THE COMPETENCES OF PHYSICAL EDUCATION STUDENTS. UNIFIED VERSUS TWO-TIER UNIVERSITY STUDIES

PE Students' Competences

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Abstract

Introduction. The objective of the study was a comparative analysis of the results of unified and two-tier university studies in physical education at the Faculty of Physical Education and Sport in Białą Podlaska of the University of Physical Education in Warsaw. **Material and methods.** The study utilized 128 full-time final semester students. The study utilized a diagnostic poll and random survey method. On the basis of respondents' opinions, the following results were analyzed: respondents' expectations regarding their education and the level of their fulfilment, forms of activities undertaken during studies, professional plans and opinions regarding the course of studies in PE. **Results.** The analysis revealed that, when making the decision to study physical education, respondents expected to gain directional competences and knowledge and skills enabling further education. Respondents highly regarded the level of these competences gained. The majority of respondents expressed a wish to find employment in the education sector and other institutions of physical education. **Conclusion.** The result of the research indicated that transforming unified Master's studies into two-tier university studies did not bring about fundamental changes in the outcome of studies in physical education.

Key words: physical education, unified Master's studies, two-tier university studies, outcome of education, competences

Introduction

The implementation of the Bologna Declaration introduced several reforms in the European higher education system. The objectives of these reforms included the creation of favourable conditions for greater mobility of citizens, improvement of comparability of education systems of the member states, the quality of education and also adjustment of education to fit market requirements thus increasing graduates' employment prospects. The introduction of the two-tier university studies model was to assist the implementation of these stipulations. Flexibility within the new system, which allowed a student to revise his choice of studies, even after undertaking a particular course, terminating studies at a bachelor's level and finding employment or taking a break and undertaking master's studies at a later time, was seen as the chief advantage. It was also stipulated that the two-tier system, based upon shortened educational cycles and open to discipline and profile changes, will provide better grounds for lifelong learning [1].

Although any practical outcomes of educational reforms that were initiated by the Bologna process have yet to be fully identified, numerous negative evaluations of the program can be found [2, 3]. Attention is drawn to the fact that, while educating graduates, who will be competitive on the market, has become the priority of higher education institutions, the knowledge imparted will only serve to shape competences marginalizing its autotelic values. Consequently, higher education graduates will be trained and not educated.

There appears to be some controversy regarding the Bologna model and education of teachers [4]. There are issues concern-

ing the benefits of dividing teacher studies into two tiers which, on account of decreasing demand for teachers, may not offer ready employment to people holding a bachelor's degree [1, 5, 6].

The present study is an attempt at empirical evaluation and analysis of the outcomes of unified and two-tier studies in physical education at the Faculty of Physical Education and Sport in Białą Podlaska of the University of Physical Education in Warsaw. Evaluation of the effects of transformation of the unified Master's studies into the two-tier university studies was based upon graduates' opinions. The objective of the present study was to determine the level of required competences and their fulfilment in the course of studies, the evaluation of attitudes reflected in students' activities undertaken during studies and students' professional plans.

Material and methods

The study utilized 60 graduates of unified Master's studies and 68 graduates of two-tier studies, who had graduated from PE studies at the Faculty of Physical Education and Sport in Białą Podlaska of the University of Physical Education in Warsaw in the academic year 2010/2011.

2/3 of the total number of respondents in both groups were male. 60-70% came from cities. 43-55% of grades ranged from 3,5-4,0). Graduates of two-tier studies received higher grades more frequently (above 4,5- 16% vs. 3% in graduates of unified studies).

Empirical data was collected by means of a diagnostic poll and random survey methods.

The survey questionnaire included a section for the analysis of:

- respondents' requirements regarding PE studies;
- the level of competences gained during studies;
- respondents' activities undertaken during studies;
- professional plans and opportunities.

The study, in accordance with definitions provided by the European Parliament and the Council of the European Union [7], under the term „effects of studies” understands - „defining what a student knows, understands and is able to do having finished a process of education. The process of defining is carried out in terms of knowledge, skills and competences”. In the light of the above definition, „knowledge” constitutes „the effect of acquiring information by learning”. „Skills” denote „the ability to use knowledge and know-how to perform tasks and solve problems”. European Qualifications Framework defines „competences” as „proven ability to utilize knowledge, skills and personal, social or methodological abilities exhibited at work or in learning and professional career and personal life”.

In order to establish the structure of respondents' requirements regarding studies, factor analysis with Varimax rotation was utilized. The Kaiser criterion was taken into account when isolating factors. Comparative analyses were carried out by means of the t-Student and chi-squared tests. The education model was employed as the discriminatory variable. Differences of $p < 0,05$ were defined as statistically relevant.

Results

Defining clients-students' requirements was crucial when assuming the marketing approach towards education as an educational service and evaluating outcomes of studies [8].

The structure of required competences vs. the model of education

Students' requirements regarding their studies were evaluated on a 5-point scale, 5 being max. A factor analysis was carried out in order to evaluate the structure and assess the extent to which required competences of students of unified and two-tier studies converged. As a result of the analysis two independent factors that bound related variables the most were isolated. In case of students of unified Master's studies, the first factor included the majority of evaluated competences. The strongest factor loadings pertained to general skills (computer literacy, knowledge of foreign languages, starting one's own business) and directional competences. The second factor encompassed requirements related to self-study and development of a career in sports. The structure of factors isolated on the basis of declarations of students of two-tier studies was slightly different. The first factor correlated the most only with general skills regarding entrepreneurship. The second factor pertained to vocational skills supported with intellectual skills and the development of a career in sports (Tab. 1).

Respondents' expectations regarding studies vs. the level of competences gained

Crucial findings regarding the evaluation of effects of studies were obtained when making a comparison of competences expected and gained in the course of studies. The analysis of respondents' opinions revealed that students of both unified and two-tier studies expected mainly good preparation for entering the employment market in the educational sector (approx. 90% of respondents), general intellectual development (84-87%) and preparation for team work (77-78%) (Tab. 2). This type of expectation scored 4,1-4,6 points (out of 5) in respondents' answers. At the same time the analysis of the data collected revealed that competences gained in the course of studies

considerably diverged from respondents' expectations and scored 3,6-4,0 points (statistically relevant difference).

Table 1. Expectations regarding studies. Factor analysis with Varimax rotation*

Required Competences	Unified Master's Studies		Two-tier University Studies	
	Factor 1.	Factor 2.	Factor 1.	Factor 2.
general intellectual development	0.52	0.44	-0.01	0.72
preparation to undertaking employment in educational sector	0.64	0.42	-0.06	0.79
managerial skills	0.58	0.23	0.82	-0.01
self-study skills	0.25	0.74	0.35	0.49
knowledge of foreign languages	0.81	-0.09	0.61	0.30
computer literacy	0.84	0.01	0.80	0.21
entrepreneurial skills	0.70	0.05	0.89	-0.06
teamworking	0.34	0.32	0.45	0.37
development of sport career	-0.31	0.73	0.34	0.54
Explained Variation (%)	31.40	16.20	29.30	19.50

* - factor loadings linked with variables the strongest are in bold

Table 2. Competences expected and gained* (%)

Evaluated Competences	Expected Competences		Gained Competences	
	Unified Master's Studies (N=60)	Two-tier University Studies (N=68)	Unified Master's Studies (N=60)	Two-tier University Studies (N=68)
general intellectual development	86.7	83.8	58.3	55.9
preparation to undertaking employment in educational sector	91.7	89.7	65.0	70.6
managerial skills	46.7	44.1	18.3	20.6
self-study skills	75.0	70.6	63.3	60.3
knowledge of foreign languages	61.7	61.8	28.3	22.1
computer literacy	55.0	47.1	48.3	36.8
entrepreneurial skills	45.0	36.8	11.7	19.1
teamworking	76.7	77.9	66.7	72.1
development of sport career	48.3	63.2	11.7	30.9

* score 4 and 5 only is taken into account in the table (1-5 scale, 5-max.)

A relatively high percentage of respondents expected good preparation for self-study (71-75%). Skills gained in this respect were evaluated as high by 60-63% of respondents (3,6-3,7 points on average). Lower requirements were expected as far as managerial and entrepreneurial skills were concerned. Less than 50% of respondents regarded these as important or essential. The level of these competences gained in the course of studies was evaluated as insufficient on average. Only one in five respondents evaluated these as high.

Respondents also exhibited low level of foreign language knowledge. Only 22% of students of two-tier studies and 28% of students of unified Master's course evaluated these skills as high (score of 4 and 5 points). Approximately 62% of respondents declared expectations regarding such skills.

Other indicators and characteristics of outcomes of education

In the context of the National Qualifications Framework, not only knowledge and skills but also exhibited attitudes, including the ability to undertake particular activities, constitute vital characteristics regarding outcomes of education. The present study revealed that students directed their activities mainly towards participation in numerous tournaments and courses, the measurable result of which was additional trainer and coach certificates (more than 80% of respondents). Other less popular activities taken up by students pertained to starting an additional degree studies (8-15%), participation in science clubs (9-12%), voluntary work (4-12%) and international student exchange programs (2-3%) (Fig. 1).

Figure 1. Activities taken up by respondents (%)

Furthermore, the analysis revealed that respondents frequently found employment. Students worked mainly during summer vacations. This type of activity was taken up more frequently by students of unified Master's studies (73% vs. 29% in students of two-tier studies). In addition, more than half of full-time students and one in three two-tier course students found part time employment. Full-time employment was found by one in eight. One out of eight students of two-tier studies and only 3% of full-time students declared they did not seek employment during their studies (statistically relevant differences; Fig. 2).

* - statistically vital differences, $p < 0,05$

Figure 2. Employment During Studies (%)

The next empirical subject discussed in the research was respondents' professional plans. The analysis showed that 2/3 of students of two-tier studies and half of those from unified Master's course were planning on finding employment in the educational sector. 37% of all respondents declared interest in employment in other organizations and institutions of physical education. Relatively few respondents were interested in finding work abroad (5-9%).

When asked to evaluate their chances of finding employment, the majority of respondents stated that they would find work but it would take considerable time and effort (approx. 50% of respondents). Almost one in three students were aware of the fact that they may have difficulties finding work. Only 1 out of five (unified Master's studies) and 1 out of 7 respondents (two-tier studies) believed that finding employment would be easy. It can be said that the education model did not differentiate respondents' declarations as regards this characteristic.

Discussion

The study is an attempt at evaluation of transformations which took place in the education of teachers along with the transformation of unified Master's studies into two-tier university studies. Despite differences in the approach to the subject, the results of the analysis indicate a convergence of opinions coming from representatives of both models of education. Assuming the isolated factors (results of factor analysis) as a kind of model of respondents' expectations regarding studies, it can be stated that two-tier course students constituted a more diverse test group where expectations regarding general competences essential to the modern labour market were dominant.

On the other hand students of the unified Master's course exhibited a more traditional approach assuming that studies will prepare them for their career, develop entrepreneurial skills and will be beneficial for their intellect and fitness.

When characterizing the level of competences gained, one ought to note that both groups of respondents evaluated professional education, organizational and interpersonal (team-work) skills, which are considered essential in the process of becoming active on the labour market, as the highest [9, 10]. Moreover, approximately 60% of respondents declared good or very good preparation for self-study which, in the light of the fleeting character of university knowledge and the concept of lifelong learning, seems to be of particular importance [5]. In turn, managerial skills and entrepreneurship ranked relatively low among respondents. Only 1 out of 5 respondents evaluated the level of these competences as high or very high. Meanwhile, the free-market economy demands that graduates of physical education studies possess managerial skills: leadership, motivational skills, the ability to offer an attractive selection of sport and recreation classes, organizing these activities, securing finances for one's own business, leading sport associations or working in local and national administration [11]. On the other hand, a sufficient level of knowledge and entrepreneurial skills may constitute an essential alternative in the face of a decreasing demand for teachers of physical education [12].

Foreign languages skills proved to be deficient, which has arisen in previous research [13, 14]. Due to the fact that these skills are of key importance in the modern labour market and that they also help improve mobility, taking corrective measures seems essential. The improvement of the existing situation requires a higher degree of student involvement which, regarding learning a foreign language, constitutes a prerequisite. Students could be encouraged to take more responsibility regarding the course and effects of studies, which is also connected with postulates of „student orientation” where „teaching” ought to be supplanted with „learning” [15, 16].

From the perspective of the stipulations of the Bologna Declaration connected with the improvement of mobility of students of two-tier courses, respondents' declarations regarding their journeys abroad, participation in student exchange programs and also intentions of going abroad in search of employment did not differentiate respondents.

Despite some high hopes associated with the introduction of two-tier studies and the improvement of vocational skills, flexibility and competitiveness on the European labour market [16], results of the analysis indicate similar outcomes of studies in both models of education. Both the level of competences gained and respondents' attitudes and declarations regarding the chance of finding employment seem to justify the claim. In addition, when comparing results of the analysis to the issue of outcomes of studies at DPES, it should be noted that the new two-tier model of education replicates drawbacks of the former, unified Master's.

The National Qualifications Framework can be seen as an opportunity for the improvement of the quality of education. However, the decisive role in this process must be attributed to the quality of student candidates, the quality of material and human resources and the involvement of higher education institutions in the process of providing an internal quality culture [17].

Conclusions

Results of the study suggest the following conclusions:

1. While deciding upon their studies, respondents expected mainly good professional education. Moreover, regarding competences gained in this respect, respondents evaluated these as high.
2. Both students of unified and two-tier studies worked actively to acquire additional certificates broadening their vocational competences.
3. The majority of respondents' declarations regarding the course and effect of both unified and two-tier studies were convergent.

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