ABSTRACT

DIU Libertas International University is committed to developing the intellectual capacity, creativity and professionalism of our students, immersing them in the rich diversity of human experience and aspirations, thereby preparing them to shape the future of our world while adding to the knowledge base of humankind.

The university includes professors, students and graduates from almost 100 countries and a clinical training program involving more than 10 hospitals from seven countries.

Keywords: Globalization, Education and research, Private and public universities, New experience of DIU.


INTRODUCTION

Long time ago Immanuel Kant made a statement about education: ‘It is the education of a personal character, of a free being, who is able to maintain himself, and to take his proper place in society, keeping at the same time a proper sense of his own individuality’.3,5

While we are living in a very different society from that of Immanuel Kant, his wisdom remains so true today. With the rapid development of information and communications technologies, industrial nations are transforming into societies in which knowledge is the most contested and valuable good—and the need for continuing education is even more important. At present, creativity and ingenuity comprise at least 50% of the value-added chain. Just a few decades ago, the value of a machine tool was determined in large part by its material value and the cost of producing it. Indeed, today these factors account for only some 20%, while the biggest portion of the share consists of development, software, design and downstream services—that is, in value-added factors with a high knowledge intensity. Knowledge has become the decisive factor for any institution competing globally. However, do globalization and the enormous acceleration of social, economic, and political transformation process demand a different kind of education? We will try to answer this complex question in this article. It is clear that education is the most important investment in the national economy. Anyone who does not invest in education is left behind.

Learning means change, new modes of behavior, new structures, unfamiliar situations and creativity. The increased speed at which we have to acquire new knowledge, insights and abilities is forcing us to divide learning into novel, shorter phases. The traditional choreography of learning with its long, rigidly defined school, job and university educational periods is already obsolete. Self-organized, lifelong learning is becoming a necessity. Education is needed more than ever to give the individual the proper orientation to make good judgments.

Economics in Globalized World

At the time of fast globalization it is clear that no human endeavor is more adopted to the globalized world than science and medicine, for their very nature is global. This is an immense privilege, but equally so an immense responsibility for the development of humanity.

Globalization is both inevitable and usually desirable and contains advantageous and disadvantageous issues. It is a source of both hope and of apprehension and is an accelerating process in flow of information, technology, goods and services as well as production means. It refers to the process of increasing interconnectedness between societies such that events in one part of the world increasingly have effects on peoples and societies far away.1-8

Economical Issue on Globalization

Reconciling global economic growth, especially in developing countries, with the intensifying constraints on global supplies of energy, food, land, and water is the great question of our time. Worldwide economic growth is already slowing under the pressures of $135 per barrel oil and grain prices that have more than doubled in the past year.

A new global growth strategy is needed to maintain international economic progress. The basic issue is that the world economy is now so large that it is hitting against limits never before experienced.

There are 6.7 billion people, and the population continues to rise by around 75 million per year, notably in the world’s poorest countries. Annual output per person, adjusted for price levels in different parts of the world,
averages around $10,000 implying total output of around $67 trillion. There is an enormous gap between rich countries, at roughly $40,000 per person, and the poorest, at $1,000 per person or less. But many poor countries, most famously China and India, have achieved extraordinary economic growth in recent years by harnessing cutting-edge technologies. However, the world economy has been growing at around 5% per year in recent years. At that rate, the world economy would double in size in 14 years. This is possible, however, only if the key growth inputs remain in ample supply, and if human-made climate change is counteracted. If the supply of vital inputs is constrained or the climate destabilized, prices will rise sharply, industrial production and consumer spending will fall, and world economic growth will slow, perhaps sharply.

What’s happening in the world today? The answer is simple and apparent to everyone: a crisis, without precedent in modern history. The world has been hit by the worst crisis in the last half a century, probably the worst one since the great depression of the 1930s. The crisis is without precedent because for the first time in history it is worldwide due to the close interconnectedness and interdependence of the global world. It is also without precedent because it is multidimensional: mankind is at the same time faced with a crisis of world finances, global economy, international affairs and global security, a crisis of liberal capitalism and the relationship between cultures and civilizations.

At this moment, the greatest problem we are faced with is the global financial crisis. The world has entered into a deep recession because of the global financial system crash which spilled into the real economy. The growth of unemployment and poverty, in particular in developing countries, give rise to social tensions and have already led to increased political instability in many, even the most developed countries.

The financial crisis started in the United States and a financial and economic recovery will begin mostly likely there as well. This time, however, the United States alone cannot save the world, nor can it come out of the crisis without co-operation with the rest of the world. All major world players realize that the global crisis requires a global solution and that humanity as a whole is in the same boat caught in a storm whose duration and possible lasting effects are still being examined.

In a current situation, the world has to deal with two fateful challenges: it has to urgently identify concrete, co-ordinated measures for solving the global crisis, while not losing sight of long-term goals and developments, including the need to tackle new historical dilemmas. The world community has to agree on and enact comprehensive reforms in both economic and social areas, and on the national and international level. Those reforms require new political and security arrangements.

Entering Knowledge Society
At the very beginning of the 21st century, it is clear that the developments of the last century will fundamentally change many aspects of today’s world. Modern communications technologies are changing the societal and economic structures, and our knowledge is growing at a speed that would have been unthinkable only a few years back. Consequently, industrial nations are transforming into societies in which knowledge is the most contested and valuable good. At present, creativity and ingenuity comprise 5 of every 10 Euros of the value-added chain, in many branches of industry even more. Just a few decades ago, the value of a machine tool was determined in large part by its material value and the cost of producing it. Today these factors account for only some 20%, while the biggest portion of the share consists of development, software, design and downstream services—that is, in value-added factors with a high knowledge intensity. Knowledge has become the
decisive location factor for a company competing globally. Indeed, only a highly developed national economy leading in global competition, which has weathered the structural changes on the labor market, its ailing solidarity system, and the onslaught of state regulations, can remain prosperous. In this context, education is the most important investment in the national economy. Anyone who does not invest in it falls behind. Those who fall behind have to accept gradual losses. The result is poverty. A lack of knowledge should start being viewed as a risk factor.

Knowledge production is the decisive driver of the fast development. However, the half-life of knowledge is sinking. A person’s knowledge becomes a museum piece several times during his or her lifetime. Today, knowledge is shrinking and a person’s knowledge becomes antiquated as the half-life of knowledge is constantly changing. Changing jobs four times is not the new qualitative factor of this development. Even today, great professional flexibility is the rule in the United States. In the future, however, even highly qualified people will have to move into new fields of activity if they are to be successful professionally. Gradual further development in fixed professional channels alone will no longer be sufficient. Teachers in developed countries today who finish their studies at the age of 25 and start teaching at a school will have to renew their level of knowledge after 10 years of professional life if they are to remain capable of teaching. At the age of 45, when they are 20 years away from retirement, their first course of study will comprise at most a quarter of the knowledge they need to teach successfully. And even today the knowledge in basic and application research doubles every 5 years.

**Does Globalization produce Different Demand for Education and Research?**

With the rapid development of information and communications technologies, industrial nations are transforming into societies in which knowledge, although intangible, is the most valuable commodity. The increased speed at which we acquire new knowledge, insights, and abilities is forcing learning to evolve, as the traditional choreography of learning with its long, rigid defined school, job, and university educational periods is becoming obsolete. Self-directed, life-long learning is the new standard of excellence and success.

Rapid knowledge production is the driver of this development as the half-life of knowledge is constantly shrinking and a person’s knowledge becomes antiquated several times during his or her lifetime. Today, knowledge in basic and application research doubles every 5 years. Young Americans can expect that in 40 years of professional life they will change their job 11 times and in the process renew their level of knowledge three times. Teachers in Germany today who finish their studies at the age of 25 and start teaching at a school will have to renew their level of knowledge after 10 years of professional life if they are to remain capable of teaching. At the age of 45, when they are 20 years from retirement, their first course of study will comprise at most a quarter of the knowledge they need to teach successfully.

**The Challenge of Globalization and the Change to Research**

In such an environment, globalization and the enormous acceleration of social, economic, and political transformation process demands a different kind of research. While in the past the natural sciences including biology, primarily had a descriptive character, today they are becoming more and more synthetic and complex. For example, because of great increases in knowledge about molecular bases of pathogenesis and the course of illnesses, there are potential new improved therapeutic approaches. More attention will be devoted to individual diagnosis and personalized treatment, that is, treatments tailored to individuals, or a group of individuals with a similar clinical picture and a similar genetic background.

It is common knowledge that without the uncertainty of the new, nothing new is possible. Research means recognizing challenges and taking responsibility for the new. However, it must be acknowledged that many errors will be made if we are to make progress. Therefore we need a culture of tolerance for error, in which the error is seen as a constitutive part of acting.

While medicine is international, legal regulations are not. We can react in different ways to the challenges that these international differences pose to education in each country. Science must transcend parochial national laws. Innovation arises through creative and intensive processes in dealing with scientific problems. These processes are extremely complex and require intensive co-operation between many different disciplines in the natural sciences. These teams, their optimum composition, their necessary degrees of freedom, and their support should be the focus of every leader. Knowledge should be able to flow across borders through international partnerships and co-ordination at the global level.

**Europe: An Effective Response**

Scientists in Europe have made a plea to the European Commission to support the European Research Council
(ERC). This organization is governed by science itself and operates solely on the basis of scientific excellence and creativity. To date, the commission has set up a committee consisting of 22 outstanding scientists with the task of developing the necessary rules for the ERC and its operation. In addition, some countries are already preparing themselves and their scientists for new variants of competition. At the beginning of last year, France founded an independent research financing organization, the Agence Nationale de la Recherche (ANR), with a starting capital of 350 million euros. At the end of June 2005, the federal and state governments of Germany launched the excellence initiative, which intends to infuse an additional 380 million euros into research each year. The aim is to bring German universities on a par with other countries in research endeavors. Eight years ago, in Barcelona, European leaders agreed to boost the level of research funding to 3% of GDP, with two-thirds of that coming from the private sector.

It has been estimated that the European Union produces almost one-third of the world’s scientific knowledge. The EU has acknowledged expertise in medical research and environmental sciences and leads the world in many areas of chemistry, physics, pharmaceuticals, aerospace, telecommunications and transport. We need a coherent approach to build a Europe of knowledge whose main engines are research and innovation. This shows that the public spending on research represents not a cost, but an important investment in Europe’s future.

In the area of research more should be done to value and recognize the contribution of retired scientists. As well as continuing to use their intellect and knowledge, they can play various ‘ambassadorial’ roles, and act as mentors for younger individuals. One excellent example is the annual meeting of Nobel prize winners in Lindau, where distinguished scientists ‘of a certain age’ interact and debate key political and scientific topics with young researchers setting out in their careers.

In our new virtual school, the campus will be virtual—students will be able to attend classes from around the world. The Ian Donald School will be administered through a plexus of real-time information arteries. Campus activities and class sessions will be monitored to gauge educator performance and student learning progress. Advanced ultrasound technologies will be immersed into the learning process. It will certainly help to develop a ‘lifelong learning way of life’ (Graph 1).

Undoubtedly, Donald Schools have to reinvent themselves in order to remain attractive to the younger generation, as well as stay success story in globalized medicine. With this innovation we sincerely hope that our school will stay as an internationally recognized brand, representing the future of education as it faces new global challenges and the changing needs of future generations of first class ultrasonic experts.

With distant learning we are creating a constructive, open forum for DIU Libertas students that do not usually have a chance to interact, to create innovative, appropriate, current solutions for the changing needs of education in the global community.

Professor Kupesic and her team, and all of national school directors will contribute to monitoring current and future challenges and their impact on education in a comprehensive manner on a global scale through highlighting and expanding innovative approaches to major education challenges.

A most important factor which has influenced the changes occurring in education has been the installation and development of the internet and electronic multimedia techniques. Traditional education as well as contemporary education is supported by informatics technologies in a unique system of flexible education. In order to use the advantages of flexible education, it is necessary to combine different forms of learning.

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**New Academic Culture at University**

DIU Libertas is committed to developing the intellectual capacity, creativity and professionalism of our students, immersing them in the rich diversity of human experience and aspirations, thereby preparing them to shape the future of our world while adding to the knowledge base of humankind.

The university includes professors, students and graduates from almost 100 countries and a clinical training program involving more than 10 hospitals from seven countries.
The creation of a legal framework allowing the setting up of nonstate higher education institutions led to a new phenomenon in Croatia: a boom in education offered in competition to the public (state-run) universities.

Access to knowledge allows individuals to invest in themselves and gain a stronger place on the labor market. A relationship has long existed between the level of education and the rate of unemployment.

Someone who has a higher education can escape from poverty. It is easier for that person to obtain work and social standing. A university degree is a passport to a better position on the labor market and higher earnings.

Discussion concerning the development and modernity of universities is a discussion about the ‘factory’ of knowledge and the quality of its performance, which in turn determines the quality of intellectual capital.

We are in the 21st century and the question arises whether the Croatian University is suited to the challenges of the new millennium. Twelve years of this century have already passed and it is worth asking what is happening with universities around the world.

The European Union needs dynamic and competitive colleges. A knowledge society and an economy based on knowledge will develop thank to institutions of higher education to which access will become increasingly widespread.

Universities are where intellectual capital is created. Admittedly these are not the only places where knowledge may be acquired, but organized scientific procedures are concentrated here which define ways of thinking and acting for research and learning.

Places of higher education maintain a certain distance from spontaneously changing reality, bringing order to chaotic information, systematically explaining phenomena and processes, and putting all of this into the language of didactics.

There are two types of university: private, endowed by their founders (families) and those founded by state. Both systems have their pros and cons. Without going into detail concerning the differences between them, it is worth emphasizing that both systems have achieved research and didactic successes.

However, European universities do not reach the level of innovation shown by their counterparts in the USA which traditionally use the private financial resources of graduates and foundations. In both, the USA and the current EU, there are about 4,000 universities, but this number in the USA serves a population of about half that of the EU.

Inevitably the system of private and public universities has given rise to a ranking of the best universities in the world. The top 10 for 2010 was dominated by universities from the USA.


This process has a sustained character; it is estimated that in some countries in the near future there will be generations where 50% will have a higher education.

This development of mass access to higher education is illustrated by data from UNESCO: in 1991 the number of students in the world was recorded as 68 million, 14 years later in 2005–132 million…

Many EU students now have the opportunity to study in the education system of various countries. Mobility during student’s years will encourage innovativeness later. Attending university in another country provides students with new experiences, and energizes behavior by ‘forcing’ them to think in another language and as a result of adaptation to different cultural conditions.

UNESCO statistics concerning student mobility show that this is a sustained tendency: between 1980 and 1998 the number of students attending university outside their own country (‘international students’) tripled worldwide.

In 2005–2.5 million studied abroad. It is estimated by UNESCO that in 2025 this number will reach 7.5 million. As a matter of interest it is worth noting that the international student market generated $ 30 billion in 2007.

Indeed, the new academic culture at universities is changing the master-pupil relationship. The pupil has new sources of knowledge at his/her disposal and sets before the master the task of keeping pace with progress. Students now expect from their academic teachers help, motivation, and suitable approaches to new problems. Students enter into dialog with their masters, and expect argumentation which facilitates their intellectual development.

The authority of the masters is no longer based on titles and distinctions; just the opposite—the merits of the master are verified by a new generation of students who reject faith in masters, but instead expect to be convinced by scientific arguments.

This culture requires both traditional direct contact and also indirect contact—created by virtual space. This space facilitates a system of asymmetrical education, paradoxically even from dead masters.

In one of the previous issue of our journal, professor Sanja Kupesic and her team elegantly described our new project of distance learning. The distance learning campaign aims to establish a distinct visual identity for DIU Libertas...
They will help develop strategies to establish new and enduring educational patterns, initiating actions and concrete solutions to rise to the 21st century global challenges, and acquiring the ability to anticipate the future challenges.

We hope to identify opportunities to shape a global educational vision for the 21st century under the theme of Donald School distance learning. The future is built on the past. The Ian Donald School has a remarkable past. It is important that teachers and students stay as futuristically thinking scientists and teachers.

In our newly formed Fellowship Program (Zagreb, Doha, Dubai, Khartoum, Moscow, Tirana, Sarajevo, Maribor, Sao Paolo), upon graduation, student laureates will earn a specialized diploma of Ultrasound in Obstetrics and Gynecology, with a leadership position in the workplace. This is done in the belief that education must be driven by innovative thinking, adaptability, and worldwide collaboration. Wherever thinking happens, ideas follow, knowledge grows, and people discover new ways to unlock their potential. Although in its infancy, the fellowship program has blossomed with its wide acceptability (Figs 1 to 3).

Indeed, DIU Libertas have to reinvent themselves in order to remain relevant to the current generation. The focus in DIU Libertas is on knowledge augmentation and not on grades. Great learners are the product of great educators. It is hoped that Ian Donald School educators will be true, dedicated ‘human amplifiers,’ turning education into a memorable experience.

How to prepare Skilled Doctors—DIU Experience

To understand the value of an education at DIU Libertas, a good place to start is the university’s mission statement. Finally, our highest purpose is education, and there is no better education than one that is truly international.

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The university includes professors, students and graduates from almost 100 countries and a clinical training program involving more than 10 hospitals from 7 countries.

As it continues to attract top graduates from the highest-ranking undergraduate institutions, along with highly motivated students from around the world (over 50% of the current student enrolment are non-Croatia citizens), intellectual capacity continues to be DIU Libertas strength.
Many of those students, some of whom do not speak English as their native language and who come from dozens of very different models of education, had never seen a multiple choice question before they came here. The fact that in a few short years we get them to the point where they match the US pass rate is nothing short of astonishing. To us, that is a testament to the students and the curriculum that we teach.

Beside its interdisciplinary ‘one world/one medicine’ approach, which provides students with training, in medicine as it is practiced in different socioeconomic settings, the university prides itself on its ability to encourage creative, well-rounded problem solving, its degree programs in medicine, veterinary medicine, public health care management are designed to broaden the scope of these fields and expose students to know–how from a wide range of medical perspectives.

The new world of medicine requires a new set of skills–onset that goes well beyond the age of art of healing.

Today’s medicine professionals need to be well versed in cultural diversity, global disease migration, changing health care systems and the managerial challenges that prompt doctors to ask new questions and solve new problems. University is responding to these needs with a new medical-education model that highlights these increasingly indispensable skills.

Studying in the small country in the Europe with such a diverse population of students brings many communities together from around the world. The students come from all sorts of different historical and cultural environments, and that makes this a powerful setting not only for teaching and learning about health, but for teaching about the critical importance of bioethics science. One of the first medical schools to adopt the ‘white coat’ ceremony, the goal of which is to encourage a commitment on the part of each medical student to the highest ideals of medicine, including being caring and compassionate physicians.

I personally believe that this background in bioethics is one of the strongest parts of our curriculum.

We need to get students up to speed not only with the standards of clinical practice in Europe which is something we do particularly well–but also with the language of bioethics are trying to teach them to be analytical in rather than making snap judgments.

In additions to diversity and an emphasis on bioethics offers an independent approach that more conventional medical programs cannot match.

Every school likes to brag about their diversity, but our diversity is our particular strength, because we are not funded by particular state of jurisdiction that limits enrolment to residents. That means we give full liberty to take students from all over the world without requirement or quotas from any one area, and that is the inherent advantage of a private medical university with no strings attached to its admissions office.

For many students, just students abroad brings a perspective to the medical profession they would not have received if they had remained at home. DIU Libertas graduates typically build a network of colleagues and friends from all over the world by the time they graduate. If you train to be a doctor close to home and stay in the place for your career, you will see all the disease and symptoms that are prevalent in that particular society, but not much else.

Our faculty is from about 20 different countries and that has a profound influence on our students. It brings different perspectives on every single discipline. DIU Libertas students are exposed to a much wider range of clinical patient populations in addition to wider range hospitals, both in and outside the Europe, as well as to how different governments run their health services. This broad perspective is important in this global environment, where diseases and illness move across borders as often as patients do.

The new medical and people skills required by doctors and other professionals in the health care field are those that address communitywide health and business management. Epidemiology and public health are both part of the basic science curriculum for all DIU Libertas students. So, too, is tropical medicine, a rarity in a nontropical medicine program.

Traditionally, Western style physicians treat patients on an individual basis. Public health looks at a broader community through subjects like preventative medicine, nutrition, clean water and other factors that affect the public at large. Public health has been much more important in developing nations than in the developed world, and that is another example of our international approach.

Masters of Public Health (MPH) degree and PhD program are in preparation.

Between 10 and 20% of the medical class receives public health training.

The developed world needs people who are trained to think in a macro way about the issues of communicable diseases, both for humans and for veterinary medicine, where animals and pets, are crossing borders at an independent rate.

We are encouraging public health studies for all of our students and a larger percentage of our students are choosing an MD/MPH dual degree–and we are careful to have public health in the basic science curriculum.

DIU Libertas also offers full masters of management administration program designed for professionals to further
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their business education in the fields of multisector health management and international business.

In addition to the physical plan additions, DIU Libertas has recently established several important new affiliations with hospitals through the medical school, the latest in Moscow.

As it continues to attract top graduates from highest-ranking undergraduate institutions, along with highly motivated students from around the world (over 50% of the current student enrolment are non-Croatia citizens), intellectual capacity continues to be DIU Libertas strength.

CONCLUSION

In a knowledge society, where competitive edge is directly tied to innovation, Ian Donald School and DIU Libertas International University, together with our partner University of Rijeka (Fig. 4), have to move forward. The slumber is over. The renaissance has been long overdue.

Kant was right—now more than ever.

REFERENCES


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Fig. 4: Signing contract with Rijeka University, Dubrovnik 2012