

How Do Lecturers Upgrade Themselves from University-Industry Linkages? Evidences from Vietnam



Le Thai Phong¹, Nguyen Thi Hanh², Luu Tien Dat³, and Nguyen Tran Hoang⁴

¹Foreign Trade University, Hanoi, Vietnam

²lecturer at Faculty of Business Administration, Foreign Trade University, Hanoi, Vietnam

³Postgraduate Office, University of Economics and Business, Hanoi National University, Vietnam

⁴Advanced Programme, International Business Management, Foreign Trade University, Vietnam

ABSTRACT: The collaboration between universities and industry is trending these days thanks to the myriad of benefits that it brings to both parties involved. The impact of this cooperation allows both companies and universities to rely on each other in terms of creating mutual value over time. This paper will discuss the actual reality of this interdependent relationship based on the statistics collected from a research survey, as well as its standing in the role of supporting lifelong learning towards university lecturers. The popularity of university-industry collaboration has provided undeniable advantages to both the academics and companies. However, to aim for a more sustainable development, a clear mechanism and expansion to support society and lecturers' lifelong learning is much needed. Incorporating lifelong learning of lecturers is a challenge and necessity for lecturers, in order to enhance their professionalism, update and deepen their knowledge through professional development. Within the scope of this article, based on an overview of the content of the cooperation between enterprises and universities related to lifelong learning of lecturers, the authors draw a number of lessons to promote university- industry relationships, while improving lifelong learning for lecturers.

KEYWORDS: University-industry linkage, collaboration, lifelong learning, university lecturer

I. INTRODUCTION

Today, developing quality curriculum has become globalized. This is due to the fact that the curriculum reflects the training needs of the global economic market. Strong cooperation between universities and businesses in curriculum development has become increasingly important (Shewakena, 2017). Therefore, for any university, the connection with business always plays a particularly necessary role in supporting the development of the university, especially in relation to the training of staff. teachers in lifelong learning.

The continued evolution of our societies towards a "knowledge society" creates a growing need for healthy people prepared for lifelong learning (Finsterwald, 2013). In the European Commission report, lifelong learning can be defined as continuous, voluntary and self-motivated learning. It can also be motivated by the individual learning a large variety of subjects and learning methods (e.g. online, distance learning, seminars, formal training programs, etc.) duration can vary from a few hours to several years, and programs may or may not be officially accredited. In the information age, lifelong learning refers to a learning process that continues throughout life and everywhere to adapt to the ever-changing conditions of education. Lifelong learning also means creating new opportunities for individuals by updating basic skills or providing more advanced education in skills (Solmaz, 2017).

University-enterprise cooperation is an inevitable trend and needs in itself to bring long-term benefits to the parties involved. In this collaborative development process, the lifelong learning of lecturers makes a particularly important contribution to the development of highly knowledgeable human resources serving businesses. If the cooperation in developing training programs is well done and participating in the training process, the enterprise will receive training human resources quickly and smoothly, increasing training efficiency significantly. .

In 2020, the Covid-19 pandemic has affected all components of the science, technology as well as education systems in countries, although the impact varies across sectors, regions, sectors. sector, size of enterprise, university and research institution. For the education industry, the impact of the epidemic is seen as a turning point to change and develop completely new learning methods. The change caused by the pandemic has led to a change in the method and form of cooperation between universities and enterprises. That certainly affects lecturers, forcing them to study and acquire knowledge to keep up with the changes.

II. LITERATURE REVIEW

A. *University-industry collaborations*

Harley (2003) argues that the conventional pedagogy approaches are simply not enough for the university to take care of competitive advantage during a knowledge society. Gumpert & Snyderman (2002) also assert that institutions must modify academic structures to enable them to compete for stability and alter. One of the various ways within which universities are responding to global competition and alter is through the incorporation of university-business collaborations and partnerships into their programs.

The model of linkage between educational institutions and businesses was proposed by the German philosopher Wilhelm Humboldt. According to him, the university, in addition to the training function, must have the function of research and cooperation with industry. Scientific research in modern schools demonstrates its function in promoting social knowledge innovation. Cooperation between universities and enterprises is understood as direct or indirect interactions, personal or non-personal transactions between educational institutions and businesses to bring benefits to the parties. Includes cooperation in research and development, exchange of personnel (scholars, students, and experts), commercialization of research and development results, development and dissemination of training programs, learning Lifetime, business development, and administration.

Ahmad and Junaid (2008) observe that university - industry linkage is considered a serious collaborative effort on the part of the 2 distinct entities, academia and business, that share their resources in a good and efficient way for attaining mutually compatible goals of technological innovation, enhancing global competitiveness and performing as an engine for economic process. On their part, Bramwell and Wolfe (2005) show that universities have emerged as central actors within the knowledge-based economy since they're increasingly viewed as key drivers of innovation and "major agents of economic growth". This can be made possible through collaborations and partnerships between universities and businesses. Collaboration is mostly thought to be a vehicle for the belief of a number of these aims and promoting a better level of competitiveness (Liyanage and Mitchell, 1994). While emphasizing the necessity for university-business collaborations, Davis (1996) observes: The strength of universities lies in their science base; the strength of the business is technological development. Davis also implicitly points out that the collaborative undertakings transform the complete edifice of business firms by turning them into true learning organizations. Thus companies learn new ways of doing things, and this could ultimately alter the character and direction of the complete business world. Dodgson (1993) observed that collaboration encourages a better level of learning, learning about leading-edge technologies, learning about methods of making future technologies, and learning of the ways new technologies might affect the prevailing business. For these reasons, University-Business Partnerships are thought to be one amongst the widely used interactive best practices, a robust tool for creating a congenial environment for technological innovations and enhancing global competitiveness ultimately promoting the interests of the firms and academia across the globe.

B. *The concept of Lifelong learning*

The concept of lifelong learning was first employed within the 1920s by Dewey, Eduard Lindeman, and Basil Yeaxle, starting out from the thought that it is a continual part of lifestyle (Peter, 2008). Lifelong learning is defined by European Commission (Avrupa, 2000) as "learning activities are undertaken throughout life resulting in an improvement in knowledge, skills, and competencies within a non-public, civic, social and/or employment-related perspective". Lifelong learning term is described due to the intentional learning that people engage in throughout their lives, for personal and professional fulfillment, and to bolster the quality of their lives (Dunlap & Grabinger, 2003). About the concept of lifelong learning, Reinsch (2007) highlights that educational system is required to lift individuals who are undertaking lifelong learning, and besides the educational system, businesses and industry are in need of lifelong learning, which the individuals are should actualize self-learning to remodel the concept of life-long learning into the philosophy of life.

The concept of lifelong learning came into the international and national arenas within the mid-1990s through the work of UNESCO and therefore the OECD in 1996. OECD defined lifelong learning as a process of individual learning and development across the lifespan, from cradle to grave – from learning in babyhood to learning in retirement (UNESCO, 1983; OECD, 1996; Volles, 2016; Smith, 2016). In keeping with Collins (2009), the Commission for a Nation of Lifelong Learners in 1997 at the primary Global Conference on Lifelong Learners, defined lifelong learning as a continuously supportive process, which stimulates and empowers individuals to amass all the knowledge, values, skills, and understanding they'll require throughout their lifetimes and to use them confidently, creativity, and pleasure altogether roles, circumstances, and environments (Commission for a Nation of Lifelong Learning, 1997, p. 8).

The individual is at the middle of a lifelong learning system, where lifelong learning has the potential to increase the engagement of the learners in learning and enables the learners to participate more deeply in practices after learning the suitable knowledge, skills, and attitudes in an exceeding range of formal, non-formal, community and workplace learning (Clemens, 2015; Babacan & Babacan, 2018). The understanding of lifelong learning depends to an oversized degree on the ability and enthusiasm of the individual person to need the care of his or her own learning (Clemens, 2015; Volles, 2016; Smith, 2016; Babacan &

How Do Lecturers Upgrade Themselves from University - Industry Linkages? Evidences from Vietnam

Babacan, 2018). This study will use the concept ‘lifelong learning’ throughout the thesis during this context where the shift in emphasis is placed on the learner due to the main target of learning and thus the event of the learners’ knowledge, skills, and attitudes through self-directed learning though self-paced. (Clemens, 2015; Babacan & Babacan, 2018).

Lifelong learning is also a skill that every individual within the knowledge societies is should have. Acquiring this skill, individuals are enabled to find out from any quiet opportunity that they're going to encounter in their lives.

III. RESEARCH METHODOLOGY

The methodology for this study is survey research. Data was gathered through questionnaires with 289 participants. The survey was conducted from 45 Vietnamese Universities to ensure comprehension and convenience for participants with all questions simple and concise so as to prevent any possible confusion. The survey consisted of two sections. The first section showed the demographic of the participants, including age, gender, educational background, working field and experience. The second one exploited the lecturers’ perception toward the necessity of the cooperation between universities and companies in the process of motivating lifelong education. Using a rating scale with five alternatives, from 1 as totally disagree to 5 as totally agree, the survey explored different factors involved in the business – university linkage. Questionnaire is as following:

NT1	Collaboration between university and industry is necessary
NT2	Collaboration between university and industry is good for both parties
NT3	Collaboration between university and industry is good for community
NT4	Collaboration between university and industry needs the effort from both sides
NT5	Collaboration between university and industry needs a clear mechanism

My university collaborates with industry in following areas:

LV1	Collaboration in teaching (firms consult us on program development, syllabi, ...)
LV2	Collaboration in conducting scientific research
LV3	Collaboration in consulting (university consults firm and vice versa)
LV4	Collaboration in transferring technology
LV5	Collaboration in commercializing products

Via collaboration, I understand that

LI1	I learn new knowledge
LI2	I can validate what I learned
LI3	I have better skills when working with industry
LI4	I have a new channel to learn and upgrade my knowledge
LI5	I am more confident when working with firms
LI6	I have a great experience when working with firm

My view on lifelong learning is that:

QD1	Lifelong learning is necessary
QD2	Lifelong learning is for all ages
QD3	Lifelong learning is better for socioeconomic development
QD4	Have general knowledge
QD5	Be able to express oneself well
QD6	Be able to cooperate with people
QD7	Know how to learn
QD8	Be able to assess situations and solve problems
QD9	Be able to take initiatives
QD10	Have organisational skills
QD11	Be able to manage people
QD12	Use computer
QD13	Use the Internet
QD14	Use scientific/technological tools/equipment
QD15	Use foreign language

How Do Lecturers Upgrade Themselves from University - Industry Linkages? Evidences from Vietnam

Within 12 months, I can learn new knowledge from

NH1	Being at home
NH2	Getting together with other people
NH3	Leisure activities
NH4	At the workplace
NH5	Using local libraries/learning resource centers
NH6	Travelling, studying, working or living abroad
NH7	Involvement in social & political activities
NH8	Training courses neither at work nor in formal learning settings
NH9	Attending training courses/sessions, conferences at the workplace
NH10	When my university collaborating with industry

I think the reasons I would keep learning is:

MT1	Keeping present job
MT2	Having a better private life
MT3	Getting a promotion
MT4	Learning a new language
MT5	Setting up new business
MT6	Getting new knowledge for a hobby
MT7	Opening up job and career opportunities
MT8	Getting a recognised certificate
MT9	Getting a pay rise
MT10	Preparing for retirement
MT11	Getting new knowledge in one's workfield
MT12	Getting back into the labour market

Lifelong learning capability:

NL1	I prefer to have my own learning plan
NL2	I think one problem may have more than one solution
NL3	I can deal with the unexpected and solve problems as they arise
NL4	I feel comfortable under conditions of uncertainty
NL5	I am able to impose meaning upon what others see as disorder
NL6	I often think about my own learning and how to improve it
NL7	I feel I am a self-directed learner
NL8	I feel I can be able to evaluate my learning
NL9	I love learning for its own sake
NL10	I try to relate academic learning to practical issues
NL11	I can be able to locate information when I need it
NL12	It is my responsibility to apply what I learn
NL13	When I learning something new I try to focus on the big picture rather than on the details

IV. FINDINGS AND DISCUSSION

First, about the perception of individual lecturers for the cooperation between universities and enterprises, we come to the following conclusions: all factors NT1, NT2, NT3, NT4, NT5 have the average value is greater than 4.00/5.00, which proves that the cooperation between schools and enterprises plays an extremely important position from the perspective of lecturers. This relationship is necessary, bringing benefits not only to both sides but also to the whole community. In addition, the NT5 factor accounted for the highest score of 4.72/5.00, which proves that what lecturers are most interested in about the university - industry collaborations is the need for a clear, appropriate and guaranteed mechanism, transparency so that this relationship really brings the expected results. The detailed results of the perception of cooperation between University –business are shown in Table 1.1 below:

How Do Lecturers Upgrade Themselves from University - Industry Linkages? Evidences from Vietnam

Table 1: Descriptive statistics of NT

	N	Min	Max	Mean	Std. Dev.
NT1	289	1	5	4.56	0.575
NT2	289	3	5	4.63	0.526
NT3	289	1	5	4.02	0.914
NT4	289	2	5	4.64	0.561
NT5	289	3	5	4.72	0.48

The field of cooperation between enterprises and universities is also considered as an important factor in influencing lifetime learning for lecturers. In this study, we have come to the following conclusions: two factors LV1 and LV2 have the average value above 4.00/5.00 ($\mu LV1 = 4.19$, $\mu LV2 = 4.05$), followed by factor LV3 and LV4 ($\mu LV3 = 3.61$, $\mu LV4 = 3.08$) and factor LV5 have the lowest mean value ($\mu LV5 = 2.79$), which proves that businesses cooperating with universities are mainly in the field of training. (program consultation, outline, invitation...), followed by scientific research and consulting. However, two areas that have not received much attention are technology transfer and product commercialization. The detailed results of the perception of cooperation between University -business are shown in Table 1.2 below:

Table 2. Descriptive statistics of LV

	N	Min	Max	Mean	Std.Dev.
LV1	289	2	5	4.19	0.713
LV2	289	2	5	4.05	0.755
LV3	289	2	5	3.61	0.868
LV4	289	1	5	3.08	1.301
LV5	289	1	5	2.79	1.184

Lecturer will certainly benefit from collaboration between university and industry. In this study, we show that all factors LI1, LI2, LI3, LI4, LI5, LI6 have average values above 4.00/5.00, showing that lecturers gain benefits such as: have the opportunity to learn new knowledge, test previous knowledge, improve skills, build a new channel for learning and improving skills. Since then, lecturers will have interesting experiences when collaborating with the industry, and especially will be more confident with their own knowledge - shown by the fact that the LI5 factor has the largest average value of the 6 factor above ($\mu LI5 = 4.47$). The detailed results are shown in Table 1.3 below:

Table 3: Descriptive statistics of LI.

	N	Min	Max	Mean	SD.
LI1	289	0	5	4.36	0.684
LI2	289	3	5	4.29	0.629
LI3	289	2	5	4.19	0.703
LI4	289	3	5	4.35	0.67
LI5	289	2	5	4.47	0.645
LI6	289	1	5	4.32	0.836

On the point of view of lecturers, lifelong learning is essential, important and for all ages. In addition, the purpose of lifelong learning is to serve economic and social purposes. All the above assertions are proved through the results that 3 factors QĐ1, QĐ2, QĐ3 all have average values above 4.00/5.00 ($\mu QĐ1 = 4.05$, $\mu QĐ2 = 4.3$, $\mu QĐ3 = 4.37$), in which two elements QĐ2 is for all ages and QĐ3 is for serving economic and social purposes which are more appreciated by lecturers.

In this research paper, we also want to evaluate the attitudes of teachers about lifelong learning based on 12 skills: General knowledge, Skills to better express yourself, Skills to work with others, Skills learning, Situational assessment and problem solving skills, Ideation skills, Work organization skills, People management skills, Computer skills, Internet skills, Business skills using equipment, tools, technology, and foreign language skills. These skills are assessed according to the importance of the skills in general, and how Lecturers need to add additional skills.

Regarding the importance of skills, the results show that the above 12 skills are very important for Lecturers, in which, Computer skills, Internet skills, Equipment and tools skills engineering technology is considered the most important ($\mu QĐ12QT = 4.74$, $\mu QĐ13QT = 4.72$, $\mu QĐ14QT = 4.7$).

Regarding the skills that Lecturers want to add, the results show that the majority of Lecturers today have quite equipped

How Do Lecturers Upgrade Themselves from University - Industry Linkages? Evidences from Vietnam

themselves with the necessary skills, and the only skills that most lecturers want to strengthen. more is general knowledge ($\mu_{QD4BS} = 4.51$). In addition, the two skills, Computer Skills and Internet Skills, had very low average values ($\mu_{QD12BS} = 1.31$, $\mu_{QD13BS} = 1.54$), showing that Lecturers have fully equipped themselves with the skills that they need. they consider the most important. The detailed results are shown in Table 1.4 below:

Table 4: Descriptive statistics

	N	Min	Max	Mean	Std.Dev
QD1	289	2	5	4.05	0.755
QD2	289	1	5	4.3	0.8
QD3	289	2	5	4.37	0.802
QD4QT	289	2	5	4.11	0.832
QD5QT	289	3	5	3.88	0.725
QD6QT	289	3	5	4.44	0.627
QD7QT	289	4	5	4.49	0.501
QD8QT	289	3	5	4.43	0.591
QD9QT	289	3	5	4.35	0.837
QD10QT	289	3	5	4.38	0.74
QD11QT	289	3	5	4.26	0.71
QD12QT	289	3	5	4.74	0.455
QD13QT	289	3	5	4.72	0.456
QD14QT	289	3	5	4.7	0.53
QD15QT	289	3	5	4.47	0.754
QD4BS	289	3	5	4.51	0.717
QD5BS	289	3	4	3.21	0.406
QD6BS	289	1	5	2.51	1.08
QD7BS	289	1	5	2.09	0.966
QD8BS	289	3	5	3.79	0.618
QD9BS	289	2	5	3.6	1.299
QD10BS	289	2	5	3.43	1.22
QD11BS	289	2	5	3.84	1.352
QD12BS	289	1	3	1.31	0.545
QD13BS	289	1	3	1.54	0.841
QD14BS	289	2	5	3.66	0.99
QD15BS	289	1	5	3.12	1.54
QD4BS	289	3	5	4.51	0.717
QD5BS	289	3	4	3.21	0.406
QD6BS	289	1	5	2.51	1.08
QD7BS	289	1	5	2.09	0.966
QD8BS	289	3	5	3.79	0.618
QD9BS	289	2	5	3.6	1.299
QD10BS	289	2	5	3.43	1.22
QD11BS	289	2	5	3.84	1.352
QD12BS	289	1	3	1.31	0.545
QD13BS	289	1	3	1.54	0.841
QD14BS	289	2	5	3.66	0.99
QD15BS	289	1	5	3.12	1.54

To evaluate the way in which teachers acquire new knowledge, the author has given 10 channels for evaluation. The results show that the number 1 priority Lecturers are mainly from conferences and seminars at colleges/universities/training institutes ($\mu_{NH9} = 4.72$). Meanwhile, the option of learning new knowledge at home for Lecturers does not seem to be very effective ($\mu_{NH1} = 3.8$). The absorption of new knowledge through the form of university cooperation with enterprises is also very effective ($\mu_{NH10} = 4.27$), but it also needs to be further strengthened. The detailed results are shown in Table 5 below:

How Do Lecturers Upgrade Themselves from University - Industry Linkages? Evidences from Vietnam

Table 5: Statistics for NH

	N	Min	Max	Mean	Std.Dev.
NH1	289	1	5	3.8	1.264
NH2	289	1	5	4.24	1.115
NH3	289	1	5	4.22	1.094
NH4	289	2	5	4.13	1.011
NH5	289	3	5	4.24	0.729
NH6	289	3	5	4.29	0.754
NH7	289	3	5	4.37	0.675
NH8	289	2	5	4.04	1.058
NH9	289	4	5	4.72	0.448
NH10	289	3	5	4.27	0.798

To assess the motivation of teachers for lifelong learning, the author gives 12 specific criteria listed in the questionnaire. After processing the collected data, the author gives the following results: The need for lecturers to continue learning in order to maintain and do better at their current work is the most important factor ($\mu_{MT1} = 4.19$). However, the motivation “To return to the labor market” for the lecturers is not important ($\mu_{MT12} = 2.21$). The detailed results are shown in Table 6 below:

Table 6: Statistics for MT

	N	Min	Max	Mean	Std.Dev
MT1	289	3	5	4.19	0.715
MT2	289	2	5	3.76	1.019
MT3	289	1	4	3	1.022
MT4	289	1	5	3.6	0.996
MT5	289	1	3	2.4	0.525
MT6	289	2	5	4	0.823
MT7	289	2	3	2.53	0.5
MT8	289	2	5	4.04	0.865
MT9	289	1	5	3.27	1.2
MT10	289	1	4	2.77	0.956
MT11	289	1	5	3.77	1.284
MT12	289	1	4	2.21	0.746

To assess the lifelong learning capacity of lecturers, the author gives 13 criteria. In which, lecturers themselves like to build their own learning plans as the most important lifelong learning ability ($\mu_{NL1} = 4.48$). In addition, lecturers themselves being fond of learning was not considered an important factor in assessing the lifelong learning capacity of lecturers ($\mu_{NL9} = 3.37$). The detailed results are shown in Table 7 below:

Table 7: Statistics for NL

	N	Min	Max	Mean	Std.Dev
NL1	289	3	5	4.48	0.746
NL2	289	3	5	4.47	0.755
NL3	289	3	5	4.45	0.744
NL4	289	2	5	3.78	1.023
NL5	289	2	5	3.8	1.008
NL6	289	3	5	4.29	0.724
NL7	289	3	5	4.16	0.702
NL8	289	2	5	3.71	0.873
NL9	289	1	5	3.37	1.21
NL10	289	2	5	4	1.067
NL11	289	2	5	3.91	1.04
NL12	289	2	5	4.02	1.012
NL13	289	2	5	4	1.024

V. CONCLUSION

University-industry cooperation is an inevitable trend and needs in itself to bring long-term benefits to the parties involved. In Vietnam, university-industry cooperation is of great interest. However, the reality shows that these activities are still very limited: they are not diversified in types, especially not in depth; The benefits brought about are very small compared to the potential of the parties. Enterprises and universities need policies and mechanisms to free up their own resources. Entrepreneurship in universities and innovation and creativity in businesses should be encouraged and developed. One of the areas that both businesses and universities need to focus on is investing in lifelong learning for faculty. Both parties need to create and maintain an environment of ongoing cooperation and interaction; to develop collaborative projects and link training through action research strategies. Continuing training is both a challenge and a necessity for teachers, aiming to enhance their professionalism, update and deepen their knowledge through career progression. We see career advancement and development as the source of continuous and lifelong learning in the knowledge society. A number of solutions are suggested by the author to develop the university - industry cooperation relationship and strengthen and enhance lifelong learning among the teaching staff.

Firstly, the two sides need to maintain regular channels of contact and communication, share information and ideas through the department in charge of cooperation or through joint projects and activities, including planning. development plan to build long-term strategic cooperation. This can help the teaching staff to absorb practical knowledge from businesses, update new trends and knowledge.

Secondly, they have to harmoniously combine the benefits and responsibilities in implementing cooperation in the direction: the university prioritizes research, technology transfer, providing high-quality human resources, and consulting on business issues. On the contrary, enterprises are oriented, develop investment plans for R&D and receive results for commercialization. Enterprises play the role of information providers and critics so that universities can understand the needs of the technology market and the labor market. training plans for teachers to help them understand the labor market and increase their own lifelong learning capabilities.

ACKNOWLEDGMENT

This paper is an integral part of Research Project CT.2019.07.05 “University-industry linkages in fostering lifelong learning: international experience and lessons for Vietnam”, financed by Vietnam Ministry of Education and Training.

REFERENCES

- 1) Ahmad, S. H., & Junaid, F. A. (2008). A Conceptual Framework for Developing Strategic Partnership between University and Industry in Pakistan with Particular Reference to NWFP. In 2nd International Conference on Assessing Quality in Higher Education (pp. 489-520).
- 2) Avrupa Komisyonu (2000). A memorandum on lifelong learning. Retrieved June 14, 2016 from web site <http://www.bologna-berlin2003.de/pdf/MemorandumEng.pdf>
- 3) Babacan, A. &. (2018). Repositioning lifelong learning in legal education. *Widening Participation and Lifelong Learning*, 20(2), 122-148.
- 4) Bramwell, A., J. Nelles and D. Wolfe.(2005). “Knowledge, Innovation and Institutions: Global and Local Dimensions of the ICT Cluster in Waterloo, Canada”. Paper presented at the DRUID Academy PhD Conference, Aalborg, Denmark, January 27-29
- 5) Clemens, A. (2015). Lifelong learning in practice. In *The Role of Higher Education in Promoting Lifelong Learning* (pp. 147-163). Hamburg: UNESCO Institute of Lifelong Learning.
- 6) Collins, J. (2009). Education Techniques for Lifelong Learning - Lifelong learning in the 21st Century and Beyond. *Radiographics*, 29, 613-622.
- 7) Commission for a Nation of Lifelong Learning. (1997). *A National Learning: Vision for the 21st Century*. Washington DC, USA: Commission for a Nation of Lifelong Learning.
- 8) Davis, R. M. (1996). Industry-university Collaborations: A Necessity for the Future. *Journal of Dentistry*, 24, 3-5.
- 9) Dodgson, M. (1993). *Technological Collaboration in Industry: Strategy, Policy and Internationalization in Innovation*. London, Routledge.
- 10) E. Reinsch (2007). The relationship among lifelong learning, emotional intelligence and life satisfaction for adults 55 years of age or older, Unpublished PhD thesis, University of Illinois.
- 11) Evans, C., & Fan, J. P. (2002). Lifelong learning through the virtual university. *Campus-Wide Information Systems*.
- 12) Finsterwald, M., Wagner, P., Schober, B., Lüftenegger, M., & Spiel, C. (2013). Fostering lifelong learning–Evaluation of a teacher education program for professional teachers. *Teaching and Teacher Education*, 29, 144-155.
- 13) Gumpert, P. J., & Snyderman, S. K. (2002). The formal organization of knowledge: An analysis of academic structure. *The Journal of Higher Education*, 73(3), 375-408.
- 14) Harley, A. (2003) *Census 2001: What do the statistics have to say about adult literacy? Talking Adult Learning*,

How Do Lecturers Upgrade Themselves from University - Industry Linkages? Evidences from Vietnam

November 2003. Cape Town: Adult Learning Network, pp. 10- 11.

- 15) J.C. Dunlap, S. Grabinger (2003). Preparing students for lifelong learning: A review of instructional features and teaching methodologies, *Performance Improvement Quarterly*, 16(2), 6-25.
- 16) J. Peter (2008) . "Foreword" *Lifelong Learning, Concepts and Contexts*, USA: Routledge.
- 17) Liyanage, S., and Mitcheil, H. (1994). Strategic Management of Interactions at the Academic-Industry Interface. *Technovation*, 14(10), 641-655.
- 18) Nugent, N., & Rhinard, M. (2015). *The european commission. Macmillan International Higher Education*.
- 19) OECD. (1996, January 16-17). *Lifelong Learning for All*. Paris, France: OECD.
- 20) Science-to-Business Marketing Research Centre, "The State of European UniversityBusiness Cooperation: Final Report - Study on the cooperation between Higher Education Institutions and public and private organisations in Europe", 2011, European Commission, <http://bookshop.europa.eu/en/the-state-of-european-university-businesscooperation-pbNC0213081/>
- 21) Smith, J. &. (2016). *Lifelong Learning in 2040*. Roosevelt Institute. Roosevelt.
- 22) Shewakena, B., & Belay, S. (2017). The Role of University-Industry Linkage to Produce Graduates with Employable Skills: Analysis of Banking and Finance Graduates' Attributes from Educators and Industries Perspective. *International Journal of African and Asian Studies*, 30, 36-43.
- 23) UNESCO. (1983). *Final Report of the International Meeting of Experts on the Implementation of the Principles of Lifelong Education*. Paris, France: UNESCO.
- 24) Volles, N. (2016). Lifelong learning in the EU: changing conceptualisations, actors and policies. *Studies in Higher Education*, 41(2), 343-363.