

## Opportunities for using professional competencies acquired during university studies according to graduates of university schools of physical education

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### ABSTRACT

**Introduction.** University graduates acquire a variety of professional competencies which often determine their future professional careers. The graduates from university schools of physical education are usually prepared to work in the education sector, sports clubs, health centres, travel agencies and hotels. However, the professional competencies acquired throughout their studies, understood as causative and instrumental skills to be used at work, are not necessarily what the employers actually expect.

**Aim of Study.** The aim of the study was to find out about the opinions of graduates from the University School of Physical Education in Poznań, Poland, concerning their professional competencies acquired throughout the studies and the opportunities for using them in the labour market.

**Material and Methods.** The paper is based on literature analysis, direct observation carried out by the author during classes with post-graduate students and a diagnostic survey measuring public opinion using an on-line questionnaire.

**Results.** The graduates from the University School of Physical Education in Poznań assessed their professional competencies as very high, with a particular focus on practical professional preparation and to work in the education sector. Lower assessments were made for human resources management preparation, with the poorest scores given to organizational and managerial preparation. The respondents also declared that a university degree allowed them to be satisfied from their jobs and to gain social recognition.

**Conclusions.** The labour market has forced university schools of physical education to adjust their curricula to include opportunities of acquisition of flexible professional competencies that can be practically implemented. The university schools will have to monitor the professional careers of their graduates to be able to offer opportunities for development of actual professional competencies within the framework of post-graduate university courses.

### KEY WORDS

graduates, professional competencies, education, university schools of physical education.

### Introduction

Education and development of human resources in an organization can be defined as a process of development of knowledge, improvement of skills and competencies necessary for proper performance of tasks in current workplaces, and opening opportunities for additional development of the knowledge, skills and competencies in terms of promotion, changing positions in a workplace or organizational changes [1]. Development of human resources should provide an organization with employees with the personality

traits, skills and competencies the organization needs for achievement of its goals (e.g. growth, development and effectiveness) [1].

The beginnings of interest in professional competencies go back to the previous century, when the term *social intelligence* was coined by EL Thorndike [2]. U Jakubowska argues that "*social intelligence, assertiveness, communicational, social and relational competencies or communication and social skills, rhetorical sensitiveness and communicational effectiveness are the examples of terms used optionally by different authors, with their sense adopted in individual studies being*

identical, similar or entirely different" [3]. She represented theoretical thinking about social and professional competencies in categories of abilities, general skills and specific instrumental abilities [3].

An analysis of changes observed in the professional environment indicates the main groups of factors determining professional competencies of employees, which include globalization, development of new technologies and changes in corporate social responsibility.

The development of competencies should include areas which result from the processes that form the structure of knowledge management. Firstly, one should stress the localization and acquisition of knowledge. Secondly, the emphasis should be on the area of knowledge creation and transfer (utilization, sharing and distribution) and the area of knowledge protection and storage. Therefore, important professional competencies include openness to new values, ideas, technologies, experiences of other companies; ability to collect and process information; ability to analyse problems which go beyond simple answers; ability to plan experiments; abilities to analyse and present data; ability to gain experience through introduction of new, often unconventional solutions into practice, abilities of transforming knowledge into deeply understood knowledge [1]. P Senge proves that only those organizations which care for the development of certain competencies on a global scale are able to make market success. Among these, the author listed personal mastery, mental models, shared vision, team learning and system thinking [4].

Another important factor in the activities of each organization are competencies of social responsibility, i.e. taking into consideration the social effects of activities in the fields of economy, ecology, society, ethics, sociology; determining the needs in terms of employees' environmental competencies and helping change orientation in enterprises and adoption of new assumptions and principles of development. Using moral and ethical norms and participating in stimulation of the processes of sustainable development provide the new dimension of professional competencies [1].

Competencies are regarded as abilities or skills of:

- adaptation: from verbal skills which are adequate in terms of social context to the entirety of social behaviours which maintain and develop interpersonal ties;
- building emotional ties (relational competency)
  - approached not as a way of communication or self-presentation but as an ability to form and derive satisfaction from positive interpersonal contacts, developing and maintaining relationships and obtaining social support;
- effective communication in task-related and emotion-related areas, which manifests itself in proper perception of information sent by others and sending your own information according to the intentions of the participants in the communication process;
- achievement of the goals while maintaining the sense of dignity of the participants of interaction, which co-determines such human mental properties as perceptiveness, attention and social sensitivity [3].

Professional competencies are also understood as specific instrumental skills which allow selected strategies to

provide opportunities for achievement of goals (on a macro scale) such as work efficiency or the degree of popularity, and they are regarded as elementary components of these behaviours (on a micro scale), e.g. tone, timbre or clarity of statements [3].

University schools of physical education teach students in the following majors: physical education, tourism and recreation, sport, physiotherapy, cosmetology and nursing. Their graduates are employed in schools, health centres, sport and recreation centres, sports clubs, travel offices, etc. The present paper is limited to the majors of physical education, physiotherapy, and tourism and recreation.

Analysis of the labour market for the graduates of university schools of physical education shows that most of them are employed in the education sector as physical education teachers. Therefore, the profile of a graduate from a university school of physical education is defined by the regulation on standards of teachers' education issued from September 7, 2004. It stipulates that the professional preparation of teachers should lead to the acquisition of competencies in the following domains: 1) didactic domain; 2) educational and social domain – expressed by the ability of recognition of students' needs and ability to cooperate within different interpersonal relations; 3) creative domain – connected with the abilities of adaptation, mobility and flexibility; 4) praxeological domain, which manifests itself in the abilities of planning, realization, organization, control and assessment of the processes of education; 5) communicational domain – focused on the effectiveness of verbal and non-verbal behaviours in educational situations; 6) information and media domain – connected with the ability of applying information and communication technologies and using them for teaching the particular subject; 7) linguistic domain, which manifests itself in speaking at least one foreign language at an advanced level [5].

## Aim of Study

The aim of the study was to examine what professional and social competencies can be observed among graduates of university schools of physical education in the years 2006-2011. Moreover, the attempts were made to determine the way these competencies are utilized in the labour market.

## Material and Methods

The study used literature analysis, observation and a diagnostic survey combined with an opinion poll carried out by means of an on-line questionnaire on the website of the Eugeniusz Piasecki University School of Physical Education in Poznań, Poland. The quantitative analysis of the questionnaire material was based on statistical methods. The analysis of related literature revealed the supporting empirical data in literature or statistical documents and was used in comparative analysis. With the restrictions for the paper's volume, the author used the literature to support the analysed problems with the results of other studies. The method of direct observation was used by the author during classes with post-graduate students, who were the graduates from the same university. This allowed the author to

make interviews with the students about the acquired and utilized professional competencies. The method of diagnostic survey concerned the results obtained from among the representative population, i.e. graduates from the University School of Physical Education in Poznań. The author used an online questionnaire survey posted in on the website of the Eugeniusz Piasecki University School of Physical Education in Poznań in the years 2006-2011. The questionnaire was filled in by 229 graduates.

The measurement of statistical relationships between the variables was carried out using contingency coefficient (Pearson's C) based on chi square, which determines the strength of a relationship between two variables. Cramer's V points to the relationships (significant or weak) between the analysed variables (between professional preparation and study major). Moreover, the author used the analysis of correspondence which allowed for presentation in a low-dimensional space (typically two dimensions) of what actually exceeds the abilities of perception of an average human. Statistical calculations were carried out with the use of STATISTICA software package.

The study was carried out in three stages.

Stage 1: Development of research methodology, creation of the questionnaire, databases and literature studies.

Stage 2: Implementation of research, proper questionnaire survey, conclusions and promotion of the study.

Stage 3: Popularization of research results during national and international conferences and meetings with experts, and publication in scientific journals.

The profile of the group of studied graduates included such characteristics as sex, place of residence, study major and material status.

The respondents were mainly women (52%), while men accounted for 48% of the group. The proportion of graduates according to their major were: tourism and recreation (44%: women – 56%, men – 44%), physical education (42%: women – 43%, men – 57%) and physiotherapy (14%: women – 68%, men – 32%) (Table I).

The data in Table I show that the contingency coefficient at 0.329 indicated a poor relationship between the variables (gender and study major). Percentage distribution confirmed the previous assumption that the tourism and recreation and physiotherapy majors were dominated by women (56% and 68%, respectively), whereas the physical education major by men (57%). This means that there was no statistical correlation between students' gender and study major at the University School of Physical Education in Poznań.

**Table I.** Respondents according to gender and study major

Gender	Study major					
	Tourism and recreation		Physical education		Physiotherapy	
	n	(%)	n	(%)	n	(%)
Women	56	56.00	42	43.00	21	68.00
Men	45	44.00	55	57.00	10	32.00
Total	101	100.00	97	100.00	31	100.00

Contingency coefficient = 0.3291487

The comparison of the structure of graduates' gender reveals that the tourism and recreation and physiotherapy majors were dominated by women, whereas the physical education major was by men (57%). In general, these results confirm that the most of graduates from university schools of physical education are women. University schools of physical education in 2006-2009 were also dominated by women (51% in the academic year 2006/2007; 50% in 2007/2008 and 52% in 2008/2009). A similar situation was observed in Adam Mickiewicz University in Poznań, where women accounted for 48% of students, although the following years saw an increasing tendency reaching 53% in 2007/2008 and 54% in 2008/2009 (data from the Powiat Employment Agency in Poznań, www.pup.poznan.pl).

As far as the graduates' place of residence was concerned, they lived typically in cities (81%), whereas 19% lived in the country. The highest number of respondents lived in big urban areas with over one hundred thousand residents (31%) (Table II).

31% of the graduates declared that their material status was good. The average material status was reported by 55.9%, and poor material status by 12.7% of the graduates.

**Table II.** Respondents according to place of residence

Place of Residence	Number	Percentage
Villages	43	18.8
Cities with more than 25 thousand inhabitants	47	20.5
Cities with 26-50 thousand inhabitants	26	11.4
Cities with 51-100 thousand inhabitants	42	18.3
Cities with 100 and more thousand inhabitants	71	31.00
Total	229	100.00

## Results

Physical education studies, stereotypically perceived as very interesting due to the high proportion of attractive physical exercises, are not easy majors. The contents of curricula include acquisition of in-depth pedagogical and biomedical knowledge (and medical knowledge in the case of physiotherapy), theory of sport and recreation, sociology, organization and management of human resources, and organization and methodology of research. There are also other contents and skills implemented autonomously by individual universities. Important characteristics for the universities of physical education include interests, preferences and motor abilities, with a particular focus on health, being a prerequisite for the successful completion of many courses [6].

The focal point of most discussions concerning the university curricula and their implementation are proportions between theory and practice and preferences for professional education, current needs and teaching problem-solving strategies [7]. The interdisciplinary nature of curricula in university schools of physical education enriches graduates' personality traits. It also permeates different domains

of life and professional work, which makes the graduates more flexible, easily adapting to different conditions of living and working in other professions [7]. Problems of professional competencies of students and graduates from university schools of physical education have been discussed by numerous authors [6, 8, 9, 10].

The respondents from the University School of Physical Education in Poznań, Poland, all reported that graduation from the university school of physical education provided them with practical and professional preparation. This view was shared by the physical education graduates (90%), tourism and recreation graduates (60%) and physiotherapy graduates (74%) (Table III).

If a null hypothesis which assumes the independence of the variables was adopted, i.e. the lack of relationships between professional competencies and the study major, the  $\chi^2$  test = 34.56 indicates that this hypothesis should be rejected and it should be noted that the relationship at  $p = 0.0000$  is statistically significant. The obtained Cramer's V ( $V = 0.32$ ) indicates that the relationship between professional preparation and study major is highly significant (Table IV).

The null hypothesis indicating the lack of dependence between preparation for work in the education sector and the study major a person graduates from was not supported. The result of  $\chi^2$  test = 7.48 indicated that they should be rejected and assumed that the relationship at  $p = 0.0062$  was statistically significant. The obtained Cramer's V ( $V = 0.168 = 0.17$ ) revealed a significant relationship between preparation for work in the education sector and the study major (Table V).

If a null hypothesis which assumes there are no relationships between the variables was adopted, it should be noted that it is not entirely true, since the results of  $\chi^2$  test = 4.08 point to the rejection of the hypothesis at  $p = 0.433$ . The Cramer's V ( $V = 0.168 = 0.17$ ) indicates that the relationship between preparation for human resources management and the study major is very weak (Table VI).

If a null hypothesis which assumes that there are no relationships between organizational and managerial preparation and the study major was adopted, the results of statistical relationships support this hypothesis. This is indicated by the result of  $\chi^2$  test = 0.25 at  $p = 0.87$  and Cramer's V ( $V = 0.26$ ).

**Table III.** Practical and professional competencies vs. study major

Practical and professional competencies	Study major					
	Physical Education		Tourism and Recreation		Physiotherapy	
	n	%	n	%	n	%
Yes	87	89.7	61	60.4	23	74.2
No	10	10.3	40	39.6	8	25.8
Total	97	42.4	101	44.1	31	13.5

Pearson's  $\chi^2$  34.56067 df = 1 p = 0.0000  
 Contingency Coefficient 0.3621186  
 Cramer's V 0.3194048

**Table IV.** Preparation for working in education vs. study major

Preparation for working in education	Study major					
	Physical Education		Tourism and Recreation		Physiotherapy	
	n	%	n	%	n	%
Yes	68	70.1	55	54.5	15	48.4
No	29	29.9	46	45.5	16	51.6
Total	97	42.4	101	44.1	31	13.5

Pearson's  $\chi^2$  7.486003 df = 1 p = 0.00622  
 Contingency Coefficient 0.1779190  
 Cramer's V 0.1681650

**Table V.** Preparation for human resources management vs. study major

Preparation for human resources management	Study major					
	Physical Education		Tourism and Recreation		Physiotherapy	
	n	%	n	%	n	%
Yes	58	59.8	48	47.5	11	35.5
No	39	40.2	53	52.5	20	64.5
Total	97	42.4	101	44.1	31	13.5

Pearson's  $\chi^2$  4.083074 df = 1 p = 0.4331  
 Contingency Coefficient 0.1323544  
 Cramer's V 0.1681650

**Table VI.** Organizational and managerial preparation vs. study major

Organizational and managerial preparation vs. study major	Study major					
	Physical Education		Tourism and Recreation		Physiotherapy	
	n	%	n	%	n	%
Yes	43	44.3	60	59.4	6	19.4
No	54	55.7	41	40.6	25	80.6
Total	97	42.4	101	44.1	31	13.5

Pearson's  $\chi^2$  0.250619 df = 1 p = 0.87421  
 Contingency Coefficient 0.0104608  
 Cramer's V 0.2641235

In the years 2005-2006, K Buchta and M Skiert carried out similar research [8] on physical education major graduates in the Branch Faculty of Physical Education in Biała Podlaska, Poland. The authors asked respondents about the assessment of their professional preparation on a five-point scale. The best results of professional preparation assessment were obtained in the area of acquisition of practical skills (mean = 4.15). A rather positive assessment was also noted in the case of preparation related to principles of healthy lifestyles as well as health protection, strengthening and recovery (3.87). Also preparation for educational work (3.80) was highly assessed. Slightly lower results were found for preparation for self-educating (3.76). The lowest notes, similarly to the author's study, were obtained for managerial preparation, computer skills (3.08) and speaking foreign languages (2.78) [8].

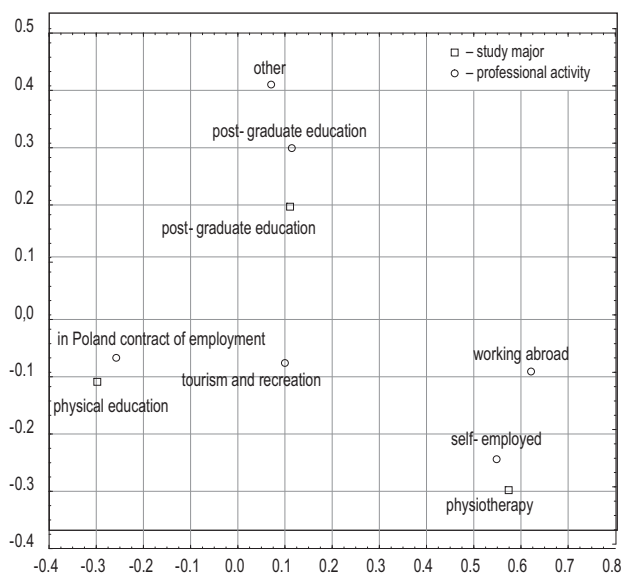
Professional competencies acquired during university studies are used in professional work. The study emphasized the employment of graduates from the University School of Physical Education in Poznań, Poland. Figure 1 presents two axes corresponding to workplaces and study majors, respectively, and indicates the existence of relationships between the analysed variables. It can be concluded that the physical education major graduates are more often employed on contract of employment than other graduates. The study suggests that the graduates of physical education majors are employed on contracts in the education sector as physi-

cal education teachers. The physiotherapy major graduates are more often self-employed or work abroad. The tourism and recreation graduates, more often than other graduates, indicated "other" and "further education". The graduates from this major predominantly attended post-graduate and professional courses, which allowed them to gain additional qualifications and certificates, e.g. guide courses, certificates required for working in travel agencies, hotels etc.

The study also analysed the relationships between sector-based employment of the graduates and motivations behind studying in the University School of Physical Education in Poznań. According to the respondents, the main motivations behind starting education in the University School of Physical Education in Poznań included plans to start jobs in this field (44.5%), aptitudes and interests (60.7%) and the attractiveness of the major (38.9%) (Table IV). The motivation connected with plans to start jobs in the field of physical education helped students find employment in the education sector (56.7%), tourism and recreation (46.3%), sport and physical culture (45.7%) and hotel services (33.3%). The study showed that the graduates were also guided by other reasons for studying at a particular university. The necessity and coincidence were indicated as motivations behind studying by only 3.9% of students, which seems a positive phenomenon (Table VII).

As mentioned before, physical education universities also offer the tourism and recreation major aimed at educating experts in the field of tourism and recreation. The standards adopted by the Ministry of Science and Higher Education [12] stipulate that graduates with master's degree in tourism and recreation should exhibit skills and competencies in the area of history of culture, free time sociology, tourist regions, information technology in tourism and recreation, marketing of tourist and recreational services, enterprise management, etc. Thus the graduates acquire important theoretical and practical skills which play a vital role in providing tourist and recreational services in hotels, recreational centres, travel agencies, etc.

In 1978-1984, W Siwiński and A Olszewska-Matz carried out a study of factors affecting the process of adaptation of tourism and recreation major graduates from the University School of Physical Education in Poznań to professional work [11]. The study revealed that the tourism and recreation graduates most highly assessed their theoretical preparation (75%), whereas their practical preparation for future work was evaluated as the lowest (25%) [9]. The study also showed that the typical workplaces for these graduates were institutions which planned and organized tourism and recreation,



**Figure 1.** Graduates' professional activity and their study majors

**Table VII.** Motivations behind the choice of study major vs. graduates' employment (%)

Motivation behind the choice of study major	Total	Sector				
		Education	Hotel Services	Physical Culture	Tourism and Recreation	Other
Plans for working in physical culture	44.5	56.7	33.3	45.7	46.3	31.7
Aptitudes, interests	60.7	74.6	58.3	65.2	65.9	39.7
Attractiveness of the major	38.9	23.9	58.3	47.8	51.2	36.5
Convenient location of the university	10.9	9.0	8.3	8.7	12.2	14.3
Necessity, coincidence	3.9	4.5	8.3	2.2	2.4	4.8
Easiness of studying	6.6	1.5	16.7	0.0	4.9	15.9
Persuasion by family or friends	3.5	0.0	0.0	4.3	7.3	4.8
Other	2.6	3.0	8.3	0.0	0.0	4.8
Total	*	29.3	5.2	20.1	17.9	27.5

\* Respondents were able to give more than one answer thus the results may not add up to 100%.

centres for tourist exchange services, social organizations which operated in the tourism and recreation sector, centres of active relaxation and spa hotels, and institutions of central and local administration [12]. Although those studies were carried out in the 1970s and 1980s and the forms of ownership of the institutions the graduates were employed in as well as job market conditions have now changed dramatically, the results obtained for the institutions of employment are consistent with the results obtained by the author of the present study.

The Polish educational reform of 2010 [11] assumed the process of education which helped graduates leave the universities equipped with particular skills in the area of time management, interpersonal communication, foreign languages, teamwork and working with customers. Furthermore, the Polish universities are obliged to monitor the professional development of their graduates for 3 to 5 years after graduation [13].

Despite the wide range of professional skills taught at the university schools of physical education and included in the higher education reform act, practice shows, as demonstrated in the present study, that high assessments of professional preparation made by the graduates are inconsistent with the assessment made by their future employers. The employers expect that the universities will adjust their curricula better to the expectations and demands of the labour markets. The implemented reform of higher education is supposed to meet these requirements. However, this issue needs further research.

## Discussion

The following analysis of results focuses on such areas of employment of graduates as education, tourism and recreation, physical culture, and health and athletic recovery centres.

### Education

Poland is one of leading countries distinguished by the high level of specialist education of school physical education teachers. Undoubtedly, this results from the development of university studies preparing prospective PE teach-

ers, who are mainly, however not exclusively, educated by university schools of physical education. Other types of universities also play an increasingly important role in training of PE teachers, e.g. Faculty of Physical Education of the University of Rzeszów [1].

Data from the statistical registry of teaching staff (Polish: *Ewidencja Kadr Nauczycielskich* EWIKAN-U) show unequivocally that core curriculum physical education classes are conducted in almost all cases by teachers with full competencies. A substantial part of these classes is covered by the graduates from master's programs of university schools of physical education, even in primary schools [1]. In the 2008/2009 school year, for instance, there were 52,238 physical education teachers in Polish state schools (primary, junior and secondary schools), which accounted for 8.5% of the total number of teachers (614,129). 46.3% of physical education teachers in all types of schools had the highest professional degrees. Combined with the number of certified teachers, they accounted for 76% of the overall number of physical education teachers employed in these schools [2].

Of all 52,238 physical education teachers employed in schools, one third were employed in state schools, one fourth (25.5%, i.e. 13,332) had additional professional certificates such as sport coach certificate (46% – 6,167 people), instructor certificate (52% – 6,874) and manager certificate (2% – 291) [14].

In the light of the above, both primary and secondary schools, will remain the main labour market (although decreasing in capacity) for university schools of physical education graduates. This is connected with the general drop in the birth rate, which might cause the discrepancies between the dynamic development of physical education teacher studies and decreasing needs and job opportunities for the graduates.

### Tourism and Recreation

In developed countries tourism has generated a huge labour market, which is developing dynamically and stimulates the demand for highly qualified employees. This causes the fast development of tourism-oriented education because one of the preconditions for tourism growth is an efficient system of professional development in this sector [10].

Therefore, the practice of tourist industry contributes to the popularity of education in the field of tourism and recreation. A master's degree holder in tourism must have a theoretical and practical professional background for planning, organization and management in hotels, holiday, sport and recreation centres, travel offices and travel and recreation agencies, recreation and athletic recovery centres, social organizations, government and self-government administration, foundations and associations as well as in the education sector after graduation from teaching majors [10].

The prospects and objectives for tourism and recreation graduates might include their own businesses and counselling services, organization of activities in agritourist farms or preparation and promotion of tourism and recreation services among different groups of recipients [10]. The tourism and recreation graduates can also teach team games, dancing, swimming, windsurfing or skiing after obtaining relevant certificates. Unfortunately, there are no opportunities for promotion in the profession of physical recreation expert understood as achievement of higher degrees in the organizational hierarchy. The promotion might mean being employed in a high-standard hotel or setting up a sport and recreation centre.

### Physical Culture

The profession of an athlete, which has its own place in physical culture, is not even listed (in 2009) among professions in the official classification of occupations prepared by the Polish Central Statistical Office (*Główny Urząd Statystyczny*). However, there are many professional athletes who perform sport activities connected with the domain of physical culture. This area of activities is stipulated by Polish legal regulations [9]. Many athletes in Poland set up 'businesses' and function as 'companies' which obtain money from sport clubs in exchange for 'sport services'. This solution is often preferred by the clubs which need to reduce labour costs. A relatively rare solution in Polish sport (but, for example, used frequently by FIFA) is permanent employment contracts. Instead, these are often replaced by a variety of other forms of non-permanent employment, including civil law contracts [10].

There are over 6,021 sports clubs in Poland. In 2006 they employed 6,215 coaches and 12,251 instructors. Since 2003, graduates from universities of physical education have been permitted to be trained as coaches and teachers who are then able to start jobs in either sport associations or educational centres. This is a positive development as it allows the graduates to start jobs in two professions.

Well-educated specialists who continuously improve their knowledge are the basis for effective operation of any organization and guarantee the achievement of goals and performance of tasks. Poland has sufficiently extended the network of the university schools of physical education. The training of physical education teachers is also supported by public and private universities. The education of specialists at the level of sport and physical recreation instructors is also provided by authorised associations and organizations. After ending their careers in sports, many athletes remain active in sport and utilize their precious experience and

knowledge in their work as coaches, managers, distributors of sport equipment etc.

### Health and Athletic Recovery Centres

Modern physiotherapy should be approached as comprehensive initiatives taken by the state and society, with a particular focus on health service centres, social assistance, science, education, culture and social, political and self-government organizations which strive to maintain or restore the traditional social roles to people who are either temporarily or permanently disabled [15].

A prerequisite for working as a physiotherapy specialist is a degree in physiotherapy (previously termed physical rehabilitation) from a university school of physical education or medical university. Physiotherapy graduates are entitled to work in health service centres as assistants [16]. By obtaining the 1<sup>st</sup> and 2<sup>nd</sup> specialization degree, an assistant can be promoted to a higher position. The professional careers of physiotherapy graduates are based on the structure of the organization they are employed in. The subsequent positions to which they can be promoted include a manager in a department, chair, laboratory and physiotherapy team. The physiotherapy graduates can also start jobs in athletic recovery centers, sport and medicine health centres or sports clubs. They can also, after graduation and certification, continue their education and work towards a Ph.D. in physical culture or medical sciences. This then opens up opportunities for scientific careers.

### Conclusions

The results of the study and their analysis allow for formulation of the following conclusions:

1. Due to the changing market requirements caused by the economic crisis and general birth rate drop, physical education universities must train students with flexible professional competencies which are better adapted to practical needs.
2. University schools of physical education should adjust their curricula for students to include the knowledge of human resources management and develop organizational and managerial skills.
3. The results show that managerial and organizational preparation, including human management skills, is the weakest link in the professional careers of university school of physical education graduates.
4. University schools of physical education should track professional careers of their graduates and, based on this, offer post-graduate courses according to graduates' needs for development of professional competencies.

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