As we speak, 900 MOOCs are being offered by American universities and colleges. MOOCs are also provided by institutions in other parts of the world.

We have many questions to discuss during this workshop. These courses are called "massive". But what does that mean? One hundred students? Or one thousand? Or more? What about "open"? Is the content free of charge or not? If it is not, is it affordable? Is registration open? If it is online, does that involve real-time interaction? What about the credits that one receives? The learning community? The assessment? What is the role of the instructor? For what purpose does an institution use MOOCs? What is the cost?

I would like to welcome Natalia Dmitrievskaya, director of the Institute for Economics and Statistics at the Moscow State University of Statistics and Informatics in Russia. She will tell us about her experience with MOOCs in Moscow.

Right after her, we will give the floor to Danny Szpiro, dean of executive education at the Jack Welch Management Institute in the United States.

Natalia Dmitrievskaya, Director of the Institute for Economics and Statistics, Moscow University of Statistics and Informatics, Russia

I am going to talk briefly about two projects that we have done at my university. But before that, I would like to say a few words about my institution, the Moscow State University of Economics, Statistics and Informatics. We are a fairly old university and one of the leaders in Russia in the use of online education. We have different programs: full online education and blended learning. We

offer these to different types of students: Bachelor's level, Master's level, and additional education for adults.

Massive open online courses became very popular two years ago. We wondered how they differ from traditional education. I will provide some answers in my presentation.

MOOCs enabled people around the world to study on courses offered by leading universities, such as Stanford and Princeton. MOOCs were described by some researchers as a tectonic shift on the educational landscape. It was predicted that they would become a strong competitor of regular programs in traditional settings.

MOOC platforms such as Coursera and others have surreal enrollment numbers but they also have dramatic dropout percentages. One result of the MOOC phenomenon is the need for educators to rethink the higher education system, be it traditional or online. There is a change in the philosophy of education in the direction of the widest possible democratization. Education is becoming accessible to anyone interested in it.

MOOCs can be used for a variety of purposes, including marketing, search and selection of the best applicants, commercial opportunities through certification and additional services - such as consulting support - advertising, publishing, and employers' access to the students' portfolios. Millions of dollars have been invested in MOOCs since their inception. They are obviously a very serious phenomenon in our educational world.

After a lot of discussions at our university, we decided to launch a project that would integrate MOOCs in our educational process at both levels: undergraduate and graduate. The idea was to test the students' reaction to this novelty. We also wanted to find out more about the MOOCs phenomenon so as to know if we should be afraid of it or not.

We selected two courses from Stanford and Princeton: "General Game Playing" and "Statistics One". The first one was chosen for our Mathematical Methods in Economics program. The selection was done by chance. I simply asked some of our instructors if they would like to integrate MOOCs in their curriculum and only a few answered positively. The second course is for students of economics at the Bachelor's and Master's levels, as well as for Statistical and Mathematical Methods of Forecasting the Economy.

This integrated model was designed as an additional course during additional time. It was called "elective" but in fact it was not because it was not integrated into the regular curriculum. At the outset, we enrolled 91 students. Only 47 completed the course. But this is an encouraging result considering the fact that our students are not very good in English. We had to explain the terminology to them and we the instructors provided a lot of help.

In another experiment, the rate of completion was 100 percent. This is very different from the usual MOOC statistics that indicate a high percentage of dropouts.

In our case, when the course was elective, around 50 percent of the participants successfully completed the training, whereas the completion rate in the integrated model was 100 percent. After the course, 80 percent of the students enrolled for another course in the same subject area.

MOOCs can be integrated into the educational process in two ways: by inclusion (integration) into the discipline based on the students' academic results or by using MOOC as a basis for elective courses with advisory support from the teachers. They can provide assistance to the students in terms of terminology and methodology as these often cause difficulties for Russian students because of their low level of knowledge of the English language and lack of self-learning skills. These two factors lead to high rates of attrition on MOOCs.

The inclusion of MOOCs in the educational process enables enrichment of the learning content by use of MOOC educational materials and activities. It provides additional teaching methods that diversify the learning process. These courses are not entertainment but an opportunity for students to get exposed to another style of teaching and learning. Also, students get integrated into the international educational space within a particular subject

domain whereas teachers integrate into the professional community. Finally, MOOCs are an opportunity for students and teachers to improve their foreign language skills in the subject area. This is especially important for Russians because our language is quite different from those of Western Europe. We must look for creative solutions so that our students improve their English.

We decided to design and deliver our own MOOCs in the framework of the OpenupEd project. It was run under the auspices of the European Association of Distant Teaching Universities (EADTU) with support from the European Commission. The participants are 11 universities from France, Italy, Lithuania, Netherlands, Portugal, Slovakia, Spain, the United Kingdom, Russia, Turkey, and Israel. Each university delivers courses on its own learning management system in English or in a national language. In total, around 40 courses were developed in 12 languages in different subject areas with workloads from 20 to 200 of academic hours. The students are either self-organized with individual schedules or follow a fixed schedule. At the end of the course, successful participants can ask for a certification for an additional payment from 25 to 400 euros depending on the university's policy.

We have developed six MOOCS in total, using Moodle as a learning management system. The languages of tuition are Russian and English. The learning materials are video-lessons, ppt presentations, and assignments, such as essays, case studies, and tests. The subject areas are Economics, Linguistic (Russian language), and Information and Communication Technologies in Education.

An example of a course is Fundamentals of Economics. I was the manager of this course and several other people were involved in it. It was an open course without any prerequisites. Perhaps we will introduce such a condition next time but I think that MOOCs should allow for some self-selection based on self-selection. Normally, Russian students can follow this course after their second year. But we do not know the situation in other countries.

We got 146 enrollments from 42 countries. Most of these people just wished to take a look or try the module tests, or ask some questions. Only seven of the students were really active and achieved a high level of educational results. We were really surprised to see that not a single Russian student completed the course. All those who managed to graduate were from Spanish-speaking countries or Portugal. The highest total number of students from a single country, other than Russia, was also from Portugal. I asked a colleague from the university of Porto why so many Portuguese are interested in our MOOCs. I was told that Portugal is far from Russia and since Portuguese students do not know anything about our country they wish to learn something. Of course, this is not a satisfactory explanation and we are going to launch a research project in order to find out the reason for this great interest in our MOOCs in Portugal. We would like to find out how they feel after they have completed our MOOCs and what they think that they can learn by studying on a Russian program with Russian instructors.

We have also offered a number of other MOOCs, such as Taxes and Taxation in Russia, Business Russian, Let Us Speak Russian, Basics of Distance Education, and ICT Competence. I can tell you that I tried to take the last of these but I gave up. It is really difficult to follow these courses. I tried Coursera and I gave up after the second module. I just could not deliver all the assignments. Very fast learning does not work well with adults although it may work well with younger people.

MOOCs cover a wide range of countries than traditional marketing efforts. They are excellent instruments for the promotion of universities and professors on the international educational market. MOOCs enable students to try new subject area or a new university before making a decision on full-program enrollment.

This being said, MOOCs have a high cost of development and delivery. Sometimes they cost more than a normal online course. The reason for that is that if you want to use a MOOC for advertising purposes you have to use your best human and material resources. We spent about 10,000 US dollars per MOOC. At present we are redesigning some MOOCs, which means that we are going to incur even more expenses.

Students prefer self-paced open courses to MOOCs. When we found that out, we changed the format of our MOOCs to allow a more flexible schedule. Instructional design is the key to the success of MOOCs.

We were glad to find that students are ready to pay for certification and for MOOC individualization. We are currently redesigning the Fundamentals of Economics MOOC into two different tracks: a normal MOOC and a self-paced open course with individual assignments to be assessed manually.

Now that our instructors have some experience with MOOCs, we have begun to ask them how they feel about that. Will they continue to integrate MOOCs in their courses? We have heard a lot of concerns about the quality and the content of different MOOCs and we need to know more about this issue. We have just launched this research. I hope that we will have some clear answers when it is over.

Danny Szpiro, Dean of Executive Education, Jack Welch Management Institute, USA

I wear a couple of hats these days. I have been associated with IEDC-Bled School of Management for 17 years. I teach there and I am involved in administration. But the hat that I am wearing today is that of dean of executive education at the Jack Welch Management Institute. I have been part of that institution for about two and a half years. However, I have been involved in technology-facilitating education for 15 years. I am not saying "online technology" because 15 years ago the technology that I am talking about had nothing to do with the world-wide web. I spent eight years at Cornell University as the associate dean of executive education. At Cornell, we launched a technology-facilitated executive MBA program. Now, at the Jack Welch management Institute all of our programs are 100 percent online. What I mean by that is that they are web-based.

My background reinforces a statement that I am going to make. For the rest of my life, the integration of technology and technology is going to be at the forefront of innovation in education. Innovation can be achieved in different ways. You can gather some people in a room, have a brainstorming session, and try to achieve a breakthrough. On the other hand, you can apply an existing technology to a new area. That is the future of innovation in education.

The topic of this session is MOOC. I want to make it clear that when I use this acronym I mean the current form of massive open online courses. I do not mean "technology-facilitated education" in general or in all the forms that it can possibly take.

In its current form today, a MOOC is an experiment. There is no way that universities will continue to pour millions of dollars into something that is given away. MOOCs are a marketing tool, a freebie that people can test and then buy something. MOOCs in their current form are criticized for lacking a business model. The only response to that is, "It is not a business". But for MOOCs to be sustainable, they have to be integrated into a university's revenue-generating activities.

If you listen to the evangelists at edX or Coursera, they will tell you that this is going to change the world. But let me share two observations with you. When I left Cornell to join the Jack Welch Management Institute, BizEd, the magazine of the AACSB, asked me to talk about my departure from an Ivy

League university to a for-profit university and invited me to write an article. I found a great quote from Peter Drucker on this topic. In 1997, he said, "In 30 years, bricks and mortar universities are going to be ghost towns". I wrote that article in 2012, exactly 15 years after his statement. With great respect and deference to Peter Drucker, he was wrong. Halfway through the period of his prediction, bricks-and-mortar universities are not ghost towns. Technology-facilitated education has opened up access to the resources of universities to people who could not come to a bricks-and-mortar university. The first thing that we have to realize when we are talking about technology-facilitated education is that it is mostly about diversification, not disruption. It is about doing what we do in new ways and making education accessible.

Is an army of 17-year olds suddenly going to decide to stay in their parents' basements and study online? No, because they realize the importance of socialization that goes on in your life at a traditional university. There are not going to be ghost towns all over the place. But there will be people who will be able to access what we do, even though they were not able to do that previously.

I will share another story with you. Not long after I got to the Jack Welch Management Institute, I got a phone call from Darden. It is a famous business school in the United States, at the University of Virginia. At that time Darden was organizing its first two MOOCs. They said that they had a delegation going around and visiting schools that know a lot more about online education than they do because they had never done that before. They wanted to pick some brains and learn some things. They wanted to visit me and talk to me. They wanted to spend half a day at the Jack Welch Management Institute and talk to the people who designed the MOOCs, the associate deans, and the instructional designers. When they came, they asked plenty of questions and we answered everything. The Jack Welch Management Institute is part of a larger university with tens of thousands of students taking online courses every semester. When my turn came to ask some questions, the very first one that I put to this illustrious group from Darden was, "Why are you doing this? You are clearly putting a lot of resources into it. What is your motivation? And, most important, what does success look like to you in this endeavor?" The only thing that they were able to say was "It is an experiment". They kept saying this over and over again in all sorts of different ways. They insisted that they did not have any goal. They just want to learn something. Success to them was simply gaining a better understanding of MOOCs.

Let us put all this in context. Having been involved in technology-facilitated education for the past 15 years, I think that the current form of MOOC is getting all bit more attention than it deserves. In a very short time, we will probably look back at this evolutionary step in the MOOCs and say that it was just a stepping stone while we were experimenting, trying to understand how people learn and what is effective in technology-facilitated education.

The MOOCs that we have developed at the Jack Welch Management Institute are not exactly MOOCs in the sense that they are not free. One of the O-s is missing. The format involves self-paced self-study. It is closed. Our target is business-to-business. We are trying to have organizations integrate this in the development of their managers, rather than just giving it away for free. We have a business model.

With respect to our degree course, which is 100 percent online, the units are not MOOCs but SPOCs. In this case, I would say that "SP" stands for "small" and "private". We have only 25 people in a section and there is required interaction through the whole course. That is how we deliver a whole executive MBA program.

If we wanted further proof that the MOOC is just an evolutionary step in the direction of further development, refinement, and improvement of the effectiveness of online education, we just have to look at the completion rates. If something were a final product that was going to change a world, it should have a higher completion rate. The reason that MOOCs have a five-percent completion rate is that there are a lot of people who are just kicking the tires. The students themselves are experimenting. They have heard about the buzz of MOOCs and want to see what it is all about. The results suggest that people are interested. But we also have evidence that MOOCs are just an

evolutionary step. If we really wanted to help people learn better through the use of technology, a good indicator would be the percentage of people who finish the course. The current results are not very exciting. This should encourage us to think about what we have to learn. There is nothing wrong with experimentation. I am just trying to be realistic. We should not imagine that this is as far as we are going.

In a sense, MOOCs are like a 21st-century version of a textbook. Imagine that somebody asked you to read a book and take a test at the end. The same happens when you take a MOOC. They give you a test if you finish it. But it is more engaging than a textbook. It has videos and you can take it around on your computer. It is just a wonderful resource at the moment but it has to be integrated into something more elaborate and comprehensive.

I also heard a great analogy, comparing MOOCs in 2014 to the movie industry 100 years ago. Think about the origins of the movie industry. In the beginning, they would put a camera in front of a stage and film a play. For centuries, actors and directors had known how to put together plays. Then a new technology appeared that could be used to capture that experience. Later people began to understand what was possible with this new technology. It could do things that were impossible on the stage. Now, in 2014, you do not even need people any more to make a movie because you can use computers.

I was involved in the creation of six MOOCs in the last year and a half. They would literally have the professors stand where they normally stand in the classroom and they would put a camera in front of them. The idea is to capture what you would get in a classroom. For the time being, we are not extending this opportunity to embrace everything that the technology can give us.

There are many people with ideas as to where we should go. I am sure this is going to grow in leaps and bounds. But again my message is "Let us not get too hung up on the current stage of the MOOC, because it is going to develop into something much more engaging than it is today".

This being said, I think that MOOCs are making an important contribution to what we are doing today. They are contributing to our experiment, designed to understand how people learn and what is important to them. The value proposition of a MOOC is its accessibility.

I have colleagues who have been involved in online education for decades. They are frustrated to hear people talking as if online education was invented in 2012. What happened in 2012 was that schools like Harvard, and Stanford, and MIT got involved, and people started paying attention. Some 20 years ago, when real pioneers were experimenting with this form of education, much fewer people were aware of that. The good news about those high-profile schools and the discussion of MOOCs that they have provoked is that faculty inside the school, who have to participate and be agents of change, are now more interested in talking about technology in education than they were even two years ago. I see that as one of the most significant breakthroughs. The dialogue about technology in education is far more widespread. It is creating far more curiosity and interest on the part of academics than a few years ago.

From the point of view of administration, MOOCs give academic institutions a real opportunity to diversify their product portfolios. If you want to have a successful business school, you have to have a portfolio of products that generate tuition so that you can help more people advance their lives and careers. Technology will not create ghost towns but it can extend the reach of a university that embraces it and understands its potential.

Giving away content free of charge underscores the fact that just absorbing content is not how people learn. You need professionals to lead that process. If absorbing content was the only thing that there was to learning, then you could just read the professor's book. The main value of going to a university is not getting content.

None of the schools that launched the first MOOCs need brand-building. They already have the best business school brands in the world. But they have realized that to maintain a leadership position in education they must

experiment in this field. They must become leaders in the field of technology-facilitated education. Therefore I am not surprised at all that leading schools are going in that direction. How else can they continue to claim that they are leaders?

Stéphane Justeau

I have a question for both speakers. Many companies around the world today say that it is good to have any kind of MOOC on your resume because it is evidence of motivation. What do you think about that?

Natalia Dmitrievskaya

If you apply for a teaching job at my institution, I would look at your educational experience. If you have paid money to take a particular course, with or without a certificate, that would tell me that this person is motivated to learn something new from different sources. This is becoming increasingly important nowadays. People need to obtain as much knowledge as possible from as many sources as possible. If you have taken a MOOC, that means that you know how to communicate effectively with people online. Everything else being equal, I would prefer the applicant who has taken a MOOC.

We have asked our academic staff to follow a MOOC in any language until the end of May. Then we will look at their performance and we will decide whether to continue their contracts or not. I do not know what results we will have but I think that this is a good experiment because it pushes our faculty members to learn something new from novel sources. It is hoped that by taking a MOOC, they will learn new methods and ideas that they could implement in the education process at our university.

Danny Szpiro

I agree entirely. Anyone looking at your resume wants to see your commitment to learning. This is so because in a modern job you have to face novel challenges and acquire new skills. If you can demonstrate to an employer that you are committed to expanding your skills and obtaining new knowledge, that is an advantage. I know people who have taken courses just to be able to prove that they have not stopped learning. MOOCs make that much easier now in terms of opportunity costs, time away from work, and so forth. They enable you to demonstrate your commitment to learning much more easily than this was possible before.

Workshop 3: Gamification and Simulations

Natalia Evtikhieva, Director General of RABE – Russian Association of Business Education, Russia

I am the director general of the Russian Association of Business Education and the dean of the International School of Business of the Financial University under the Government of the Russian Federation. I have the pleasure of leading this session on gamification and simulation. I am not an expert in information technologies but our two speakers are.

Franck Thomas is an expert in digital marketing. He is a senior consultant, advising large and small companies. Among other things, he advertised

internal Google systems from 2006 to 2011. He is very passionate about the emerging technologies and the massive open online courses. He is also interested in hybrid learning.

Marcin Wardaszko comes from Poland. He is the director of the Center for Simulation Games and Gamification and an assistant professor at the Department of Quantitative Methods and Information Technology at Kozminski University in Poland. Since 2003, he has been involved in the development of simulation games for business and consulting. He believes that games and gamification will change the world. Perhaps in an hour we will also share his enthusiasm.

I now invite Franck Thomas to explain the difference between gamification and simulation.

Franck Thomas, Academic Pépinier Incubator at ESSCA School of Management, France

I have been lucky to experience gamification first hand as well as through a network of people who told me about their experience across diverse industries. I also want to give you examples of gamification and simulations. These words sound nice but what is really behind them? How do we distinguish between them? And how do they enhance an educational experience?

What they bring to the classroom is an opportunity for people finally to do something. Students can put their knowledge into practice. This is a strong argument in favor of these activities. They can help you create an immersive environment and enhance student engagement. Course participants become more interested because they can learn as they play.

This approach is not error-free. It is fine to let the participants make mistakes because when that happens you can analyze the mistakes and try to understand why they occurred. Then, you can try to draw lessons from that and improve the teaching process.

I would like to focus on the corporate perspective. I think that Marcin will present the educational perspective.

Gamification is a layer of game mechanics applied to something that is not really a game. We add game mechanics to an activity or a context that is not a game. The typical objective of gamification is to promote behavioral change. This can means adoption of a new desirable behavior or extinction of an existing undesirable behavior.

You know that asset managers are involved in quantitative activities but not in commercial activities. Now, you may want to change this. You may want them to know how to sell their investment strategies to potential customers. How do you do it since these people prefer investment strategies, not sales?

A pool of companies decided to take a stake in a startup that wanted to apply some gaming logic to its portfolio of investment strategies. It started working with about 15 asset managers, located mostly in France. They work for different investment firms. Thus, it is important to know that there is an audience. These people are fund selectors who have an interest in knowing who is the best asset manager and which is the best investment fund around. Since this is a commercial activity, the investment funds support the startup

with an annual fee. That is their business model. You pay a fee and then you can play as much as you want.

What is really nice about this game is that it is based on real numbers and real market situations. You actually have all the data and the whole context concerning the political situation in the world. Everything counts in this game. Then you enter a strategy just as you would in real life as an asset manager. Of course, you are not playing with real money but this can have consequences for the money of potential customers. You try to play in such a way that you win, while being conservative enough, avoiding serious risks. You need to follow this path so that you make sure that people trust you. That is the beauty of it. It is a game but behind it there is a reality. Instead of bidding real money, you bid potential money. It is not a simulation in the sense that ultimately, you make similar decisions in the real world with the funds of your customers. And the decisions of the other players also count.

Ultimately, you can see which managers perform well against the market and against each other in the same market conditions. In that sense, we do not imitate the real world. We take it as it is and add a game layer to it so that the participants can play with a safety net and do not have to worry about losing real money. Still, the customers are interested in seeing what choices they make. This is a great advertisement channel for investment funds because it puts the asset manager's name in the front row. They can sell their skills by doing their job, rather than by playing golf. This is probably the best way for them to sell their skills. As far as investors are concerned, this provides fast identification of the best performing funds.

This is interesting because it is easy to replicate a quantitative world. But how do we gamify softer skills? Managers make decisions that are not highly quantifiable. That makes their jobs much harder to recreate in a game. This provides an intellectual challenge. You can ponder the construction of a game layer that imitates these decisions.

The beauty of gamification is that it is scalable. The more players, the better. As for the educational element, it can vary from weak to strong. It is possible to have a game version with a stronger educational element. It should still replicate reality so as to maintain the participants' engagement and give them the feeling that they are doing something real.

There are also other sectors, where mistakes can be very costly. One such sector is health. There is a platform for the development of games for that sector called Patient Genesis. Developing a game involves a fixed cost. You need a design, a scenario, and other elements that generate costs. But you can also start from a platform that offers you ready elements. You take them and assemble them to create your own game. In that way, you project becomes easier. It facilitates the development of an application for hospital practitioners, such as doctors and nurses. It enables them to make the right decisions in a particular complex situation. You have a lot of information, including what the patient has told you. This creates a very complex world. How do you analyze all this information and make the best decision? That is the objective for this type of game.

In reality, a medical institution describes its real world and the game developers start from there. There is a healthcare editor who writes books on therapy. That person provides additional information for this game. This results in a complete and convincing simulation.

What is nice about this platform is that the modules are not for the consumption of a specific person. You can share or sell the content that you have created. I think that about 15 modules have been developed so far. I know of a pharmaceutical lab that created eight modules so that they could explain the effect of a particular treatment in a specific situation. This can be used by the corporate world. They have an editor who provides real data concerning treatment with drugs.

Following the game, you can have a high-quality debriefing session with the doctors who have participated in it. Most of those people do not sit in a classroom as they play the game. They are typically between two interventions at the hospital. They can play at their own pace and then take part in the debrief at a later stage, when an instructor is available.

It is relatively easy to create new modules with new scenarios. You do not have to be an information technologies expert. You can be the subject matter expert.

Games like these can be played on the Internet or they can be downloaded and played without an Internet connection.

The examples that I gave you challenge our view of a traditional simulation that is a non-evaluative type of game. These new games contain reality. They use real data that can help you make a decision.

Marcin Wardaszko, Assistant Professor, Department of Quantitative Methods & Information Technology, Kozminski University, Poland

A few years ago, when I started doing what I am doing, people said that I was a lunatic. Now, they are willing to listen to me.

Brian-Sutton Smith, a famous sociology professor says that the opposite of play is not work. It is depression. Playing is one of the hardest types of work that you can imagine. Seventy percent of all brain activity takes place during play.

Nowadays, the question is not whether we want to use games and simulations in education. In the United States, 97 percent of educational institutions in the field of business use games and simulations even if the dean does not know about that. The question is how to make them effective. I even know of attempts to redesign a whole curriculum around games.

You can use games and simulations for the purpose of teaching strategy in very different ways. The same game can have a very different didactic impact. The choice of the role, model, and place of simulation games implementation in the educational systems can have a great impact on the way they are used. Simulation games can provide a summary of knowledge and skills. They are good motivational tools in education. They can be useful for the purpose of recognition of knowledge and skills gaps. Simulation games provide support to specific fields of knowledge or skills. Finally, they can be used for testing.

First of all, you can use a game to summarize existing knowledge and skills. That is our typical usage of games. We use them at one of the last stages. It is something like pilot training. Before you enter a real plane, you practice in a flight simulator for 600 hours. In Australia, they have built a hospital worth 400 million Australian dollars that does not have any real patients. All the patients in residence are dummies. The whole hospital is a huge simulator. Every student of medicine must spend six months there. This can be done for managers or any other professionals who need a set of special skills. The idea is to give these people experience before they start practicing their profession.

We have large summarizing simulations that cover all areas of business and last a whole semester. We can also use them as motivational games. People can play them for fun. There is a game helping high-school students choose a career. It covers diverse topics, such as law, finance, marketing, and entrepreneurship. The students play and get a feel of these fields. Then they can choose to study whatever they like.

There are also microsimulations that you can use as motivational tools in a classroom for a half hour or more. If you want to use them for educational purposes, there are some requirements and systems that you have to fit in. If

you choose a particular strategy, you have to live with the consequences of your decisions.

What is the difference between gamification and simulations? The gamification uses game mechanics in non-game context. A simulation is an artificial micro-world. It is a world that we create. It is perfectly risk-free and safe. On the other hand, you can use different scenarios to manipulate the situation and highlight particular aspects of it. For example, you can simulate an economic recession to provide an experience of it to people who have never lived through a recession.

If you want to teach specific hard skills, highly sophisticated simulators are the best option. But if you want to teach some creative abstract concept, you cannot use a flying simulator. You have to come up with something that gives the students the freedom to create their own solutions. The majority of games are somewhere in between. The most important thing is to be clear about the skills that you want to teach. Then you should think how you can deliver this to your audience. And it is always a good idea to connect it to real context. There exist examples of best practices that illustrate how this can be organized as a process. But before you set out, you need to make good strategic decisions concerning what you want to teach. Otherwise, even if you have a perfect layout, the game will not help much.

Simulations can give a very deep insight into what the players have done at every level. This enables educators to give feedback to the players but it also provides important feedback to educators. For example, you know exactly how much time each player has spent on the game. You know what they clicked, how often, and in what sequence.

If you want to choose a game for educational purposes, what should you choose? This is a typical question that will come from a dean or a human resource manager. You have two main options. You can get a license to play a particular game or you can build your own. You can also hire somebody to provide a customized solution. There are companies that specialize in this field and you can outsource this job to them. All of these solutions have advantages and disadvantages.

Obtaining a license is not very expensive because there is huge competition in the field of game production and a huge selection. I have about 1,400 games in my data base. There are plenty of local and global companies that deliver games for all sorts of purposes. Implementation would also take a very short time. You just train the people who will run the game.

The problem with getting a license is that you would be buying somebody else's viewpoint. The whole content of the game and the mechanics come from a context that is different from yours. In the case of many games you have no idea how they were built. It is like buying a cat without having seen it. You know that it is moving, mewing cat but you do not know how exactly it behaves. If you buy a game from a global company, and you have some specific local needs, you can expect that you have made a bad investment because the local flavor will be missing.

You can decide to develop your own game but that costs a lot. The good news is that in this case you get some unique solutions that fit your particular scenario. Your product can also have some revenue generating potential if you want to share it with somebody. Because it is your own game, it does not have any train-the-trainers cost. You can train as many people as you want. Your game would also have huge knowledge-generation potential. The knowledge that you have gained can be incorporated in your learning system.

We use a lot of games. We develop our own but we also use a lot of licensed ones. Let me give you an example.

We designed a course based on a gamified classroom system. The format is traditional. It involves coming to class, reading, and asking questions. There is an exam at the end, too. However, we have added a game. The students are a spaceship crew. Unfortunately, the ship breaks down in the middle of nowhere. Each student plays the role of a crew member, whereas the teacher is the ship's captain. The task is to repair the ship and complete the voyage.

The game helps the students concentrate on a specific task. To achieve that effect, it needs to have some epic meaning. Thanks to that, the course can

become more atractive and the students will be motivated to see how the story will end.

How does the game unfold? Each of the ship's systems needs a number of energy cells to get activated. Players earn points for missions accomplishment (one mission for each system), for being active during lectures, and for dealing with instant challenges and random events. For instance a mission can be the following:

"Your task is to find a gamified solution and write a short review about its purpose and functionalities. Start by describing the problem that the chosen service or platform aims to solve. Provide a short description of the game design elements that you can observe in the system. State your opinion about the solution and do not hesitate to be critical.

Upon successful completion of this mission you will be awarded 10 energy cells. Bonus: +5 energy cells if your chosen solution is not based on marketing".

We also use random events so as to take care of attendance problems. A random event brings in an element of surprise that stimulates student participation. Students roll dies and each facet of the die is associated with a different outcome.

We do not have mid-term exams or final exams. We have case studies and individual projects as boss fights that have to be completed by the end of the semester.

All this is a course with a player-centric design that stimulates positive behavior. It demonstrates that gamification can be the answer to very old educational problems, such as short attention span and provision of instant feedback. And the beauty of it is that it gives feedback to the administrators as well. For example, I had 77 people on that course and I found that people did 3.5 missions on average.

There are ready platforms on the market, such as Youtopia and World of Classcraft. You can use them to set up and manage your own course.

Sergey Mordovin

I would like to make a couple of comments. Games are fine in kindergarten. They are actually the only possible didactic method there. You can also use them in primary school and perhaps in secondary. They might also be a good tool for lazy inexperienced students on Bachelor's programs. But I am dealing with serious people in their 40s, with 20-25 years of professional experience. They hold top positions in big companies. Some of them own those companies. Playing games with them poses a problem. First, they are not kids. They will not pay for playing games. They come to my school to do serious things. They are not psychologically prepared for play.

The second thing is that these people are very busy. They do not have enough time for complicated business games.

Marcin Wardaszko

I have used business simulations in executive courses on advanced management programs since 2007. I have also watched the games played on Harvard University `s advanced management education programs. Some of the participants make more money in a month that I will probably make my whole life. So, the professional background of the participants is not a real impediment. What matters is the approach that you take.

If you say, "Let us play a game for fun", you will generate a negative reaction. You have to explain the benefit of the game. Paradoxically, I have found that it is the people who are reluctant to play that get the greatest educational value out of games. I know why they do not want to play. We take them out of their comfort zone. But that is what management education should be about. It should be about making managers step out of their comfort zone. You have to put them in a situation where they experience a problem. If you keep them in a situation that they know, they will just use known patterns and will learn nothing. You have to convince them that you are putting them

through a simulation that equips them with a very useful set of skills. And you can tell them that it has been proven that this is an effective learning tool.

It is also a matter of trust. Do your students trust you as an educator?

Franck Thomas

Indeed, it is important to use the right approach to senior managers. You should not focus on the fun part of the game. You should focus on the competitive element because they like to compete against each other and win. You put them in a risk-free environment where they can test themselves.

Marcin Wardaszko

Of course, you play different games with different audiences. There are games for executives, for master-level students and so forth. They are appropriate games for everybody. For example, there are business games for high-school students. It is possible to come up with a game that so sophisticated that it is like running a global company. You do not shoot aliens. You run a serious company. It does not matter that it is called a game. What matters is how you play it.

Zoltan Buzady

My field is leadership. You can teach that by talking about Bill Gates and showing films but I have also been looking for some new technology. I came across a Hungarian award-winning simulation game. It is based on psychology research from the 1970s in California that resulted in the so-called flow theory. It postulates that people are happy if they can achieve a balance between their individual skills and their contextual challenges. It is a well-executed simulation that involves a movie and a story board. The participants get feedback based on their decisions. My role is to facilitate discussions of the development of the game and, in particular, who made a good decision and why.

If you have colleagues who are interested in using simulations about organizational behavior and leadership, please have them contact me. I am also interested in analyzing data from simulations games. Big data analysis for the purpose of scientific research is another exciting area that games open up.

Nikos Mylonopoulos

I would like to bring up a different issue. We have management programs for the Emirates. They do not want to have lectures and workshops. They want only games. This poses a problem because we cannot invent games fast enough. But there is another issue as well. Management education is not just about knowledge. It is about behavioral change as well. And you cannot have that without failure. Consequently, you have to go to those vice-presidents of companies and chief executives and tell them that you are going to have them play a game that will make them sweat and curse for a half hour and they will finally fail because that is the design of the game. They will not fail because they are not good but because they have to. After some experience, they learn from the process and even manage to have fun.

Still, there remains a problem that we have not solved. We need measures of behavioral change and we do not know how to do that. I would be glad if anybody has ideas.

Sergey Mordovin

You cannot identify the right decision in management. In most situations there is no one right decision.

Marcin Wardaszko

It is not a matter of who did the right thing and who did something bad. It is about comparing who did what and why. Then you can analyze the advan-

tages of each strategy for hours. You can also discuss how we can learn from the failures.

Games allow different types of measurements. For example, you can measure how well a participant can predict a financial gain or a loss in a particular situation. You can ask them to predict whether a company's market share will increase or decrease if a particular decision is adopted. You can measure these prediction skills before and after the course. You can also measure them in the middle of the course. It is a beautiful way of demonstrating how much progress has been made.

Besides, you can measure how uncomfortable a player felt playing a game for the first time and how much the comfort level has increased after a number of rounds.

You can also look at the changes in the behavior of people who have taken a traditional course and a course that incorporates a simulation. This is also measurable. We found that half of the people who took the traditional course do not even remember that they have passed it. "Did I have strategic management? Oh, yes, I forgot about it. It was three months ago".

Natalia Evtikhieva

Can somebody tell us what is the right percentage of gaming time for each type of program: Bachelor's, Master's, and executive? I would also like to know what characteristics the games should have for these different audiences.

Franck Thomas

There are plenty of games that can enhance a particular desirable skill. Playing chess trains you to think ahead and anticipate. That is a great skill in a business environment. The go-go game teaches you how to avoid making mistakes at any cost. All these games strengthen some skills.

I have noticed that all business games share a characteristic. People always try to play them in such a way that they earn something. But if a game is properly made it should lead to unpredictable results. That is a great lesson for the participants. We live in an unpredictable world. You cannot crack the complexity around us with an algorithm. That should be the main lesson that you get from playing a game.

Natalia asked what type of game is appropriate for different ages and types of students. I think that it is especially important to show to younger students that the world contains a lot of unpredictability because they tend to see it in a systematic way. We have to teach them that you cannot master the complexity of the world. What you can do is produce some beneficial effects in line with your own objectives.

Marcin Wardaszko

To answer Natalia's question, the proportion of games that you should use on your programs depends on your strategy. As far as I am concerned, percentages do not matter. What matters is how you use those games. It is very important that your whole educational system is built logically. It must correspond to the kind of skills that you want your students to acquire.

I also would like to refer to what Franck said. It is true that the world is full of uncertainty. How do you manage that? By having the students read thousands of pages about how various leaders dealt with uncertainty? That would hardly be very useful. Franck is right that you cannot make the world more predictable. But you can manage the way that you deal with this inherent unpredictability. This is called "emergent learning". It is one of the key topics in management training these days. At the core of this concept is the philosophy that how you react to problems is more important than what you do.

My boss says that the people who have lost a game are those who have learned the most. I do not agree. In my view, those who have learned the most are those who have analyzed what they did. That is what we want to maximize. We want the students to connect to what they have done. If they are not connected, they will forget everything.

Franck Thomas

The proof that Marcin is right is plain to see. What do students do during the breaks between two sessions of a game? They discuss the game and their results. How many traditional courses have you had that have produced this effect? One definition of learning is making some content yours. Games achieve precisely this effect. Participants identify with the game and feel that they own the content. This happens after all business games. That is exactly what we want in our education process.

Natalia Evtikhieva

We have to wrap up now. May I ask our speakers to make some final comments?

Franck Thomas

Yesterday, some speakers talked about the cost of incorporating games and simulations in the education process. You can choose a short-term investment such as game development that pays off really well and really soon. If your resources are scarce, I think that you will get a log of educational value out of this. In my view it does not to have be a huge investment but it has to be well thought out. You have to consider the audience that you want to engage and for what purpose. What behaviors do you want to change? How do you measure the incremental value of a particular game session? You must have answers to all these questions.

Marcin Wardaszko

I totally agree with what Franck said.

Of course, we can stick to the traditional form of education. That will not make anything worse but we cannot expect a better result either.

On the other hand, we have enough knowledge and resources to adopt a new type of learning environment. It is not teacher-focused but student-focused. One way to do that is to engage the students in the process of learning by motivating them to search for knowledge on their own. Gamification and serious games gives us this opportunity.

Workshop 4: Learning Management Systems

Ivo Matser, CEO, TSM Business School, the Netherlands

Welcome to the workshop in Learning Management Systems. We have two excellent speakers from two excellent schools: Gorazd Planinc from IEDC-Bled School of Management and Alec Wersun from the Glasgow School for Business and Society.

If you look at our bios, you will see that all three of us have a corporate background. Subsequently, we fell in love with management education. Another thing that we have in common is that the students of our schools have jobs. We need to keep this in mind because it probably makes a difference. When your students work, you have a special role with respect to life-long learning. It is more correct to say that we are partners in the students' personal and

professional development than to describe our institutions as developers and sellers of programs.

When your students work, the programs must be context-oriented. The context must be integrated into the learning programs. Technology is very important in this process. We should not draw a line between working and learning. We need to be flexible. Also, since our students work, we need to use their input. We need to develop our programs together so as to meet the expectations of our students. I think that technology will be the key to make this process stable, flexible, and attractive.

Gorazd Planinc, IT Director and Web Marketing Advisor, IEDC-Bled School of Management, Slovenia

During the past two days, I heard a lot about the systems that are used in education. In the past 12 years, the Bled School of Management has made a transition from using very little technology to using a lot of it in the learning process. I would like to talk about where we were yesterday and where we can go tomorrow with learning management systems.

As I listened to the previous speakers, I realized that massive open online courses are not the only existing system out there that we need to consider. There are many technological systems that you can harness to improve you education process. Let us start with a look at what a learning management system is. It is a web platform for the management and delivery of content for online and off-line courses. It enables course administration, grade tracking, and reporting. It acts as an information hub and a communication channel for all stakeholders involved in the educational process: program managers, students, professors, mentors, experts in information technology support.

I am not going to talk about the components of a learning management system. I want to discuss its potential position in a business school and how we could use it effectively. I will talk about the role of learning management systems and Alec will later discuss some existing functions of those systems.

In the previous sessions there were a lot of references to massive open online courses, the cloud, and more. It is hard to imagine how all these come together in what a business school does. Where is the system positioned? How can we use it? How can we improve it?

There has been too much focus on massive open online courses. This creates the impression that these are the most important component of learning management systems but that is unfair. There can be many other systems in place at a business schools. They all have to function well so as to deliver the educational content to the students.

If you want to track potential candidates from the awareness phase to their enrollment, you need many well-functioning systems at your school. It is not only the learning management system, which is the most important one.

I will talk a little about the systems, how they can relate to each other, and how we can improve the educational process, knowing what these systems do at our school.

I am currently working on a tough project at our school: how to identify and attract prospective candidates. You can have the best learning management system but if we do not have students it will not help a lot. You have to

find them and convince them that your school is the right choice. There is a system called "content management system" that you can use to persuade potential customers who are surfing the Internet that your school is really the right choice for them. Marketing experts should start using these systems. That is their job. It is not the job of information technology experts like in the early days of these systems. It is the marketing experts that should write the content.

There are many tools that can help in the transition from awareness to enrollment so as to attract visitors and convert them into participants.

When it comes to intent and the decision-making process, we would not survive without the customs-relationship management system at our school. It allows us to monitor the intent of the potential students. This is called a "lead" and a "business opportunity" at a later stage. We collect data on our website and we use them, making a lot of effort to sell our programs. Without organizing the data in the customer relationship management system, we would not be able to use a learning management system because we would not be able to sell anything. Now, when somebody makes a decision and comes to the school, the learning management system does something very simple. You can put cases and presentations on it. You can provide access to forums, blogs, and chat-rooms. The students can talk to their professors or to each other. There are a lot of tools in a learning management system. Alec will discuss some of them in his presentation.

After the students have graduated from you program, they usually like to stay in touch. At IEDC, we have an alumni area in our learning management system. It enables us to communicate with them and stay in touch. Our alumni are a very important marketing tool. They are the school's ambassador, brining students.

We have been doing this for about 10 years. What does the future look like? I see three key elements that I would like to dwell on: personalization, automation, and integration.

Imagine a person called John. He is in his mid-thirties, searching for executive education. His field is finance. He is searching online, which is what people normally do in this case. If you have an advanced marketing tool available, you can find ads that target John. When he sees the ad, he will click on it because he will recognize that the offer is what he needs. He will not open the home page of your business school but the page that is devoted to what he needs. This is content personalization. It is no longer enough to present the general business card of your school.

You have to be careful about what you communicate on your pages and how it reflects John's needs. A good strategy is to study the market: find out what people want, create the best possible advertising for that purpose and, of course, personalize your website so that you attract these people.

Content personalization, advanced tracking reporting, web content management, and many more, are examples of already functioning systems. There are companies that are selling them. I am not talking about distant future but the present. All these technologies are available as we speak. I think that we all agree that attracting students is not easy these days. These systems can help.

Now imagine John coming to your special page. He is full of enthusiasm because he believes that he has found exactly what he needs. He is doing his search late at night. He wants to download your school's brochure and take a closer look at the program that he is interested in. Imagine having a system in place that can tell that somebody is downloading the brochure. It can immediately send him a nice e-mail: "Dear John, we have a special offer for you that you can avail yourself of in the next 48 hours: a 10-percent fee reduction". He has received this e-mail despite the fact that there is nobody at your school at that time. The message has been generated automatically. But John might think that these people are working around the clock. What is actually going on behind the scene is called automated marketing. There are companies that develop tools for marketing automation. You can use these tools to influence the decision of your potential applicants. Offering fee reductions is just one possible option. You can also generate e-mail messages that explain how good your program is for this particular person.

Now imagine that your sales department is notified that John is interested in a particular program. He decides to go ahead and is eventually enrolled on the program. If your learning management system is connected to your customer relationship management system, it knows that this person has applied. Then, John gets another nice e-mail message: "Dear John, here are your access data: user name and password. This is how you can use the learning management system". John is impressed because now he can log in and access the members' area.

Imagine now that he can choose the time of study and the content of his studies on the chosen program. Perhaps he can also choose a professor. You give him flexibility using a totally self-maintained system.

If your systems talk to each other and share their data, you can achieve a lot. Otherwise, they would be separate systems. But in the future we can expect system integration and personalization.

After John finishes the program, the system will know that and will send him another message, informing him that he can use the same username and password to access the alumni area. On those pages he can obtain information about the school and contact all his fellow alumni. The information will be updated on a regular basis. In this way, John will know that a particular classmate has left his job or his country and moved somewhere else.

Imagine also that John finishes a long program in finance. He can receive a message telling him to contact some human resource managers who might have a job for him. No particular person needs to do that. The system knows what qualities and skills John possesses because he studied at the institution. It is also possible to charge him for the job offer.

All these systems become one single ecosystem at the school, talking to each other and exchanging information. Naturally, you have to make sure that all elements of these systems are interconnected properly. This is not easy but it is possible. The real challenge is to understand the full potential of these systems and use it.

Ivo Matser

Thank you very much. I see that your school is far ahead of many others. Many schools have contact management systems but few have learning management systems. Typically, the existing customer relationship management systems are poor. And most schools do not have a sophisticated advertising system.

Alec Wersun, International Business Policy, Strategy & Management, Glasgow School for Business and Society, UK

Gorazd talked about customization. In my presentation, I would like to set the context. I have to stress the importance of context in any discussion of learning management systems.

The IEDC is relatively small, compared to my institution. Therefore, I would like the audience to bear in mind my context. That context is Scotland in the United Kingdom. There are some trends that have shaped the whole sector and institutions like mine. The first one is massification of management education. Gorazd talked about customization. But in the United Kingdom, there are sectors, such as undergraduate education, where massification is

prevalent. I am talking about lectures attended by 500 students and seminar classes of 30.

There is a second contextual issue I would like to highlight. Although we have class sizes of 500 students, we divide them into smaller groups that a team of 5-6 faculty members teach. This creates a challenge of maintaining consistency of message amongst team members. The students need to receive similar information and a relatively similar experience. The question is how to use a learning management system to ensure that we provide a relatively consistent message to students.

The third contextual component that is important in the United Kingdom is the diversity of the student population. For example, even at the undergraduate level we have different ages, ranging from very young to more mature. On the first day of this meeting, somebody used a phrase borrowed from the famous American sociologist George Ritzer who coined the term "McDonaldization of society". We are now observing a McDonaldization of higher education. A long time ago, Ritzer observed that students had become customers who wanted to see a menu and they wanted to be able to choose from it. Besides, they want to be able to choose where they will consume whatever (courses) they buy.

A management learning system (MLS) provides the means and flexibility that is necessary to achieve this. A MLS provides the means of finding the right balance between learning in a bricks and mortar environment, or high-touch environment as somebody called it, and giving people the flexibility that they need to learn at their own convenience and pace, depending on their personal circumstances and own individual learning style.

There is another contextual factor that I would like to share with you. That is the effect of financial pressure and the demand for efficiency. My institution is heavily reliant on government grants for undergraduate education. That money comes from the state. The amount of money that they give per student is falling, whereas the number of students is increasing. As a result, we have a dual pressure of reduced financing and increased student numbers. This creates a need for efficiency gains.

Because of all this, we have to respond to the needs of the students who are increasingly seen as 'customers',never mind that many academics hate the use of that word !! It seems to go against the grain of educational values that a lot of educators hold, especially those who have been in academia all their lives and have their own understanding of what education is and should be.

I must thank Gorazd for giving us a big overview. Gorazd was looking at MLS in the context of customer relationship management. But I am not going to touch on that because my type of institution has 17,500 students, with 4,500 students at the business school. Ninety percent of those are undergraduate. A lot of our services for customer management are managed centrally. By definition it is not as tailored or customized as what Gorazd talked about, because he works in a very different context.

The first question programme designers need to answer is "what will we use a management learning system for? How can we think about it from an educator's perspective, not from a managerial perspective?

I am going to approach this subject through a model that I hope you find interesting. It can help us to think about how we can frame the use online resources and management learning systems.

In 2002, my university employed a very well-known professor in digital education, named Gilly Salmon. She is very good in the field of e-learning. She came up with a five-step model that is very helpful. Before I introduce it very briefly, let me again give you some context. We use the term management learning environment (MLE) for management learning systems. It means the same thing. We use MLEs at three different levels at the business school. First, we use the MLS for the whole business school, in which we have have three departments. One is Business Management (BM). Another one is Social Science, Media, and Journalism (SSMJ). The third is Law, Economics, Accounting, and Risk (LEAR). One part of the MLE is used on this level - to give students access to general information about the Business School, about all the

courses, all the staff, our business connections, international activity, research activity, and the like,

In Scotland, undergraduate management education lasts four years. In terms of program management, in addition to having a programme director, we have directors of each level or year. It is like a matrix structure. Each of these directors will configure a part of the MLE to provide electronic information, resources and guidance specific to students on that particular year of study (one for each year), and provide an open online channel of communication that students can use with their peers and tutors.

I am going to go into more detail concerning the third level of a four-year undergraduate degree programme - and focus on one particular module, on which I have up to 300 students. Using the MLE to good effect demands a lot of thinking. As leader of the module with two colleagues in the teaching team, I use a separate part of the MLE for this one module, providing a variety of functionalities as we call them.

This was a lengthy introduction but I think that it is important in terms of context.

I think that Gilly Salmon's model is an interesting heuristic device to help management educations design the way we can use a MLE. Let me talk you through it.

The model consists of five steps: Access and Motivation, Online Socialization, Information Exchange, Knowledge Construction, and Development.

Imagine students turning up in great numbers. We might have a big welcome and induction session. We must make sure that all program participants have access to all the information that they need, so everyone is on the same page. I am talking about simple things such as ground rules, timetables, and the like. Some of these will be provided by program administrators.

Because a lot of the students are new to higher education, we have to make them feel comfortable. The management learning system can do this by providing them with the requisite information about their year of study, as well as using the communication tools in the MLE to keep them informed, to update them on changes, and to send them messages that make them feel comfortable in their environment.

You can think of this in terms of the caption on this slide. A cautious student comes to the business school. He/she does not know where things are. She is asking staff where different lectures are taking place. The role of the academic and the administrator at this stage is to make sure that all the information is there for the students, readily available at a click, so that they feel confident that they know what their are doing, where to go, and how to plan their time.

The second stage in using the MLE is for what Salmon calls the "Online Socialization" stage - getting students to know each other online. We all know the importance of human interaction, and of course students meet each other in classes, but given the size of some lectures they can't meet everyone. Over the years I have found that young people like to communicate with each other online. They just feel comfortable with that. In our management learning system we provide discussion boards. The role of the educator at this stage is to stimulate engagement, and point them in the right direction by sign-posting and providing students with small activities to carry out online, in addition to what is being done in the classroom. This is necessary because at this point some students still feel as if they are somewhat blindfolded, groping to find their way in the academic environment.

After seeing that students are socialising online, the next (third) stage is about using the MLE to encourage students to exchange information about the course online. In addition to any classroom activity, such as lectures and seminars, we try to get the students to share some information online in an online discussion board. That may be information about themselves, saying who they are and what they except from their experience at the business school. We also try to get the students to engage with the subject, complementing anything that has been done in the lecture theater or a seminar.

Once students are confident in exchanging information online, Salmon says that the academic moderator moves on to the fourth stage of using the MLE, which she refers to as "Knowledge Construction". In this stage, students are increasingly confident in the MLE environment and assume more control of the content and direction of online discussion themselves. The academic at this stage that is employing what we call "directed learning", setting the direction of travel, and giving students space to explore and develop the agenda themselves, with less intervention from the academic. If the students are not in the classroom, we say, "This module carries the equivalent of 20 credits". Now, the question is what is a 'credit' worth? In the United Kingdom education system, one credit is equivalent to 10 hours of learning. If you take a 20-credit course, that is the equivalent to 200 hours of learning. Students look at their timetable and see only 28 hours on it. They might think that they have plenty of time to go and take a part-time job, or spend time in the pub! Clearly, the answer is that they have got this wrong. In addition to the three high-touch hours students get per week, there are another seven hours that they are expected to spend studying individually or within the MLE.

At stage four, if we (academics) have done our jobs properly, we should withdraw a bit and have the participants generate discussions, set agendas, and take control over their learning. At this point we come to the idea of knowledge as co-creation. Participants generate discussions, propose ideas for further discussion. Students have to engage in teamwork on joint assignments. Some of this is done face-to-face, but much of it is done online, and students learn by doing. By the end of this stage, we have moved to more experiential learning.

The last stage is Development. The educators are basically sitting back, observing and intervening, and students are now using the MLE as a communications hub, and base for virtual interaction and as a virtual classroom.

I believe that this model can be very helpful. We have to think of the purpose of using the management learning environment. What are we trying to achieve? Is it a one-size-fits-all process or not? The answer that I suggest is that it is not. There is a progression.

As a module leader I use the Blackboard MLE system, which allows me to communicate to all students with a single message, or to send messages to teams of students, or individual students. I no longer have to go to an administrator and ask for a message to be sent to my students. Communication is direct, instant, and more efficient. Some people may have reservations about this kind of direct interaction with the students, as some fear it burdens the academic.However, there are many advantages. For example, if I send a message myself via the MLE, I know that the message has been sent out, I know precisely what I have said, and I get responses more quickly and can easily respond to students queries and questions.

Let me also say a word about managing assignments with assistance of the MLE. Students can submit their work directly into the MLE. We use this channel for two purposes. This may sound strange to some of you, but plagiarism is a big issue in undergraduate education. Inside our assignment section, we are connected to what is called the Turnitin system, an online plagiarism detection system that checks the work of students in case it has been copied and pasted. Plagiarism is more likely to happen in essays than other types of assignments.

We have an assignment that asks the students to do market research for a company. The research must cover five countries. After writing a report, they have to present their findings to the sales director of the company. So, the students collect information about markets. There is a real danger sometimes that they will cut and paste this information from one of the many reports that we have in the library. In that case, the students will obviously not add any value, which is what we are looking for. Since I do not want to be a policeman, I allow the students to submit their work to the Turnitin device in the management learning system, and take remedial action for any inadvertent plagiarised pieces of their work. Turnitin creates an 'originality report' that tells the author how much and what has been copied directly from secondary sources. Of course, as long as the students' work is clearly referenced, it is

acceptable to use it. It encourages students to use best practice, reference appropriately, tell us what sources they have used for their research.

When the students submit their assignment in a management learning environment, it allows the academic to mark it online. In the past, the students would take a hard-copy report and hand it in to an administrator. The administrator would log it in to the system, and send it to the academic. The academic would write some comments on it, and send it back to the administrator who monitors the reports, logs the marks, and hands it back to the student. Now, the management learning environment allows the students to put in their work, check for plagiarism, and redo it if plagiarism is confirmed. Then, the academic can mark it online, and the students can receive and see the results online together with academic feedback and comments. You can imagine the efficiency savings that derive from use of the MLE in this way.

Let me leave you with one thought. Last year a colleague of mine said, "Alec, would you do us a favor?" I said, "What is that?" He said, "Will you come and try to fire up the new cohort of 250 first-year students a bit. Help us to get them off on the right foot". I said, "That is a lot to ask but if you insist, I will give it a go". The conclusion that I came to is that in addition to meeting the students face-to-face and trying to connect to them, I should use Facebook.

This is the final thought that I would like to leave you with. Facebook and the social media are a modern version of a management learning system. Social media is different to Blackboard and other MLEs are obviously very different animals and one cannot substitute one for the other. But imagine 260 students that have just turned 18, some of them worried sick, wondering how they are going to cope at university, whereas others are excited. I met them on a Monday and I said, "By Thursday, I would like to see some online socialisation". The Discussion Board is a bit boring. So how could we help these young people get to know each other, other than sitting next to each other in class? I set up a Facebook page for these students. To be honest with you, I am not a great Facebook user. I set up a separate account, using my university e-mail address. Then I told the students that we were going to have a competition for Thursday. "I want you to post your aspirations and dreams for which you have come to this university". I had 38 entries and I thought that was fabulous. The Facebook page helped to create a buzz amongst the students, and generated a lot of traffic, socialising the young students in a way that was familiar to them. I collected a whole range of wonderful statements from students, such as "The sky is the limit", "By failing to prepare you are preparing to fail", and "Work hard, play hard".

Gorazd looked at learning management systems from the customer relationship management perspective. I have looked at it from a micro-perspective. Whoever uses a MLE should always ask themselves, "What are we trying to achieve, and what should we do in the MLE at each stage in the learning process?" When you are using a management learning environment, you should be clear as to the purpose of use, and use it as a way of handing over responsibility for learning over to the student.

Ivo Matser

Alec talked about "massification" and the learning management system as a way of handling it. Gorazd is from a small institution and he talked about customization. I would like to hear more about this difference.

Gorazd Planinc

I talked about how to get potential customers on board by informing them about the education process. This requires a lot of effort on the part of the staff. That is the first stage. The second stage starts when they start studying. They need easy access to the course materials, any time anywhere. The learning management system can be very useful because you do not need to have program coordinators running after them telling them what they need to read.

I think that Alec presented what the system can do for you at the school very well and he explained how the processes can be optimized. Facebook was

the perfect example showing that a learning management system does not exist alone. We have to use different systems and combine them. If you put the students in a close system, they will most likely dislike it because they will feel lost in it. If you give them a tool that they know already, such as Facebook, you can expect to be successful. I think that this is the way to go in the future. Give the students what they want.

Mel Horwitch

I think that we are observing new trend. The use of a limited number of sources of information in management education is declining. There are multiple digital sources of information and this is going to change the way that we teach, because we need to take advantage of this information. The learning systems are becoming more flexible. The nature of decision-making, and the hierarchy of who decides what course will be taught, is shifting away from the faculty. It is moving toward the students, allowing them to bring various kinds of input into the classroom. This raises a very interesting question: who controls the learning system? How much control does an instructor have? If I open up the system too much, I get resistance from the faculty.

Alec Wersun

I agree with much of what you said. This is related to the notion of the students being encouraged to be co-creators. I do not want students to look at me as the sage on the stage. Yes, I do know more than them and I do not want to bring that into question. But I think that the nature of the relationship should be different. We should tell the students that they have access to a lot of information. If for example we are discussing ethical issues in international business, I can ask them to post on the discussion board an example from the press that illustrates some good practice. The students then become a resource themselves because they will go out and find a story. In that way students take more control of their learning. I move from the role of a sage on the stage to being a guide on the side.

Gorazd Planinc

Nowadays learning is happening everywhere. You cannot stop it and you cannot block it. You have to support this process. If a student has a good idea to share with fellow students, the system should support this.

Danica Purg

I listened carefully to Mr Papaphotis's presentation. He said that parents should provide educational support to their children. But I wonder how many parents have time for that. And how good are they as educators?

Derek Abell

I think that we are beginning to lose sight of some very basic things. The social media are a distraction. One thing is clear to me: we need iron discipline. This is something basic. If the door is supposed to be closed at 2:00, you cannot come at 2:01. Insist on preparation. If the students are not prepared, throw them out. I am probably talking like this because I recently spent time with my grandchildren. They were supposed to take some piano lessons. They resisted at first but my wife was adamant and they did it.

Did you notice that this room was half-full this morning? Where were all these people? They are not kids but they have the same problems as kids, doing what they want.

I would say that, as teachers, we should focus on what the students need, not what they want. What they want is sit down, browse through Facebook, make phone calls. What they need is sit in the classroom and study the required material. We have lost sight of this. I have seen classes with no discipline at all. It is amazing. Students walk in and out, eat and drink in class, and talk to each other.

Alec Wersun

I would like to come back to Danica's comment. The children that Mr Papahotis talked about this morning are those that might come to study at your university, believe it or not. They will not necessarily go to an elite university. They might come to a university like mine. Part of our mission is a social mission to include first generation kids. A lot of them will not have had the parental guidance that Derek talked about. An institution like mine sets aside one third of its slots to children from disadvantaged backgrounds. This creates educational, pedagogical, and pastoral challenges. But the key element is the importance of feedback. We have to send messages and set expectations. Some of this is done on a face-to-face basis whereas some is done through the management learning environment. And it is no good saying "I did not know". If you did not know, why did you not know?

I have a lot of sympathy with you, Derek, but that's a very tricky issue.

Mel Horwitch

I think that these systems expand the range of the learning experience. We are no longer shackled to what we teach in a class in the way that we were before. The new systems, such as Turnitin, also ensure a certain amount of quality control. Besides, they extend the time that students can spend studying. In general, the new systems allow us to maintain higher standards.

There is also another potential benefit. We can have collaborative projects with other institutions if their systems can speak to one another. Our institution is now harmonizing our executive MBA courses with those of another school. This will allow virtual student teams to work together. This is exciting because it allows us to reach a diverse student body.

Reports from Parallel Workshops

Drikus Kriek, Director of the Leadership Development Centre and Associate Professor in Human Resource Management at the Wits Business School of the University of the Witwatersrand, South Africa

I must thank our two presenters, Olin Oedekoven and Andrea Tracogna, for their wonderful presentations and the answers that they provided to the tough questions from the audience.

We addressed the topic of blended education: where it starts and where it ends, and from which end it starts. Do we start from traditional education and infuse it with online elements? Or, if we start from online education, what part of the whole process can we do face-to-face?

We also talked about the effectiveness of the two types of education. Our conclusion was that it depends on the type of students. Those that take traditional education do not have the same type of motivation as the students who prefer to study online.

Olin stressed the fact that we must not underestimate a degree that comes from an online institution. The knowledge that the graduate obtain online is not inferior to that from traditional education. We must realize that there are benefits from both types of education and we must try to understand how we could use each of them. Andrea gave us excellent examples of how traditional and online can be combined in executive education.

Arshad Ahmad

I am curious to find out what "blended" means to the rest of the audience. The dean of one school once decided that "blended" means 50 percent traditional, 50 percent online, period. But I wonder what it means to other people.

Danica Purg

It may mean different things today and tomorrow. But I think that at the moment, we can launch some online courses in areas such as finance, but certainly not leadership. In other words, I would run some high-tech courses and some high-touch ones.

Nikos Mylonopoulos

Currently, the balance between traditional and online is at the discretion of the professor who teaches the course. There is no clear method for drawing a line between the two.

Arshad Ahmad

I do not know about your particular institutions but one of the chronic issues that we face at Canadian schools is that there is just not enough classroom space. I happened to do a study on space once and I found that there was space but it was hoarded by some departments and faculties who did not want to share it. One of the conclusions of the study was that blended education could solve this problem.

Douglas Viehland

I do not teach at a business school but I have a son who recently graduated from one in the United States. I thought it was interesting that every senior was required to take an online course. They met as a group at the beginning of the first semester, once at mid-term, and once at the end. The rest of the time, the course was online. The idea was that they might decide to pursue a graduate degree after the undergraduate and this online course would prepare them better to engage in online learning. That was something that I had not heard of.

Arshad Ahmad

Thank you for this comment. Let us now move on to the next workshop.

Juan Andrei Villarroel, Assistant Professor at Católica-Lisbon School of Business and Economics, International Faculty Fellow at MIT Sloan School of Management and Visiting Scholar at the MIT Center for Collective Intelligence, Portugal

Stéphane asked me to stand in for him. We had a very exciting discussion in a small group. Stéphane reminded us about the origins of MOOCs. They are based on the idea that we can all learn from each other.

Then, Natalia Dmitriyevskaya told us about MOOCs at her institution and what challenges they faced. On the production phase, in terms of finance –significant resources are needed to create a MOOC- and technology –the faculty teaching them were not acquainted enough with it. On the delivery phase, it was surprising that Portugal was the most responsive country, besides Russia, in terms of enrollment on their MOOCs (as it turns out, Ukraine has the largest immigrant population in Portugal, at par with Brazil). On the evaluation phase, the enrollment and completion numbers on their MOOCs were quite low -compared to those of MOOCs offered by US universities.

Danny Szpiro shared some ideas about a potential business model behind MOOCs. It is not true that MOOCs are incompatible with a business model. The Jack Welch Management Institute (which offers 100% online programs) attracts real talent who achieves real results and people are ready to pay for those results. Danny shared that MOOCs were just one step in the development of that type of education. Some 20 years from now, they are likely to have evolved into something very different. Danny believes in a brighter future where online education helps us expand our reach. If we develop it properly, it can be hugely profitable and effective.

Danny Szpiro

Yes, online education has been around for decades. The reason that this is becoming such a hot topic of discussion is that some high-profile universities have now started focusing on it. That has raised the profile of technology-facilitated education. I believe that all the innovation in education is going to come from the use of technology. Seeing MOOCs as the state of the art is missing the point that it took us years to get here and we are continuing to move quickly forward with further innovation.

So, my message is that we should not get obsessed with the current form of MOOCs because it is transient. We are still learning about the best fit between type of audience and type of learning module. MOOCs are still an experiment. It is useful to look at them as a way to find out more about how people learn. More importantly, they can show us how business schools can extend their reach so as to help people become better managers, even though they cannot access our campuses physically.

Andrei Villarroel

Universities (tenure committees) tend to put special emphasis on publication records when hiring (and firing) professors. This leads to Universities having a (larger) concentration of professors who are great writers but not necessarily great teachers. (teaching being the main source of income at most schools) This is something for Deans to think about going forward: the rising importance of having great teachers involved in the development of technology-facilitated learning (and the fact that they get 'recorded' and put online for the world to see).

Arshad Ahmad

Let us please move on to Workshop 3 whose topic was "Gamification and Simulations". Natalia, the floor is yours.

Natalia Evtikhieva, Director General of RABE – Russian Association of Business Education, Russia

It was a very interesting session. I would like to thank all of the participants.

The speakers defended the view that gamification and simulations were very useful in business education. However, some people in the audience begged to disagree. Then the debate focused on the kind of audience that games and simulations would be appropriate for. They are fine for Bachelors and Masters but executives are not psychologically ready to play games. There is also a perceived danger that playing games would be a poor substitute for the transfer of real knowledge. Nevertheless, we concluded that, when used appropriately, gamification and simulations can be useful tools in modern education.

Andrei Villarroel

I wonder if we could assess the technological skills of the participants before they engage in simulations and games. Some leading US universities use a lot of these (as complement to their course experience. E.g. Carnegie Mellon University, Wharton Business School, etc.) but the participants are required

to have technological skills at the start. Has there been a discussion on how such skills can be assessed?

Natalia Evtikhieva

We talked about the type of course where games can or cannot be used. For example, a course in finance is appropriate but a course in soft skills is not.

Franck Thomas

Human beings are playful creatures but not everybody is the same. Some senior managers are not necessarily well versed in modern technology. After our workshop, I had a conversation with Sergey Mordovin who said that the best game is one in a half-page text format. He is a proponent of low technology in executive education. If the participants can project their company situation without any technology, you do not need high-tech education. A game can be highly sophisticated in terms of the technology that is required for it but it can also be very simple: half a page of text. That was a very interesting insight.

Arshad Ahmad

Thank you very much. We are moving on to the final workshop, moderated by Ivo Matser.

Ivo Matser, CEO, TSM Business School, the Netherlands

We had a stimulating session on learning management systems. Our speakers told us about different approaches to these systems. The context of our students is important for the learning process.

Gorazd Planinc told us about the four systems of the IEDC-Bled School of Management: a content management system, a customer relations management system, a learning management system, and an alumni management system. It is essential to keep these four systems integrated and active.

Alec Wersun told us about the learning management system of his school. The issue that his school is dealing with is maintaining a consistent message across all departments.

Closing Remarks by the Chairperson

Arshad Ahmad, AVP, Teaching & Learning at McMaster University and STLHE President, 3M National Teaching Fellow, Canada

How many people have been at a conference devoted entirely to technology? Have you ever listened to a compelling speaker who has a technology background? Of course, there are some. We heard some at this conference. I listened to one at a conference eight or nine years ago. He was an anthropologist who had suddenly decided to start dabbling with technology. We invited this man to our school because I was fascinated by what he was doing at his university. In particular, I was interested in the way that he inspired faculty. I wanted him to come and share the same message with our faculty, hoping that he would accept. Unfortunately, he was from the United States and he asked a very high fee for speaking.

Why am I telling you this story? I am telling you because the first YouTube video that he made, generated five million hits. It is an old video but in the context of our discussion today "old" is something relative. His name is Michael Wesch and you can watch his videos on YouTube. The video is called A Vision of Students Today. It was made in 2007. I encourage you to see it and listen to his lectures. That is really worthwhile.

It is time for us to wrap up this conference. I have been asked to share some of my own reflections on the last two days.

First of all, ladies and gentlemen, the most important thing I want to say in my closing remarks is "Thank you". On behalf of all participants and presenters, I would like to thank Danica and Catherine, as well as CEEMAN and ESSCA, for hosting us. We acknowledge the hard work of Zsuzsa who is not here now, as she is doing what she is supposed to do: preparing the gala dinner tonight. There are also a lot of other people behind the scenes doing a lot of hard work. Of course, we must also thank Olga. She is both behind the scene and on it. She is absolutely indispensable. She puts her heart and soul into everything that this conference stands for.

We also thank all the presenters for their stimulating presentations. I hope that we will walk away from this conference with some deep reflection. This is necessary for any learning to occur. Personally, I am going to think what kind of change I have to make based on what I heard here.

I have jotted down quite a few things and I would like to share with you some of my preliminary thoughts, including some suggestions for action.

I start with an honest reflection. I did not come here to learn about technology even though it was advertised as a big topic for discussion. I did not come to get converted, either. I did not expect that I would hear anything that would change my essential views, those that form my belief system. I will come back in a moment and tell you more about what the scientific litera-

ture says about the way in which academics change their belief systems concerning pedagogy and teaching.

We know that technology is just a tool that means nothing on its own. If you look at a piece of technology, it is like looking at a pen. What can you say about a pen other than the well-known fact that it writes? But many people at this conference asked what you can do with technology as a tool. One of the things that Alec said in the panel discussion is that when you get in a serious discussion with faculty about redesigning a course, the first question is what do you want to achieve? What are the desired learning outcomes that you want to arrive at, using whatever tools you have in your toolbox? But the learning outcomes are a lot trickier than what we read in course outlines. You may state in the description of the learning outcome that you want to change the lives of your students. Or you can say that you want to change the way that they think. But the conversation with the designer of your technology will go a step further. The designer will never be happy with the stated outcomes. He will ask, "How do you know that you will achieve your outcome?" In other words, it is not sufficient to know what outcomes you want. You have to figure out how you will achieve your goals. That is what a good assessment system does.

This is the core of the instructional challenge. It is not really about defining the outcomes. It is about the design of a good assessment system. Incidentally, the assessment systems that we teach to managers, recommending their use in organizational settings, are not those that we practice with our own students. In authentic assessments, there are no closed-book exams or three-hour tests. There is no content regurgitation. The idea that all of the assessment should take place at the end is also obsolete. The assessment should be continuous. This is not what we practice but it is the subject of a different conversation. Of course, technology is implicated in the question of assessment. I want to know how it can help me do authentic continuous assessments that mean something to the students. They should be like the assessment of the managers that are doing real work in the real world. That is what we want to prepare our students for.

I was planning to speak a little about converting people's and teachers' beliefs. If you ask people after the rich discussions that we had, whether they would change their minds, I suspect that the answer will be negative. People do not change their minds after a few conversations. In fact, they do not change their minds even after a deep reflection. Teaching beliefs are statements about identities. It is not so much about the strategy or tactic or technique that you use. Teaching involves a deeply ingrained view about how human learning occurs. In principle, we do not change these convictions very quickly. They are part of our identity.

There is a study that I wanted to talk to you about briefly. It is by a British and an Australian researcher. I know them very well as I have worked with them. I am really fascinated by their work. Their names are Keith Trigwell and Michael Prosser. They started from the results of the Swedish study of how students approach learning that I cited in one of my previous talks. Keith Trigwell and Michael Prosser studied the way in which teachers approach teaching. They did a longitudinal study that has come under a lot of scrutiny. They discovered two types of approaches. One is known as a teacher-centered approach. You will not be surprised to hear that the other one is called a student-centered approach.

What does the first of these approach look like? According to Keith Trigwell and Michael Prosser teachers who take this approach think mainly about themselves. They think about their techniques and the way that they present their material. They think about their exams. They basically think how they can improve themselves.

The student-centered ones are primarily concerned about how students learn. They want to know their personal characteristics and how they differ from each other.

This is not to say that the first type of teachers never think of their students or that the second type are not concerned about their own improvement as teachers. It is just a matter of predominant focus that results in different choices.

Of course, every study has a silver lining. The good news from this one is that despite labels such as "teacher-centered" and "student-centered", people who carry them are capable of change, depending on the context in which they do their jobs. They might use very different approaches in a first-year undergraduate course and at the graduate level.

Now, let me share my second thought. It is about a deja-vu that I experienced here. It has to do with what seems like a dichotomy that is often created in these conversations about technology. I think that it is actually a false dichotomy. It has used up a lot of my energy and has diverted my career because I fell in the trap of that dichotomy. I think that some schools are still perpetuating it. I am here to tell you that it is false and it does not help an institution in higher education.

You may have guessed that this dichotomy is about labeling academics as "teachers" versus "researchers". Scholarship is characterized by a hierarchy and the higher rung is naturally research. If you do research, you are a scholar. But if you do not do it properly, sorry, you are a poor second cousin. You are just a teacher. We are not interested in you. If you are really good in teaching, we might give you a couple of prizes but at the end of the day you may even be farther away from becoming a researcher.

This is actually first-hand experience that I am sharing with you. In 1981, I was foolish enough to give an interview to a national newspaper after winning a national award for teaching excellence. I was asked provocatively what I thought of the teachers-versus-researchers debate. I fell right into the trap. The next thing that I saw were headlines such as "Publish or Perish" and that sort of nonsense. Then, my courses were reassigned and I moved to a different campus. My life literally changed after that article. I thought that our president would call me and say, "Congratulations! Because of you, our university is in the news!" Instead, I was isolated for many years because I spoke my mind about this dichotomy.

I learned from that experience that there is a reason that this is false dichotomy. The foundations of both teaching and research are in what Derek mentioned a while ago: asking good questions. If you ask a good question, you will do good research. And you can do good teaching in the same way. In both cases, there are curious people who ask good questions. And if we want to ask good questions, we should rely on the help of our students and colleagues and use them as partners.

Talking about questions, what about those that came up today? What is your question? Are you going to be thinking of using a particular tool? If you are, why is that so? Why do you want to use this tool and not that one? Why this platform and not that one? These are the questions that we live with every single day.

I do not think that the technology divide is really between online and off-line. Imagine a debate in the past about what kind of boards we should use in the classroom: blackboards or whiteboards? That sounds silly right now. But we did have such debates. There were also debates on slides versus videos. I have a colleague who is a researcher on PowerPoint. He works in the Psychology and Neuroscience department. He is a phenomenon in our school. He has tapped into a particular tool - PowerPoint - that transcends culture and geography because everybody uses it. Now, he does controlled experiments about the use of particular fonts and colors and their impact on various parts of the brain. He churns out publication after publication about the use of PowerPoint. One of his conclusions is that PowerPoint kills learning. But if you attend his classes, what will you see? PowerPoint slides.

This takes me to my last observation. I have been driving toward this last point: Why did we all come here in the first place? As I told you, I did not come to change my view about technology. I learned a lot but I do not think that my views have really changed. I came because this is the perfect place where we can ask some hard questions about the nature of what we really do and the reason that we do it. This has to do with what we will be doing tomorrow. Are we really preparing the next generation? Or are we at the point where the next generation is preparing us? This is one of the questions that I am grappling with.

Another question. Do we want to live in what our students call a digital desert? Or are we ready to enrich our toolkit with what is now offered as a digital ocean? These are metaphors that reflect the way in which our students see our digital literacy. We need some faculty development in that field. Faculty development is not just about being an effective teacher by projecting your voice and engaging your students. It is also about using tools. This conference has done this for us.

Today I was really impressed with the potential of big data, the so-called notion of analytics, and cloud computing. There is a promise of a kind of instruction that will be giving us a very personalized experience. Tutoring systems are becoming personalized, intelligent, and incredibly adaptive.

When I think of technology as something that forges our teacher identities, I am also reminded that I am one of 1,000 at my university. You can figure out your own ratios at your institutions. Relative to our audience, we are a pretty small group. But despite our small size, we have good chances for success. This is so because we are in a business that we know very well. That is the business of changing higher education step by step. I think we do great advocacy work and I want to remind you that the most sustainable progress is based on that advocacy. This can make us think about the one-step-at-a-time improvement on at least two different fronts. On the other hand, if we have difficulty taking that next step, let us help the next generation of teachers. Let us give them the platforms and the tools that they need to enhance their own abilities. Let us engage the passionate people who are going to be the next champions at their institutions.

I think that we also have another responsibility: to make it easy for other people to join us. Small groups are fine. They are nice. But larger groups are nicer because they are more powerful and effective.

So, ask yourself how you are assisting the development of an individual teacher. As far as I am concerned, I have the opportunity to advocate the inauguration and expansion of different platforms, and I am sure that you do that, too, in your own ways. We have to identify the leaders of the future and help them develop. It is a question of leadership at the end of the day and our mission is to find the true champions in our work and connect them, support them, and enable them. Let us scout for colleagues with the potential to join us.

We are fortunate enough to be part of this revolutionary moment. Moments like this one usually happen once or twice in our careers. But in the long run, it is not a revolution. It is an evolutionary process. This is a point that I was trying to make earlier, at the deans' meeting yesterday. We should be preparing ourselves for a tipping point and our efforts and advocacy should be focused on supporting that evolution step by step and group by group. This CEEMAN conference is a wonderful way to experience this process.

List of participants

Albania

Gazmend Haxhia, President, A.S.G. Group

Belarus

Natalia Makayeva, Deputy Director, IPM Business School

Belgium

Antonia Sariyska, Operations Manager, EFER - European Forum for Entrepreneurship Research

Canada

Arshad Ahmad, AVP, Teaching & Learning at McMaster University and STLHE President, 3M National Teaching Fellow

Czech Republic

Andreas Antonopoulos, Rector, University of New York in Prague

Sotiris Foutsis, General Manager, University of New York in Prague

Radka Machkova, Business Manager, Emerald Group Publishing

Estonia

Arno Almann, Rector, Estonian Business School

Üllas Ehrlich, Dean, Professor, Tallinn School of Economics and Business Administration of Tallinn University of Technology

Karen Voolaid, Director, Head of International Programmes, Tallinn School of Economics and Business Administration of Tallinn University of Technology

France

Joelle Isaak, Public Relations, ESSCA School of Management

Stéphane Justeau, Professor, ESSCA School of Management

Catherine Leblanc, General Director, ESSCA School of Management

Franck Thomas, Academic Pépinier Incubator, ESSCA School of Management

Georgia

Boris Lezhava, Dean, Caucasus University, Caucasus School of Business

Germany

Derek Abell, Professor Emeritus, ESMT-European School of Management and Technology

Frank Hoffmann, Associate Dean, Director International Relations, Leipzig Graduate School of Management

Marcus Scholz, Professor, Pforzheim University

Axel Schumacher, Associate Dean International Relations, EBS Universität für Wirtschaft und Recht

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Nikos Mylonopoulos, Associate Dean, Associate Professor of Information Systems, ALBA Graduate Business School at The American College of Greece

Christodoulos Papaphotis, Education Director, Microsoft

Hungary

Zoltán Buzády, Faculty Director of MBA Programs, Central European University Business School

Erzsebet Csibi, Representative, Pearson Central Europe

Zsuzsa Deli-Gray, Director of the Hungarian Site, ESSCA School of Management

Ágnes Hofmeister, Professor of Marketing, Corvinus University

Mel Horwitch, Dean, Central European University, Business School

Lilla Kovacs, Journalist, Figyelo journal

Tamas Matura, Adjunct Professor, ESSCA School of Management

Agnes Pavel, Finances, ESSCA School of Management

Eva Pinter, Programme Coordinator, ESSCA School of Management

Robert Rahner, Programme Coordinator, ESSCA School of Management

Peter Roebben, Senior Managing Director, Member of the Executive Committee, K&H Bank Zrt.

Roland Szilas, Adjunct Professor, ESSCA School of Management

Ádám Török, Secretary General, Hungarian Academy of Sciences

János Vecsenyi, Executive Director, EFER-European Forum for Entrepreneurship Research

Gyula Zilahy, Professor of Management, Corvinus University

Zita Zoltayné Paprika, Dean, Faculty of Business Administration at Corvinus University

Italy

Vladimir Nanut, Dean, MIB School of Management / ASFOR President

Andrea Tracogna, Deputy Dean, MIB School of Management

Kazakhstan

Assylbek Kozhakhmetov, President, NPEI Almaty Management University

Viktoriya Tsay, Vice-Rector for Strategic Development, Kazakh Economic University

Kenya

Josiah Aduda, Dean, School of Business, University of Nairobi, School of Business

Latvia

Inga Lapina, Vice Dean for Academic Affairs, Faculty of Engineering Economics and Management at Riga Technical University

Tatjana Mavrenko, Director of Dual Degree Study Programmes, BA School of Business and Finance

Claudio Rivera, BBA Director, Riga Business School

Irina Sennikova, Rector, RISEBA

Alexander Tarvid, Academic Adviser, Riga Business School

Lithuania

Virginijus Kundrotas, Dean of Adizes Graduate School (USA), President of the Baltic Management Development Association

Malaysia

Md Zabid Abdul Rashid, President, Universiti Tun Abdul Razak

Peru

Jorge Talavera, President, Universidad ESAN

Poland

Witold Bielecki, Rector, Kozminski University

Marcin Geryk, Chancellor, Gdansk Management College

Zaneta Geryk, Vice Chancellor, Gdansk Management College

Marek Gruszczynski, Vice-Rector, SGH Warsaw School of Economics

Andrzej Popadiuk, Member of the Board, Gdansk Foundation For Management Development (GFKM)

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CEEMAN

CEEMAN – the International Association for Management Development in Dynamic Societies

CEEMAN was established in 1993 with the aim of accelerating the growth and quality of management development in Central and Eastern Europe. Gradually it has become a global network of management development institutions involved in economic restructuring and social change in dynamic societies. CEEMAN fosters the quality of management development and change processes by developing education, research, consulting, information, networking support, and other related services for management development institutions and corporations operating in dynamically changing environments. Its holistic approach to the phenomena of change and leadership development builds on the specific value platform that celebrates innovation, creativity, and respect for cultural values, and promotes the principles of responsible management education.

CEEMAN's objectives are:

- To improve the quality of management education and leadership development in general and particularly in the dynamic societies that are in search of new economic and social responses to the global challenges
- To promote leadership for change, global competitiveness, sustainable development and social responsibility
- To provide a network and meeting place for business schools and other management development institutions in order to promote and facilitate cooperation and the exchange of experience
- To provide a platform for dialogue, mutual cooperation and learning between management development institutions and businesses that are operating in dynamic societies and are willing to grow together by working together
- To represent the interests of its members in other constituencies

CEEMAN's main activities include:

- International conferences and forums
- Educational programs to strengthen teaching, research, management and leadership capabilities in management schools
- International quality accreditation for context-driven, innovative, impactful and responsible business schools
- Promoting and rewarding outstanding achievements in areas that are critical for success in business education and management development
- Support for the development of educational materials
- Promoting and rewarding case writing
- International research relevant for businesses and management development institutions
- Publishing

CEEMAN has 220 members from 55 countries in Europe, North America, Latin America, Africa and Asia.

www.ceeman.org

ESSCA School of Management

ESSCA is sound: in its 100 years it has consistently borne the humanistic values which are its ethical foundation.

Differing from the traditional model of the French grande école, ESSCA has moved closer to international practices with an integrated five-year curriculum in the spirit of the European LMD structure three years consecrated to mastering fundamental knowledge, developing structured critical thinking and discovering the workings of the corporate world ESSCA students are guided in their choice of master s programs to acquire a solid specialization in business and a genuine international, professional and cultural dimension.

It is our heartfelt desire to pursue the development of ESSCA along the path of excellence that we have forged over the years, and to foster an atmosphere of active support to young people who are about to embark on their lives as professionals and citizens.

Governance. Founded by the Catholic University of the West in 1909, ESSCA is now managed by a non-profit association as per the 1901 association law. Its Board of Directors has been presided over by Mr. Pascal Leleu, a corporate head and leader, since January 1, 2010.

Its members include the Catholic University of the West (UCO), the Maine-et-Loire Department Chamber of Commerce and Industry (CCI), Alumni Association and Network, the Maine-et-Loire Departmental Council and Angers Loire Métropole, as well as students, parents and qualified representatives from the business world.

ESSCA briefly: four Campuses: Angers, Paris, Budapest and Shanghai, 168 partner universities in 47 countries, 3,000 full- and part-time students, 75 full-time faculty, 570 adjunct and part-time faculty or international experts, five expertise and research centers, two institutes, Institute Marketing Digital and Institue for Teaching in Higher Education,) 2,500 corporate partners 11,700 alumni worldwide.

ESSCA equips students and managers for a successful and sustainable career while taking fully into account the human and social dimensions of a globalized world. This is achieved through high level academic and professional management programs, developed by research-active faculty, a strong student mentoring system and respect for the traditional humanist values on which the school was founded.

Each year ESSCA welcomes 2,800 students and trainees in continuing education. Out of over 5,000 candidates in the competitive entrance examination, 430 have been admitted into the 1st year. ESSCA has also recruited 50 French and international students directly into the 1st year of the master's program. ESSCA's alumni quickly join the corporate world—95% of them find their first position in less than their three months following their graduation, and 96% of them state that they are pleased with this first job.

Educating students for careers in a globalized world is central to ESSCA's mission. Thanks to a mandatory international semester – study or internship – during the 3rd year and the possibility of further study or internships abroad at master level, all ESSCA students are given the opportunity to develop their language and intercultural skills, while gaining credits for transfer to their ESSCA degree.

ESSCA's 160 plus partner network is crucial to this objective. All student mobility with partner universities is on an exchange basis and incoming international students in France have the choice of studying in French or in English. ESSCA

also runs programs in Budapest and Shanghai, both for ESSCA and international students and here teaching is in English. In total, ESSCA welcomes up to 500 international students each year, creating a multicultural learning environment on all its locations.

ESSCA's activities in Europe and China continue to develop with its participation in the creation of the Alliance of European and Chinese Business Schools (ACE) as a founding member. Under the patronage of EFMD (European Foundation for Management Development), ACE is a strategic alliance of 20 leading Business Schools in Europe (10 members) and Greater China (10 in Mainland China, Hong Kong Macau and Taiwan). The ACE network will be an important platform to collaborate on student and faculty exchange, executive education, joint research and corporate projects among others.

The implementation of ESSCA's international strategy is largely the responsibility of ESSCA's International Relations Office, a team of 8 in Angers and 1 in Paris, who work in close collaboration with the Associate Dean for China and colleagues in Shanghai and Budapest. The main areas of responsibility are:

- Development of the partner university network
- Organization of student exchanges within the partner network
- Development of double degree agreements
- Coordination with colleagues in Budapest and Shanghai for student and faculty mobility
- In cooperation with the dean and academic departments, promotion and organization of faculty and administrative staff mobility and research cooperation
- International student recruitment
- International student support
- Organization of tailored programs for partners
- Organization of summer programs

Teaching staff exchanges with partner universities and a growing number of full-time international Faculty are also important to the development of the international dimension of the ESSCA programs and its international research. Both short and long-term visiting faculty positions are offered with, as a result, over 50 foreign lecturers teaching in the programs in France each year and international and ESSCA permanent faculty teaching in Budapest and Shanghai.

www.essca.fr

Previous CEEMAN Annual Conferences

2013 *Business Schools as Responsible Change Agents: From Transition to Transformation*
Bled, Slovenia

2012 *Business and Educational Challenges in Dynamically Changing Environments*
Cape Town, South Africa

2011 *Management Education in a Changing World:*
Are We Ready for the Challenge?
Tbilisi, Georgia

2010 *New Global Performance Challenges and Implications for Management Development*
Caserta/Naples, Italy

2009 *Local Responses to Global Crisis*
Riga, Latvia

2008 *Management Education for the Realities of Emerging Markets,*
Tirana, Albania

2007 *Globalization and Its Implications for Management Development*
Istanbul, Turkey

2006 *Creating Synergy between Business Schools and Business*
Berlin, Germany

2005 *Innovations in Management Development*
New Challenges of Faculty Development
Kiev, Ukraine

2004 *Enlargement of the EU and Its Impact on Management Development*
St Petersburg, Russia

2003 *Business Co-operation and Business Schools Co-operation:*
New Opportunities within CEEMAN
Sofia, Bulgaria

2002 *Leadership and Our Future Society*
Bled, Slovenia

2001 *Going International from an Emerging Economy:*
Corporate Experience and the Business School Challenge
Dubrovnik, Croatia

2000 *Entrepreneurship on the Wave of Change:*
Implications for Management Development
Trieste, Italy

1999 *European Diversity and Integration: Implications for Management Development*
Budapest, Hungary

1998 *Transformational Leadership - The Challenge for Management Development in Central and Eastern Europe*
Riga, Latvia

1997 *Developing and Mobilizing East and Central Europe's Human Potential for Management*
Sinaia, Romania

1996 *Managing in Transition in Central and Eastern Europe: Stage II*
Prague, Czech Republic

1995 *From Restructuring to Continuous Improvement*
Lessons from the Best-Run Companies
St Petersburg, Russia

1994 *East-West Business Partnerships*
Warsaw, Poland

1993 *Management Development in Central and Eastern Europe*
Brdo pri Kranju, Slovenia

Proceedings are available upon request from CEEMAN Office, while the latest editions can be downloaded in pdf from www.ceeman.org.

23rd CEEMAN Annual Conference Events

Co-organized and hosted by Almaty Management University

Localization vs. Globalization of Leadership and Management Development in Dynamic Societies

23-26 September 2015
Almaty, Kazakhstan

The 23rd CEEMAN Annual Conference events will take place on 23-26 September 2015 in Almaty, Kazakhstan, hosted by the Almaty Management University.

For more information and registration, please visit our website, *www.ceeman.org*.

Program Management Seminar
15-17 April 2015
Bled, Slovenia

An intensive and highly interactive three-day program designed to make Program and Project Managers more effective in handling their increasingly demanding and complex responsibilities.

International Management Teachers Academy
7-19 June 2015
Bled, Slovenia

CEEMAN International Management Teachers Academy (IMTA) provides a unique opportunity for young faculty to develop their curricula, course design, teaching materials and particularly teaching skills and methods.

Executive Education Forum
Co-organized and hosted by Izmir University of Economics
date to be confirmed
Izmir, Turkey

CEEMAN Case Writing Competition

In order to encourage and promote the development of high-quality teaching case material and promote the development of case-writing capabilities CEEMAN invites submissions to the 21st Case Writing Competition in cooperation with Emerald Publishing. Deadline for submissions: 29 May 2015.

CEEMAN Champion Awards 2015

With the aim of recognizing and promoting outstanding achievements of faculty, management, and staff from institutions associated with CEEMAN, we invite nominations for CEEMAN Champions 2015 in the categories of teaching, research, institutional management and responsible management education. Deadline for nominations: 1 July 2015.

For more information, please visit www.ceeman.org

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