



The Highway to the Learning Society: The Idea of an Entrepreneurial University in the Twenty-first Century

SUMMARY

Entrepreneurship and entrepreneurial universities are new opportunities that need to be leveraged and interconnected. The main purpose of the article is to elaborate upon the idea of entrepreneurial university. This article shortly describes the historical development of open and distance learning and reviewing the past and potential future role of developing new forms of learning that might support the development of entrepreneurial university in the twenty-first century. The article discusses five focus categories at the heart of the innovation and entrepreneurship activities within America's universities: student entrepreneurship, faculty entrepreneurship, technology transfer, industry collaboration, and engagement in regional economic development. These five categories reflect the widespread importance of innovation and entrepreneurship to the mission and activities of higher education.

→ **KEYWORDS** – ENTREPRENEURIAL UNIVERSITY, OPEN LEARNING, DISTANCE LEARNING, INNOVATION, HIGHER EDUCATION

STRESZCZENIE

Autostrada do uczącego się społeczeństwa. Idea uniwersytetu przedsiębiorczego w XXI wieku

Przedsiębiorczość oraz przedsiębiorcze uniwersytety to nowe możliwości, które powinny być z sobą powiązane. Głównym celem artykułu jest przedstawienie idei przedsiębiorczego uniwersytetu, jednocześnie prezentuje on rozwój historyczny kształcenia na odległość oraz dokonuje przeglądu dotychczasowych i nowych form kształcenia, które mogą wspierać rozwój uczelni przedsiębiorczych w XXI wieku. W artykule omówiono pięć kategorii, które są „sercem” działalności innowacyjnej i przedsiębiorczej na uczelniach amerykańskich, w tym: przedsiębiorczość studentów, wykładowców przedsiębiorczości, transfer technologii, współpracę w zakresie przemysłu i zaangażowanie w rozwój

gospodarczy regionów. Te pięć kategorii odzwierciedla ogromne znaczenie innowacji i przedsiębiorczości w misji i działalności szkolnictwa wyższego.

→ **SŁOWA KLUCZOWE** – UNIWERSYTET PRZEDSIĘBIORCZY, NAUCZANIE OTWARTE, NAUCZANIE NA ODLEGŁOŚĆ, INNOWACJA, SZKOLNICTWO WYŻSZE

Introduction

Nowadays everybody is inspired by a vision of natural renewal, where everybody is engaged in creating a better society and a dynamic economy. In the middle of that vision is the extension of opportunity: the highway for all of us to learn, to earn and to care for our families. As Macmillan noticed: “there is the familiar circle to be squared: a poor country cannot afford health and education, but without them it cannot even develop such economic resources as it has.”¹ Education and learning are the most effective ways to deal with the bias of birth and status, to enable people to create and seize new opportunities, and to promote social improvement and mobility. Education is directly connected to action, the importance of higher education has been passed down from generation to generation, and universities are the key to taking the economy to a prosperous future. Good practice initiatives, investment in universities and basic research all over the world connected with developing entrepreneurial activities show that education also plays a considerable role in that field.

Why is an entrepreneurial university of interest to many researchers and educators? Why does it matter now? The main thesis of this paper is an assertion that we are now facing changes connected to entrepreneurial actions and entrepreneurial universities. Increasingly universities are expected to ‘give back the community’ through scholarly interaction with industry focusing on the creation of intellectual property, and more diverse forms of scholarly engagement which contributes to social and economic development.² According to Kwiek, higher education, at

¹ H. Perraton, *Open and Distance Learning in The Developing World*, New York 2000, p. 1.

² Cf. S. Braznitz, M. Feldman, *The Engaged University*, “Journal of Technology Transfer” 37(1), online publication, 2012, pp. 139-145.

the same time is becoming a multi-billion euro enterprise, an important branch of national economies.³

The structure of this paper is as follow: in the next section open and distance learning are presented as a part of new opportunities and the 'highway' for universities. Then, innovative and entrepreneurial universities are described. In this part special attention has been paid to the report entitled "The Innovative and Entrepreneurial University: Higher Education, Innovation and Entrepreneurship in Focus" prepared by the U.S. Department of Commerce's Office of Innovation and Entrepreneurship Economic Development Administration. The paper ends with final remarks and policy recommendations: the author argue that entrepreneurial activities become an integral part of universities, those that are unable to act as entrepreneurs may stay in the shadow of those that lead actions like this. However, universities should remember to evaluate their possibilities and potential risk.

Learning Oportunities: Open and Distance Learning

The opportunities to participate in higher education have been considerably expanded beyond the traditional face-to-face classroom setting to include distance learning, allowing almost everyone to learn almost anything from anywhere at anytime.⁴ Many mainstream universities and institutions have adopted distance learning as the next logical step in educational delivery systems. Technology and entrepreneurial activities have also opened education and 'closed doors' to some students, for example, those with physical disabilities, enabling them to participate for the first time alongside able-bodied student. Others whose disabilities involved communication, hearing, vision or speech could often get materials in alternative media, and submit assessment by the use of alternative media.⁵

³ Cf. M. Kwiek, *Knowledge Production in European Universities: States, Markets, and Academic Entrepreneurialism*, Frankfurt 2012, pp.15-31.

⁴ Cf. M. Simonson, *Foundations of Distance Education*, in: *Teaching and Learning at a Distance. Foundations of Distance Education*, eds. M. Albright, S. Smaldino, S. Zvacek, New Jersey 2008, p. 7.

⁵ Cf. G. Kirkup, A. Jones, *New Technologies for Open Learning*, in: *The Learning Society*, eds. P. Raggatt, R. Edwards, N. Small, London 1996, p. 275.

Open and distance learning process it is not new to the educational community, even the epistles of St. Paul can be classified as a form of religious correspondence education.⁶ Even then letters written on papyrus by scribes were delivered to the early Christian communities, to promote and explain religious beliefs. The roots of modern distance learning are at least 170 years old. An advertisement in a Swedish newspaper in 1833 touted the opportunity to study “Composition through the medium of the Post.”⁷

The earliest modern and formal correspondence program was initiated by an Englishman Isaac Pitman, in 1840 he established and provided tuition on free courses in shorthand writing in Bath (England).⁸ Students were instructed to copy short passages of the Bible and return them for grading by post. Three years later to establish these courses on a more formal basis and spread them across the country, the Phonographic Correspondence Society was founded. In 1858, Queen Victoria, signed a Charter allowing the University of London to offer its degrees to people wherever they had studied. Since its formation in 1858 for over 150 years the University of London International Programmes has enriched the lives of thousands of students across the globe and became the first university to offer its degrees worldwide, and made a university education available to people who were not wealthy, who worked, had less affluent backgrounds or who were not able to study full-time. This program is now known as the University of London International Programme and includes postgraduate, undergraduate and diploma degrees created by colleges such as the London School of Economics, Royal Holloway and Goldsmiths.⁹

American university level distance learning began in 1874 at Illinois Wesleyan University where bachelor and graduate degrees could be obtained in absentia. Since that time also

⁶ Cf. J. Tifflin, L. Rajasingham, *In Search of the Virtual Class: Education in an Information Society*, London 1995, p. 47.

⁷ M. Simonson, *Definitions, History and Theories*, in: *Teaching and Learning at a Distance. Foundations of Distance Education*, op. cit., p. 36.

⁸ Cf. A.G. Picciano, *Distance Learning: Making Connection across Virtual Space and Time*, New Jersey 2001, p.18.

⁹ Cf. University of London International Programmes, 2014, webpage, <<http://www.londoninternational.ac.uk/>> (accessed at: 04.02.2014).

enrolment in the largest private for-profit school grew explosively. For example originally founded in 1888, International Correspondence Schools began to provide training for immigrant coal miners aiming to become state mine inspectors or foremen.¹⁰ In 1894 it enrolled 2500 new students and matriculated 72,000 new students in 1895. By 1906, total enrolments reached 900,000. The growth was due to sending out complete textbooks instead of single lessons, and the use of 1200 aggressive in-person salesmen.¹¹ Many who begin distance learning wonder about the effectiveness of this approach to teaching and learning. Research on the effectiveness of distance education clearly shows that students who learn at a distance do not learn any worse, or any better, than traditional students. Referring to the Sloan report over 90% of public universities offer online courses, and about half offer degree programs online. About 85% of public universities consider online education critical to their long-term academic strategies, as compared with about 50% for private institutions. Faculty at public universities are more accepting of the value of online education than their colleagues at private universities.¹²

Year by year, the expansion of education and training all over the world has led governments to put pressure on established educational institutions to teach more students as long as incurring little, if any, increased cost. Basically there are four totally different generations of distance learning:

- first generation: distance learning as a concept of correspondence education by using letters (19th century),
- second generation: the learning process through television and radio,
- third generation: communication by phone, emails and video conversations,

¹⁰ International Correspondence Schools Ltd, also known as ICS and ICS Learn, is one of the world's most experienced providers of distance learning courses. ICS offers over 150 home learning courses that enable students to attain professional and vocational qualifications. The courses cover a range of subjects such as Human Resources, Business, Marketing, Education, Child and Elderly Care, Hospitality Management, Construction and Engineering.

¹¹ Cf. J.F. Kett, *Pursuit of Knowledge Under Difficulties: From Self-Improvement to Adult Education in America*, Stanford 1996, pp. 236-238.

¹² Cf. The Sloan Consortium, Survey Report: *10th Annual Survey of Online Learning: Changing Course: Ten Years of Tracking Online Education in the United States*, 2012, <<http://www.onlinelearningsurvey.com/reports/changingcourse.pdf>> (accessed at: 09.02.2014).

- fourth generation: online learning concept where ICT plays a very important role.¹³

Nowadays we are living in the fourth generation where using the power of technology to transfer education is a solution to institutional problems, and provides a potential way of cost reduction. It is the highway to the learning society that might support the development of the entrepreneurial university in the twenty-first century. Entrepreneurial universities are a well-known generation of universities amongst people interested in universities and higher education.

Entrepreneurship is more than the creation of business, it is a dynamic process of change, vision and creation. It needs passion towards the creation and implementation of new ideas and creative solutions. The word “entrepreneur” was coined around 1800, and it means “to take action.”¹⁴ Essential ingredients of entrepreneurship include the willingness to take calculated risks in terms of time, equity, or career; the ability to formulate an effective venture team; the creative skill to marshal needed resources; and fundamental skill of building solid business plan; and finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion.¹⁵ As part of the development more and more universities have embraced innovation and entrepreneurship as critical to their mission and role in their communities. Both aspects entrepreneurship and distance learning are connected, for example most universities in the United States which provide entrepreneurial activities also provide distance learning, which allows them to achieve additional profits.

Innovative and Entrepreneurial Universities in Focus

The past decade has witnessed the powerful emergence of entrepreneurial activity in the United States and it has achieved its highest economic performance by fostering and promoting

¹³ Cf. H. Perraton, *Open and Distance Learning in The Developing World*, New York 2000, p. 247.

¹⁴ H. Thorp, B. Goldstein, *Engines of Innovation: The Entrepreneurial University*, Chapel Hill 2010, p. 6.

¹⁵ Cf. D.F. Kuratko, R.M. Hodgetts, *Entrepreneurship: Theory, Process, Practice*, Mason, Ohio 2004, p. 30.

entrepreneurial activities. According to Scott Shane and his article in Forbes, many people do not realize how important a role universities play in creating technology commercialized by the private sector.¹⁶ In the 30 years since the U.S. Congress passed the Bayh-Dole Act, which assigned ownership of federally-funded inventions to academic institutions, university inventions have led to 6,000 new businesses, 4,300 new products, and more than 160 drugs.

Today, academic institutions of higher education are critical factors in knowledge based and modern economy. Pressures for change necessitate urgent reflection on the role and purpose of a university.¹⁷ We are witnessing the birth of new types of universities; there is also a growing body of literature in this field. The existing literature could be divided into two categories which are related but also have some differences: the literature on entrepreneurial university, and the literature on university entrepreneurship. The entrepreneurial university was introduced by Etzkowitz as provides of new sources of found which play significant roles in partnerships and contract researches.¹⁸ Chrisman highlighted creation of new business by academics and students.¹⁹ Clark added their innovative aspect.²⁰

At the present time all universities should have the great interest in entrepreneurship and embrace the importance of innovation, entrepreneurship, and the creation of economic value for their communities because these are the key drivers of economic growth not only in the United States. Decisively as in the United States universities need potential partners to develop a common

¹⁶ Cf. S. Shane, *Entrepreneurial Universities*, November 04, 2011, "Forbs", <<http://www.forbes.com/sites/scottshane/2011/09/04/entrepreneurial-universities/>> (accessed: 25.01.2014).

¹⁷ Cf. E. Deiac, A. Hughes, M. McKelvey, *Universities as Strategic Actors in the Knowledge Economy*, "Cambridge Journal of Economics" 2012, vol. 36, no. 3, pp. 525-541.

¹⁸ Cf. H. Etzkowitz, *Entrepreneurial Scientist and Entrepreneurial Universities*, "American Academic Science", Minerva 1983, vol. 21, no. 2-3, pp. 198-233.

¹⁹ Cf. J. Chrisman, *Faculty Entrepreneurship and Economic Development. The Case of University of Calgary*, "Journal of Business Venturing" 1995, vol. 10, no. 4, pp. 267-281.

²⁰ Cf. B. Clark, *Creating Entrepreneurial Universities: Organizational Pathways of Transformation. Issues in Higher Education*, Elsevier Science, Oxford (New York) 1998, p. 54.

action plan to support and nurture university-based innovation and entrepreneurship. The report entitled “The Innovative and Entrepreneurial University: Higher Education, Innovation and Entrepreneurship in Focus” prepared by the U.S. Department of Commerce’s Office of Innovation and Entrepreneurship Economic Development Administration²¹ in consultation with the National Advisory Council on Innovation and Entrepreneurship²² announced the results of interviews and conversations with colleges and universities around the United States, and answered the question how they are nurturing and promoting innovation and entrepreneurship. The leadership at these universities and colleges stressed the pedagogical value of entrepreneurship, their vision for entrepreneurship in their communities, and the organizational infrastructure they are developing to maximize the research, ideas, and talent associated with their colleges and universities. What is more university leaders emphasized the importance of the United States government, for more than ten years universities have been the largest sector to receive funding and assistance from a variety of federal agencies, including the Departments of Commerce, Education, Agriculture, Labor, Energy and more. At the report five focus categories of the innovation and entrepreneurship activities were identified: student entrepreneurship, faculty entrepreneurship, technology transfer, industry collaboration, and engagement in regional economic development. These five categories reflect the widespread importance of innovation and entrepreneurship to the mission and activities of higher education. Universities are investing heavily in the development of their students’ entrepreneurial skills and focused on the pedagogical value of entrepreneurship as a set of skills that can be applied across professional environments and activities to

²¹ The United States Department of Commerce is the Cabinet department of the United States government concerned with promoting economic growth. Originally was created as The United States Department of Commerce and Labor on 14 February in 1903. The main purpose of this organization is to create jobs, promote economic growth, encourage sustainable development and improve standards of living for all Americans. (<www.commerce.gov>).

²² National Advisory Council on Innovation and Entrepreneurship was created as part of the implementation of the America COMPETES Act (The America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act), a council comprised of some of America’s leading entrepreneurs, investors and university leaders provides ideas and feedback on policies that nurture innovation and entrepreneurship.

supplement the students' classroom experience. Offering formal programs which include degrees and certificates in entrepreneurship and extra-curricular activities, while business plan contests, entrepreneurship clubs, start-up internships, experimenting with on-campus accelerators, entrepreneurial dorms universities provide important organizational skills to students. Moreover they may create the next great university spinoff. According to report faculty and graduate students do not always consider the market and societal relevance of their research, that is the way in which second category faculty entrepreneurship became very popular. Universities are putting in place a series of policy changes like greater recognition of faculty entrepreneurs, integrating entrepreneurship into the faculty tenure and selection process, and increasing faculty connections to outside partners – through externships, engagement with business, and targeted resources for start-up creation. Finally, universities are actively working with federal agencies to address some of the regulatory challenges around faculty entrepreneurship, in particular, those related to conflict of interest and national security issues.

To actively support the university technology transfer function, University Technology Transfer Offices and Technology Licensing Offices are now focused on identifying and supporting entrepreneurship on campus, helping start-ups find the best opportunities and building successful business models, changing the culture of their universities, and creating companies that will be based in the communities around the university.²³ The offices have also expanded support beyond their traditional areas, such as energy and life sciences, into education, social innovation, and agriculture. Businesses and industry benefit greatly from university research and innovation. Universities are constantly looking for ways to connect their research and students' education to emerging industry interests. To that end, universities have put greater emphasis on supporting start-up companies, while continuing to engage established companies that have traditionally been their licensing partners. To facilitate greater collaboration and innovation, universities are opening up their facilities, faculty

²³ Cf. U.S. Economic Development Administration, *The Innovative and Entrepreneurial University: Higher Education, Innovation, and Entrepreneurship in Focus*, <http://www.eda.gov/pdf/The_Innovative_and_Entrepreneurial_University_Report.pdf>, October 2013 (accessed at: 21.01.2014).

and students to businesses both small and large in the hopes of creating greater economic value. Historically, local economic development has been an important mission of the nation's large universities. Many of America's leading universities, particularly land-grant universities, have always felt a strong responsibility for the betterment of their surrounding communities. These days, universities are increasingly focusing on innovation and entrepreneurship as key contributors to the growth and success of local communities. Universities are requesting the federal government to include commercialization and innovation-driven economic development in their grant programs. In addition, regional economic development planning now often starts with an assessment of a local university's research strengths. In turn, universities are seeking partners to supplement their strengths and overcome their weaknesses through partnerships with community colleges, non-profit economic development agencies, governments, and entrepreneurship groups.²⁴

The United States has one of the strongest educational policies in the world, and universities more often act from the bottom up, sideways, criss-cross as well as top down to build active and transparent Triple Helix relationships. From centres for education, research and public service, universities become innovation catalysers that can significantly contribute to the general economy.

As Etzkowitz noticed the Triple Helix is a platform for institution formation, the creation of new places to promote innovations.²⁵

Conclusions

An increasing number of universities all over the world are progressively shifting from their long-established main role as educational providers and scientific knowledge creators to an entrepreneurial university model, that combine the additional role of the commercialization of knowledge and active contribution to the development of private enterprises in the local and regional

²⁴ Cf. *ibidem*.

²⁵ Cf. H. Etzkowitz, *The Triple Helix: University-Industry-Government Innovation in Action*, New York 2008, p. 8.

economy.²⁶ Higher education clearly makes great strides towards to innovation and entrepreneurship; practices worthy of emulating are those where universities and government are key partners in research, development, and innovation. Universities of 21th century have been already engaged in many activities that promote innovation, entrepreneurship and the commercialization of research results. They are committed to working even more closely with industry, private foundations, local companies and governments to enhance their efforts.

After that they are able to share a common desire to increase collaboration and bring innovative ideas and research to the market to create the best solutions and high-growth in economy. Currently, universities struggle with the challenges of adapting to changing conditions in its organization field, it becomes essential to work and look at unique and special cases that allow us to study how strategic decision making conceives and shapes the emergence of entrepreneurial universities.

There are many reasons for this sudden surge in activity and interest in entrepreneurship: to develop an entrepreneurial spirit among students, faculty, staff, and administrators of universities, to make money to replace a decline in government funding and to create jobs and develop the area economy. Entrepreneurship usually needs more than a full-time commitment; therefore, one of the best solutions for 21st century universities is the introduction of distance learning, which increases opportunities for both the university and its students. The number of distance learning courses offering in Poland is increasing. Many of the large universities have had distance learning programs in place for several years. Distance learning and entrepreneurial universities are becoming increasingly popular as economic forces encourage, new technologies facilitate, and future opportunities.

However, greatest challenge facing universities is the education of future generations – teaching how to be entrepreneurial but not with empty words.

Your time is limited, so don't waste it living someone else's life.
Don't be trapped by dogma – which is living with the results of other people's thinking. Don't let the noise of other's opinions

²⁶ H. Etzkowitz, A. Webster, C. Gebhart, B.R.C. Terra, *The Future of the University and the University of the Future: Evolution of Ivory Tower to Entrepreneurial Paradigm*, "Research Policy" 2000, vol. 29, no. 2, pp. 313-330.

drown out your own inner voice. And most important, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary.²⁷

This quote comes from commencement address at Stanford University in 2005 which was given by Steven Paul Jobs, who was an American inventor, marketer, and cofounder of Apple Inc. All universities need to remember to touch the heart and minds of their students, by grappling with their beliefs and real interests in that way not only students' moral values be reinforced, but also so that a better future will be built. According to Nelson Mandela and Barnett "Education is the most powerful weapon which you can use to change the world" and now "universities have to decide how they are to be in the world."²⁸

In short, entrepreneurial activities become an integral part of universities – those which are unable to act as entrepreneurs may stay in the shadow of those that lead such actions. But when universities become the entrepreneurial champions, they also run a risk, in case of the failure of their actions they may lose their current reputation and position. Teaching entrepreneurship can give some students confidence for starting their own businesses, and pursue their dreams. However, before such actions, each university should evaluate their possibilities and the potential risk.

BIBLIOGRAPHY

- Allen E., Seaman J., *Changing Course; Ten Years of Tracking Online Education in the United States, 2013*, <<http://www.onlinelearning-survey.com/reports/changingcourse.pdf>> (accessed at: 09.02.2014).
Barnett R., *Being a University*, Routledge, Abingdon and New York 2011.
Braznits S., Feldman M., *The Engaged University*, "Journal of Technology Transfer" 2012, 37(1), online publication.
Chrisman J., *Faculty Entrepreneurship and Economic Development. The Case of University of Calgary*, "Journal of Business Venturing" 1995, vol. 10, no. 4.

²⁷ Steve Jobs quote from his commencement address at Stanford University in 2005, M. Pena, *Steve Jobs to 2005 Graduates: "Stay hungry, stay foolish"*, Stanford University, June 12, <<http://news.stanford.edu/news/2005/june15/grad-061505.html>> (accessed at: 03.02.2014).

²⁸ R. Barnett, *Being a University*, Abingdon and New York 2011, p.16.

- Clark B., *Creating Entrepreneurial Universities: Organizational Pathways of Transformation Issues in Higher Education*, Elsevier Science, IAU Press, Oxford 1998.
- Deiaco E., Hughes A., McKelvey M., *Universities as Strategic Actors in the Knowledge Economy*, "Cambridge Journal of Economics" 2012, vol. 36, no. 3.
- Etzkowitz H., *Entrepreneurial Scientist and Entrepreneurial Universities*, "American Academic Science", Minerva 1983, vol. 21, no. 2-3.
- Etzkowitz H., *The Triple Helix: University-Industry-Government Innovation in Action*, Routledge, New York 2008.
- Etzkowitz H., Webster A., Gebhart C., Terra B.R.C., *The Future of the University and the University of the Future: Evolution of Ivory Tower to Entrepreneurial Paradigm*, "Research Policy" 2000, vol. 29, no. 2.
- Kett J.F., *Pursuit of Knowledge Under Difficulties: From Self-Improvement to Adult Education in America*, Stanford University Press, Stanford 1996.
- Kirkup G., Jones A., *New Technologies for Open Learning*, in: *The Learning Society*, eds. P. Raggatt, R. Edwards, N. Small, Routledge, London 1996.
- Kuratko D.F., Hodgetts R.M., *Entrepreneurship: Theory, Process, Practice*, South-Western Publishers, Mason, Ohio 2004.
- Kwiek M., *Knowledge Production in European Universities: States, Markets, and Academic Entrepreneurialism*, Peter Lang, Frankfurt 2012.
- Pena M., *Steve Jobs to 2005 Graduates: "Stay hungry, stay foolish"*, Stanford University, June 12, <<http://news.stanford.edu/news/2005/june15/grad-061505.html>> (accessed at: 03.02.2014).
- Perraton H., *Open and Distance Learning in The Developing World*, Routledge, New York 2000.
- Picciano A.G., *Distance Learning: Making Connection across Virtual Space and Time*, Merrill Prentice Hall, Upper Saddle River, New Jersey 2001.
- Shane S., *Entrepreneurial Universities*, November 04, 2011, "Forbs", <<http://www.forbes.com/sites/scottshane/2011/09/04/entrepreneurial-universities/>> (accessed: 25.01.2014).
- Simonson M., *Definitions, History and Theories*, in: *Teaching and Learning at a Distance. Foundations of Distance Education*, eds. M. Albright, S. Smaldino, S. Zvacek, Pearson, Upper Saddle River, New Jersey 2008, p. 36.
- Simonson M., *Foundations of Distance Education*, in: *Teaching and Learning at a Distance. Foundations of Distance Education*, eds. M. Albright, S. Smaldino, S. Zvacek, Pearson, Upper Saddle River, New Jersey 2008.
- The Sloan Consortium, Survey Report: *10th Annual Survey of Online Learning: Changing Course: Ten Years of Tracking Online Education in the United States*, 2012, <<http://www.onlinelearningsurvey.com/reports/changingcourse.pdf>> (accessed at: 09.02.2014).
- Thorp H., Goldstein B., *Engines of Innovation: The Entrepreneurial University*, The University of North Carolina Press, Chapel Hill 2010.

Hompronty Wychowska

Tiffin J., Rajasingham J., *In Search of the Virtual Class: Education in an Information Society*, Routledge, London 1995.

U.S. Economic Development Administration, *The Innovative and Entrepreneurial University: Higher Education, Innovation, and Entrepreneurship in Focus*, <http://www.eda.gov/pdf/The_Innovative_and_Entrepreneurial_University_Report.pdf>, October 2013 (accessed at: 21.01.2014).

University of London International Programmes, 2014, webpage, <<http://www.londoninternational.ac.uk/>> (accessed at: 04.02.2014).