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Lifelong Education at the Faculty of Economics and Management at the Czech University of Life Sciences in Prague

Abstract

Lifelong learning is not an aim but a means for continuous and permanent development and successful advancement of each individual. Not only does it bring competitive advantage at the labour market, but it also helps to solve problems and provides new knowledge and contacts. Thanks to lifelong learning any individual has an opportunity to get educated at various stages of his life in accordance with his own interests and needs and his value at the labour market is increasing. Lifelong learning differs from school education by a variety of means, methods and motivation.

The paper describes and analyses one of the main stages of lifelong learning, which is the adult education at the Czech University of Life Sciences in Prague (CULS). The main aim of this paper is to provide basic information on the lifelong education at the faculty of Economics and Management of the Czech University of Life Sciences in Prague. Selected statistical methods of quantitative research were used in order to analyse the above-mentioned issues. The data were obtained from a questionnaire survey and analysed using the one-dimensional as well as multidimensional statistical methods. The basis for the analysis itself were the data about students in the courses of lifelong education in the combined form of studying at the Faculty of Economics and Management (FEM) of CULS in Prague between the years 2004–2012.

Keywords: *adult education, lifelong education, labour market, qualitative data, test*

Introduction

The aim of this paper is to define and characterize lifelong education at the Czech University of Life Sciences in Prague according to the age and sex of the students. The evaluation of this form of education was based on real data. The basis for the analysis itself were the data about students in the courses of lifelong education in the combined form of studying at the Faculty of Economics and Management (FEM) of CULS in Prague between the years 2004–2012.

Defining the term of lifelong education

The development of lifelong learning should be integrated into all areas of education. The main goal of lifelong learning is mainly the enhancement and modernisation of primary, secondary and tertiary education and implementation of individualised and differentiated education. In this context it is necessary to mention the fact that the term lifelong education is often confused with lifelong learning. However, lifelong learning is a complex of activities that form the experience and skills of a person throughout his life and not only in adulthood, as it is with lifelong education. It can be concluded from the above-mentioned that the lifelong education of adults represents only one stage of lifelong learning. (Vychová, 2008). As Vychová (2008) also mentions, these two terms can be used as synonyms at a certain level of generalisation.

Lifelong education focuses mainly on acquiring new and developing the existing skills and knowledge. Adult education commences after the systematic school education is finished and when the person begins his first employment. The highest level of the education completed either in the classic full-time studying or in the form of lifelong education is closely related to one's position at the labour market. (Jachimczak, 2012). Adult education covers professional (qualification) education, education of citizens as well as interest education.

The concept of lifelong education was defined for the first time at the UNESCO conference in 1970 by Paul Legrand. (Brdek, Vychová, 2004). Two years later, in 1972, an international survey on the state of education was carried out and it emphasised each individual's right to education throughout his life. The results of the survey proved the necessity of combining formal and informal education as well as the importance of the quality rather than quantity of education. The strategy of lifelong learning, which was presented in the OECD report in 1973, defined lifelong education as "education continuing after joining the labour market". (UIV, 2000). At present this definition is not valid anymore and it should rather be called further education or adult education. (Vychová, 2008). In 1979 the ability

of individuals to analyse and process new knowledge was regarded as the driving force of society (Botkin et al., 1979). Due to the economic crisis in the seventies and eighties of the last century the importance of the above-mentioned priorities was on its decrease. Among the most prominent figures in the area of adult education in the CR at that time were Vladimír Jochmann and Josef Fischer, who founded the subject of study called Adult Education at Palacký's University in Olomouc in 1977. In the 1990s more attention was paid to lifelong education. It was caused by the new concept of solving a significant amount of social and economic problems. At that time the term of education was substituted by the term learning and it was understood to be an activity that takes place in schools. In the UNESCO report lifelong education was considered to be the means of incessant personal development and a means that enables the individual to adapt to the ever-faster changes in society (UNESCO, 1996). The year of 2000 was critical in the area of education. All over the world intensive globalisation processes were in progress and these were made faster due to the advances in information technologies and their universal application.

In his paper, Chang (2002) deals with the history of adult education and emphasises using the Internet as a teaching aid for lifelong education. Other authors also highlight using information technologies in lifelong education as well as in distant form of studying - Rodriguezrosello (1993) and Lloyd, Moore and Kitching (2001). Pilch and Stochmialek (2008) also stress the usage of new information and communication technologies, i.e. the Internet, in adult education. According to Pilch and Stochmialek (2008), this is caused by the great importance of ICT in contemporary society. The evaluation of adult education applying new methods and forms under special circumstances is presented in the paper by Kosová (2010).

Lifelong education at CULS

Lifelong education at CULS in Prague is an important part of the educational activities of the university. Within the framework of lifelong education programmes the faculties and departments offer a variety of courses designed for different target groups (employees, seniors, graduates etc.). The realized courses are aimed at improving qualifications for job performance, preparing for entrance tests or as a matter of interest.

At CULS the courses designed to enhance one's qualifications are organised as courses of lifelong education in the form of combined studies. The combined study uses elements of full-time study as well as distant study. A student has less contact classes with a teacher, studies individually in a virtual environment, has

special teaching aids available and is connected online to the teachers and faculty via the Internet.

The course of lifelong education is an exceptional (paid) study, organised in accordance with the law No. 147/2001 of the Code, which amends the law No. 111/1998 of the code – Act on universities (§ 60 Lifelong education). The participants in the course are not university students according to the law on universities, but rather participants in lifelong education.

The course of lifelong education in the combined form is accessible to anybody who has fulfilled the condition of successfully completing secondary education for the Bachelor's degree study and to anybody who has successfully obtained the Bachelor's degree for the Master's degree study. The content of the courses is based on the accredited subjects that are taught in the full-time programmes of the university. The participants in the course obtain "Proof of studying in a lifelong education course" and having completed the course they can get a certificate if required.

The study includes contact classes in six subjects every semester. All the subjects comprise eight hours of lectures that take place in the consultation centre and a four-hour consultation that can take place also in the consultation centre. The FEM publishes textbooks for combined study and also virtual studying materials in the LMS Moodle platform and these serve as support for self-study. (Dömeová et al., 2011). Having graduated the students obtain a degree, i.e., Bc or Ing, just as the students of regular study.

Research Methodology

The analytic part of the paper is focused on the development in the numbers and structure of the students in the consultation centres, which are in the competence of FEM CULS in Prague. The consultation centres are in Hradec Králové, Cheb, Jičín, Klatovy, Litoměřice, Most, Šumperk and in SezimovoÚstí. The centres had been founded in cooperation with one or the other local secondary or higher education institutions or other kinds of organisations (e.g., Chamber of Agriculture).

The analysis of the data was based on reduction, organisation, synthesis and summarisation of information applying the exploratory analysis of data. It is a research analysis of data and it is significant that it is based on a complex of graphical and semi-graphical methods and computing processes which yield numerical values of important characteristics of the sample under study. It is based

on methods that are used for initial recognition of the data matrix structure and searching for hypotheses for further testing.

In the case of quantitative variables, the basic elementary characteristics used in analysing time series were selected in order to monitor the development of the selected indicators related to lifelong education.

The analysis of the quantitative variables was based on the testing of the bi-variate correlation of the indicators applying the chi-squared test of mutual independence. The construction of the measures of correlation intensity was based on computing the Pearson coefficient of contingency (Pecáková, 2008).

The processed data were obtained with the consent of the vice-dean for pedagogy. The statistical computing was done the IBM SPSS statistical software, version 20. The significance level in testing the statistical hypotheses was set at $\alpha=0.05$.

Research Results

Between 2004 and 2012 FEM CULS in Prague offered programmes of lifelong education in the consultation centres at the Bachelor's level (B) and also at the successive Master's level (SM).

There were two subjects in particular:

- Public Administration and Regional Development (PARD)
- Business and Administration (BA)

The primary description of the data was based on the computing of absolute and relative frequencies. The description was used to get an overview of the development of numbers of students at the Bachelor's level in particular consultation centres. (Table 1). The first year under study was the year of 2004, when FEM CULS in Prague had two consultation centres: in Cheb (42.1 % of the total number of students) and in Most (57.9 % of the total number of students) only studying the PARD subject. In the following years more centres were opened. The most consultation centres (eight) were opened in 2008.

Table 1. Numbers of students admitted to lifelong learning courses over 2004–2012 Bachelor's degree study form

Centres	Subject	2004	2005	2006	2007	2008	2009	2010	2011	2012
Hradec Králové	BA					126	103	97	77	32
Cheb	BA					121				
Sezimovo Ústí	BA						57			
Hradec Králové	PARD		236	369	383	177				69
Cheb	PARD	40	80	84	83	76		46		
Jičín	PARD					67		51	47	
Klatovy	PARD		96	275	260	267	122	126	111	95
Litoměřice	PARD		110	119	272	297	141	171	144	86
Most	PARD	55	157	218	232	220	50	52	53	38
Šumperk	PARD				59	90	53	69	82	66
Sezimovo Ústí	PARD			68	171	93		63	43	25
Total		95	679	1133	1460	1534	526	675	557	411

Source: own processed data

In order to get a complete overview it is necessary to add the information about the successive Master's level studies in the consultation centres of FEM CULS in Prague (Table 2). The largest number of students at the successive Master's level was studying in Litoměřice from 2009 to 2012. Most students attended the consultation centre in Litoměřice in 2012. In contrast, the lowest number of students in the year of 2012 studied in Cheb (4.8 % of the total number of students).

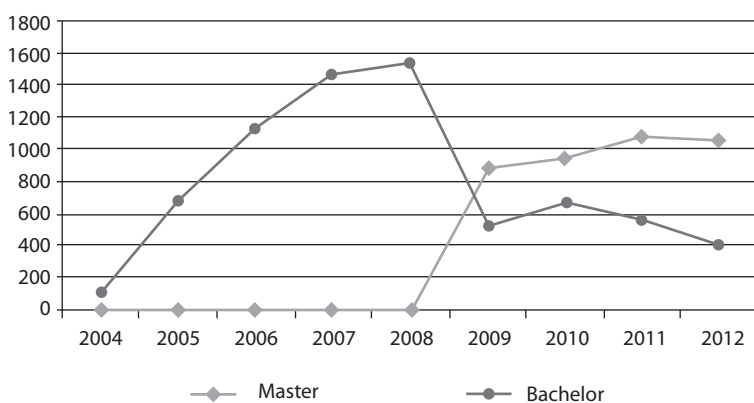
Table 2. Numbers of students admitted to lifelong learning courses over 2004–2012 in Successive Master's degree study form

Centres	Subject	2009	2010	2011	2012
Hradec Králové	BA			117	98
Hradec Králové	PARD	135	152	152	162
Cheb	PARD	108	69	82	50
Jičín	PARD	66	78	71	83
Klatovy	PARD	128	120	123	136
Litoměřice	PARD	178	194	180	167
Most	PARD	124	108	81	82
Šumperk	PARD		81	106	117
Sezimovo Ústí	PARD	148	157	168	157
Total		887	959	1080	1052

Source: own processed data

Figure 1 presents the total numbers of students. There is a considerable increase at the Bachelor's level from 2004 to 2008. In 2009, a significant decrease in the numbers of students at the Bachelor's level was registered and it continued till 2012. In contrast, in 2008 the first consultation centres for the successive Master's degree were opened and students showed significant interest in those. The subjects leading to the Master's degree were increasing till 2011. In 2012 there was a moderate decrease in the number of students.

Figure 1. Total numbers of admitted students in the lifelong education courses



The average age of students in the consultation centres in 2004 at the Bachelor's level of study was 32.08 (Table 3). The value of median for the age of students is 30 years of age. The range of age of the students at the Bachelor's level of study in the consultation centres went up from 22 to 60. On the contrary, in 2012 the average age of students at the Bachelor's level increased to 32.98, which represents almost a year of difference. The value of median for the age of students is 31 years of age. The range of age of the students changed significantly as both limits (the lowest age as well as the highest age) dropped by five years. The range of age in 2012 was in the interval from 17 to 55. This decrease in age suggests that after completing their secondary studies students start their employment and at the same time they start studying in the consultation centres and improve their qualifications.

The average age of students at the successive Master's level of study was 34.07 in 2009. The range of age of the students was in the interval from 22 to 57. In contrast, in 2012 the average age was 32.98 and the range of age was in the interval from 22 to 56. In this form of study the decrease in the age is significant.

Table 3. Age of the students

Start of studying	Type – code	Mean	Median	Minimum	Maximum
2004	Bachelor's level	32.08	30	22	60
2005	Bachelor's level	30.90	30	19	56
2006	Bachelor's level	31.55	31	19	57
2007	Bachelor's level	32.83	32	19	57
2008	Bachelor's level	33.00	33	19	64
2009	Successive Master's level	34.07	33	22	57
	Bachelor's level	31.12	31	19	55
2010	Successive Master's level	33.61	33	22	55
	Bachelor's level	31.28	31	19	55
2011	Successive Master's level	33.68	33	22	59
	Bachelor's level	31.87	31	19	53
2012	Successive Master's level	32.98	32	22	56
	Bachelor's level	31.32	31	17	55
Total	Successive Master's level	33.56	33	22	59
	Bachelor's level	32.03	31	17	64

Source: own processed data

The ratio of men and women at the Bachelor's level of study is balanced in 2004. In the consultation centres 52.6 % of women and 47.4 % of men studied in 2004. Over time, the lifelong education studies become the domain of women. In 2012, 61.8 % of women and 38.2% of men studied in the consultation centres. The highest ratio of women in the consultation centres was in 2009, when the number of women studying in the consultation centres reached 63.3 %. There are more women also at the successive Master's level of study. In the first year (2009) 60.3 % of women and 39.7 % of men studied in this form of study. The highest ratio of women at the successive Master's level of study was in 2011 and reached 67.9%. In the last year under study (2012), the ratio of women was 65 % of the total number of students. The same tendencies were observed in the Bachelor's form of study in the consultation centres of FEM CULS in Prague.

Further analysis of the data was focused on the relationship between the students' gender and age. In order to get clearly arranged data and for logical reasons the relationships between gender and age were again processed for the Bachelor's and Master's levels of study separately.

Most of the students who start studying belong to the interval of 27–36 years at the Bachelor's level (3269 students) and also at the Master's level (1663 students).

There were 4932 students who started studying at this age (44.6 % of the total number of students). On the other hand, the least numerous group in both forms of study is the group at the age of 57 and older. The most significant differences between men and women are in the group of students up to 26 years of age. In this age interval, 861 men and 1 976 women started studying in the consultation centres (Table 4).

Table 4. Contingency table of relationship between gender and age

Bachelor's level		Age intervals					Total
		do 26	27-36	37-46	47-56	57 and more	
Gender	man	659	1472	654	122	7	2914
	woman	1252	1797	926	176	5	4156
Total		1911	3269	1580	298	12	7070

Master's level		Age intervals					Total
		do 26	27-36	37-46	47-56	57 and more	
Gender	man	202	674	457	93	0	1426
	woman	724	989	689	147	3	2552
Total		926	1663	1146	240	3	3978

Source: own processed data

From the above-mentioned analyses it is obvious that there are statistically significant differences between men and women and their representative frequencies in the particular age intervals at the Bachelor's level of study (p-value 0.000) as well as at the Master's level of study (p-value 0.000).

Discussion

During the period under study it was possible to study courses at the Bachelor's (B) as well as successive Master's (SM) level in the consultation centres of FEM CULS within the framework of the lifelong education programme. The first year under study was 2004, when FEM CULS had two consultation centres in Cheb and in Most and the only subject studied then was PARD. On the other hand, most consultation centres, eight, were opened in 2008 (Hradec Králové, Cheb, Jičín, Klatovy, Litoměřice, Most, Šumperk, SezimovoÚstí).

The ratio of men and women at the Bachelor's level of study was balanced in 2004. In the consultation centres there were 52.6 % of women and 47.4 % of men.

Over time, there are more and more women studying at lifelong education courses. In 2012 there were 61.8 % of women and 38.2 % of men studying in the consultation centres. The highest ratio of women in the consultation centres was in 2009, when the number of women studying in the consultation centres reached 63.3 %.

Most of the students who start studying belong to the interval of 27–36 years at the Bachelor's level (3269 students), and also at the Master's level (1663 students). There were altogether 4932 students who started studying at this age (44.6 % of the total number of students). On the other hand, the least numerous group in both forms of study is the group at the age of 57 and older. In this interval only 15 persons started studying in both forms of study during the period under study.

The distant type of study is a new trend in education. One of the advantages of distant study is its flexibility. Except for the compulsory consultations, the process of learning is to a large extent based on self-studying, in contrast to full-time studying. (Chang, 2002). It is apparent from the above-mentioned evaluation that the employed students are interested in the lifelong form of education.

As mentioned in the paper by Dömeová et al. (2010), the students in the consultation centres of FEM CULS in Prague are predominantly women (61 % – 70 %). Most of the students are employed full-time or women on maternity leave. The main advantage of the combined form of study is that it is more flexible than full-time study as far as timing is concerned. According to experience, the time flexibility is most important for women with families. (DePew and Lettner-Rust, 2009)

Conclusion

The paper is focused on the lifelong education at the FEM of the CULS in Prague. From the above-mentioned analyses it can be concluded that the structure of the students at the Bachelor's level as well as Master's level of study was changing during the period under study. From the moment when the consultation centres were established, increased interest in obtaining the Bachelor's degree was recorded (between 2004 and 2008). In the following period a decrease in the numbers of students was recorded. The successive subjects of the Master's level of study were opened in the consultation centres in 2009 for the first time. Since that time the interest in this form of study has been quite stable.

In conclusion, it can be said that lifelong education is one of the priorities of contemporary society as the population is aging steadily. This is closely related to the needs of the people at productive age to manage new knowledge and informa-

tion technologies and their interest in education and programmes that will enable them develop their creative skills, help them deal with the demands of modern society and fulfil their needs and interests. Lifelong education is an important part of life and getting qualifications of each individual. The demand for economic growth and positive development of society has direct consequences for the education system. Mainly lifelong education has been becoming more easily accessible especially at higher levels and as a result education is also significantly longer.

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