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Perceived Importance of Slovenian Physical Education Teachers' Professional Competencies

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ABSTRACT: This cross-sectional study was designed to evaluate perceived importance of Slovenian physical education teachers' (PETs) professional competencies with the aim of diagnosing the main needs of practising PE teachers and preparing continued professional development programmes. For this purpose, a self-administered questionnaire has been designed to examine a wide scope of general and subject-specific competencies among 672 Slovenian PETs. The participants evaluated their own actual professional competencies on a four-level scale. Cronbach's alpha coefficient of internal consistency was used to estimate the reliability of a questionnaire, and factor analysis was used in order to examine an internal structure of competency field. The results point to the high degree of reliability of the entire questionnaire (Cronbach alpha=.97), whereas the values of individual segments of variables vary between .62 and .92. The competency profile of teachers is quite complex, as it consists of 11 factors, which together explain 57.6% of the total variance. Didactic approaches as the subject-specific competencies, which represent the first factor, seemed to be the most informative for PETs, explaining 33.8% of the total variance.

Keywords: teachers, physical education, competencies, didactic approaches

1. INTRODUCTION

In recent years, it has been asserted that education and lifelong learning should again be included among the priority political tasks of European countries. Teachers, in particular, are attributed a crucial role in fulfilling quality education, with competencies being emphasised, in addition to their knowledge.

Perrenoud (2002) has defined competencies as the potential of an individual to activate, utilise and connect acquired knowledge in complex, varied and unpredictable situations. Numerous authors (Rychen and Salganik 2003; Torre and Ricchiardi 2007; Weinert 2001) nevertheless emphasise that a term competency is multi-layered, as it also includes motivational and emotional aspects of individual's functioning.

Education competencies can be divided into general (subject-independent competencies) and specific competencies (Eurydice 2002); both types should be transferable and available for use in various situations, not only in a context where they were acquired. General competencies are related to communication, teamwork, ability to acquire and transfer knowledge, and lifelong learning. Specific competencies are related to individual teaching subjects (Eurydice 2003). Within the project *Tuning Educational Structures in Europe*, the 30 most relevant general competencies have been described and divided into three wider categories: instrumental or practical competencies, interpersonal competencies and systemic competencies (Gonzalez and Wagenaar 2003).

In studying and defining the competencies of teachers of individual subjects, Laporte (1997) emphasised the importance of a common (i.e. European) approach to physical education (PE), which included uniform concepts and educational programmes for physical education teachers (PETs). The project AEHESIS (*Aligning a European Higher Education Structure in Sport*

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Science) was undoubtedly a decisive step towards the systematisation and professionalisation of vocations in the field of sport, particularly the profession of PET and its competency profile (Hardman, Klein, Patriksson, Rychtecky, and Da Costa 2008).

In United States of America, the National Association for Sport and Physical Education (NASPE) adopted a position statement that defines the highly qualified PETs. NASPE acknowledges that highly qualified PETs will be certified to teach by virtue of having completed an accredited physical education teacher education (PETE) programme (Napper-Owen, Marston, Volkinburg, Afeman, and Brewer 2008). Highly qualified PETs exhibit the following attributes: (1) Possess the skills, knowledge, and values outlined in NASPE *National Standards for Beginning PETs*; (2) Base their teaching on the *National standards for K-12 PE*; (3) Establish high expectations for learning with the psychomotor, cognitive and affective domains and support student learning; (4) View assessment as an integral component of the teaching-learning process; (5) Demonstrate professionalism and ethical behaviour; and (6) Engage in reflective practices while systematically reviewing their curriculum, teaching practices and assessment tools.

One of the main duties of responsible PET is continual and critical self-assessment of curricular effectiveness (Wiegand, Bulger, and Mohr 2004) and his/her professional development (Wang and Ha 2008). When preparing new study programmes in Slovenia, the competencies of PETs have already been studied; however, samples were purpose-made and have included only selected, particularly active teachers, heads of study groups (Kovač, Sloan, and Starc 2008). Due to economic crisis in recent years, accredited PETE programmes were not supplemented with quality continuing professional development programmes. Chen (2006) believes that a personal commitment to, and active participation in professional development are essential in helping teachers stay current in their field. As regards formation of lifelong learning programmes, it would be interesting to determine how competent the Slovenian PETs feel, so the present study used a purpose-designed questionnaire in order to examine their self-perception of general and subject-specific competencies.

2. METHOD

2.1. Participants

The sample consisted of 408 men (59.9%) and 273 women (40.1%); 439 (64%) participants were employed at Slovenian primary schools, 216 (31.7%) participants at secondary schools, and the remaining participants were employed elsewhere. Almost half of the participants have been teaching more than 20 years (n=307, 45.1%); the remaining participants are almost equally distributed in the following groups: from 16 to 20 years of working experience (n=94, 13.8%), from 11 to 15 years of working experience (n=95, 13.9%), from 6 to 10 years of working experience (n=85, 12.5%) and up to 5 years of working experience (n=100, 14.7%).

More than three quarters of participants (n=521, 76.5%) have finished a four-year university physical education teacher education (PETE) programme; 17.2% of participants (n=117) held a further education degree (completed two-year PETE programme, which was available until 1976 in Slovenia); 3.2% of participants completed postgraduate studies (n=22); 2.2% of participants were students at the Faculty of Sport, University of Ljubljana (n=15); two participants have only completed PE secondary school. Slightly more than a quarter of the participants (n=187, 27.5%) held a mentoring title (which can be acquired after four years of successful working experience), half of the participants (n=350, 51.5%) held the title of adviser (acquired after eight years of working experience) and 5.6% of participants held the title of counsellor (n=38; the highest title, which only the most successful teachers can acquire after thirteen years of working experience).

The characteristics of a sample according to gender, age and the level of teaching are

similar to the population of PETs (Ministry of Education and Sport 2010).

2.2. Instrument

According to previous studies (Agencia nacional de evaluacion de la calidad y acreditation [ANECA] 2004; Gallardo, 2006; Kovač et al., 2008; Laporte, 1999) and theoretical model of PETs' educational outcomes (Hardman et al., 2008) a self-administered questionnaire was constructed for the purpose of the study. Before administration, the questionnaire was qualitatively validated for content by a group of 22 PETs (10 men and 12 women) of different ages, amount of working experience, and working at different teaching levels. The original questionnaire was shortened slightly, as per the recommendations of the validation group. The questionnaire consisted of three parts: 1) demographic (gender, length of work experience, age, teaching level), 2) general competencies (36 items) and 3) specific competencies (40 items). General competencies included the ability to communicate, also teamwork; team leading; the ability to plan and adapt; understanding general pedagogic and didactic principles; the ability to use information and communications technology (ICT); communication in a foreign language; mentoring ability; following safety principles and the ability to behave ethically and responsibly. Specific competencies included specific aspects of PE, such as understanding social science, biological and physiological aspects of physical activity (PA) and sport; understanding the theory of training; possessing pedagogical skills; didactic abilities, related to teaching PE in the narrow (demonstration of motor skills and methodical steps) and broad senses of the word (inter-subject correlation, ICT use, evaluation of the teaching process). The importance of competencies were reported on a four-level scale (1=not important at all, 2=less important, 3=important and 4=very important).

2.3. Data Collection Method

The questionnaire was sent to all primary (n=449) and secondary schools (n=137) by regular mail. Teachers were informed about the objectives of the study and about the voluntary and anonymous character of their participation. A total of 681 questionnaires were returned. Nine questionnaires were missing more than three pieces of data and were thus excluded from the study, questionnaires with 1 to 3 pieces of data missing (n=121, 17.7%), had the missing data imputed with the use of E-M algorithm; 551 questionnaires (80.6%) were totally completed.

According to data, approximately 1,300 PETs work in Slovenian primary and secondary schools (Ministry of Education and Sport, 2010). The sample consisted of 672 PETs, representing approximately 52% of the entire population of PETs in Slovenia (Ministry of Education and Sport, 2010).

2.4. Data Analysis

The data were analysed with the PASW Statistics 18.0 computer programme. At first, the Kaiser-Meyer-Olkin test (KMO) was used in order to evaluate the adequacy of the sample of variables. Secondly, Bartlett test of sphericity was calculated. To reduce the complexity of connections between questionnaire items, maximum likelihood (ML) factor analysis with oblique rotation (Direct oblimin) was used. Kaiser criterion ($\lambda>1$), scree plot and interpretability of factors were considered when deciding on the number of factors. Cronbach's alpha coefficient of internal consistency was used in order to calculate the reliability of a questionnaire.

3. FINDINGS

3.1. Reliability of the Entire Questionnaire

The entire questionnaire has a high degree of reliability (Cronbach's alpha=.97), while the values of individual items were between .62 and .92.

3.2. Perceived Importance of Teachers' Competencies

The results of Kaiser-Meyer-Olkin test (KMO=.97) and Bartlett test (p=<.001) confirmed the eligibility of factor analysis. The procedure extracted 11 factors, which together explain 57.6% of the total variance. The structure of factors with the loadings of variables on individual factors, the reliability coefficient (Cronbach's alpha), the proportion of variance explained for each factor and the naming of factors is shown in Table 1.

Table 1: Naming of Factors, Average Values and Standard Deviation of Individual Variables, Factor Loadings, Cronbach's Alpha and Proportion of the Total Variance Explained by Individual Factor

Item	*m*	*s*	*l*	*α*	*% v*
Didactic approaches				.92	33.8
Qualification for encouraging student's learning in an instructive and creative way	3.57	0.57	0.55		
Qualification for encouraging creativity in finding solutions to motor tasks	3.46	0.61	0.54		
Qualification for efficient conveying of theoretical contents in PE lessons	3.40	0.63	0.48		
Respecting principles of inclusion, individualisation and differentiation	3.50	0.61	0.46		
Qualification for encouraging personal progress of a student	3.61	0.52	0.45		
Qualification for different ways of assessment and grading knowledge in PE	3.55	0.59	0.40		
Qualification for encouraging students to be sportingly active in free time	3.67	0.53	0.40		
Organisational ability and knowledge for realisation of in- and out-of-school programmes	3.56	0.58	0.38		
Qualification for special pedagogical approaches	3.59	0.56	0.37		
Qualification for inter-subject connection of PE with other subjects	3.25	0.65	0.37		
Qualification for formation and conveying of feedback information	3.61	0.54	0.37		
Qualification for evaluation of own pedagogical work in PE	3.58	0.58	0.33		
Recognising sportingly talented students and guidance	3.60	0.57	0.30		
Social science aspects of sport				.85	4.7
Understanding media influence on sport	3.00	0.73	-0.65		
Understanding financial flow in sport	2.76	0.84	-0.57		
Understanding philosophical aspects of sport	2.87	0.79	-0.57		
Understanding historical aspects of sport	3.10	0.70	-0.54		
Understanding cultural aspects of sport	3.32	0.63	-0.54		
Understanding social circumstances in PE lessons	3.38	0.65	-0.41		
Understanding social importance of sport	3.57	0.57	-0.41		
General pedagogical knowledge				.86	4.1
Ability for recognition, setting and solving problems	3.60	0.54	0.59		
Ability for flexible use of knowledge in practical situations	3.66	0.51	0.52		
Ability for good communication	3.83	0.39	0.48		

Ability for adaptation and work in new situations	3.60	0.53	0.47		
Understanding educational concepts	3.31	0.63	0.44		
Ability to lead the team	3.72	0.49	0.42		
Understanding various pedagogical approaches and social context to lessons	3.41	0.62	0.41		
Ability for teamwork	3.54	0.55	0.41		
Understanding various pedagogical strategies for acting	3.49	0.64	0.39		
Ability to make right decisions according to the circumstances in a lesson	3.56	0.58	0.33		
Understanding school system as a complete entity	3.21	0.69	0.32		
Understanding legislation in the area of education	3.32	0.69	0.32		
Biological and physiological aspects of sport				.83	2.8
Understanding anatomical-functional aspects of sport	3.69	0.49	0.85		
Understanding physiological aspects of sport	3.67	0.51	0.80		
Understanding biomechanical aspects of sport	3.35	0.68	0.63		
Understanding psychological aspects of sport	3.58	0.58	0.38		
Understanding health aspects of PA and sport	3.87	0.35	0.38		
Understanding physical and motor development of children and youth	3.80	0.41	0.30		
Teaching methods				.72	2.3
Qualification for demonstrating skills, which are not a part of curriculum	3.13	0.71	0.92		
Qualification for demonstrating skills, which are a part of curriculum	3.62	0.54	0.57		
Understanding methodical ways in teaching skills, which are not a part of curriculum	3.20	0.67	0.56		
General didactic knowledge				.83	1.9
Understanding PE curricula	3.76	0.46	0.57		
Qualification for setting goals according to curriculum	3.59	0.57	0.44		
Understanding general didactics of PE process	3.62	0.53	0.34		
Understanding methodical ways in teaching motor skills from the curriculum	3.77	0.45	0.32		
Qualification for using various teaching methods in teaching PE	3.47	0.46	0.31		
Research, entrepreneurship, organisation				.87	1.8
Understanding characteristics of research work	2.74	0.76	-0.70		
Qualification to research on appropriate level	2.79	0.75	-0.66		
Qualification for planning and time management	3.31	0.70	-0.45		
Ability for taking initiatives, entrepreneurial spirit	2.92	0.77	-0.44		
Ability for formation and leading various projects	3.13	0.73	-0.36		
Ability for abstract thinking, analysis and synthesis	3.10	0.71	-0.36		
Qualification for setting goals and learning targets	3.07	0.74	-0.31		
Understanding various didactic principles	3.43	0.65	-0.30		
Communication skills				.76	1.7
Working in international area	2.80	0.82	0.73		
Communication in foreign language	3.06	0.79	0.72		
Use of information technology	3.31	0.65	0.36		
Qualification for working with modern teaching technology in sport	3.27	0.66	0.31		
Planning				.81	1.6
Qualification for planning a process according to status analysis and curriculum	3.52	0.60	-0.58		
Qualification for diagnosing and composing status analysis	3.40	0.64	-0.59		
Responsible behaviour				.81	1.5

Appreciation and respect for multiculturalism	3.41	0.64	-0.59		
Ability for socially responsible behaviour	3.38	0.67	-0.57		
Ability for ethical and professionally correct attitude	3.75	0.48	-0.50		
Importance of equal opportunities	3.56	0.59	-0.42		
Ability for criticism and self-criticism	3.58	0.54	-0.39		
Considering safety principles in management of pedagogical process	3.86	0.36	-0.39		
Leadership, motivation				.62	1.4
Qualification for pedagogical management of class in PE	3.79	0.45	-0.37		
Ability to motivate people for progress towards common goals	3.64	0.53	-0.32		

Note. *m*=mean, *s*=standard deviation, *l*=factor loadings, *α*=Cronbach's alpha, *% v*= percentage of total variance explained by factor.

4. DISCUSSION and RESULTS

The main finding of the study is that Slovenian PETs have recognized the highest level of professional competence in those areas of activities that are closely related to the teaching process itself. These competencies reflect the pedagogical content knowledge which differentiates expert teachers in a subject area from subject-area experts (Cochran, De Ruiter, and King 1993). Pedagogical content knowledge is unique to teachers because it is based on the manner in which teachers relate their pedagogical knowledge – what they know about teaching – to their subject matter knowledge – what they know about what they teach (Shulman 1987).

Specific pedagogic and didactic knowledge is one of the most valuable competencies in PETs (Campos Mesa, Ries, and Del Castillo 2011; Kovač et al. 2008; Vitali and Spoltore 2010). The present research also revealed it to be the most developed first factor, named *Didactic approaches*, which explained 33.8% of the total variance. It is formed by specific competencies, particularly of the instrumental type, related to special pedagogical and didactic approaches in PE lessons, such as creativity in teaching and encouraging the ability of students to solve motor tasks. Creativity as an important competency of future graduates has been mentioned by both university teachers (Sàenz-Lòpez Bunuel et al. 2009) and the students of first three-years of Spanish sports faculties (Romero Cerezo, Zagalaz Sànchez, Romero Rodriguez, and Martinez Lòpez 2011). Particular importance within the first factor is also seen for respect for inclusion, individualisation and differentiation in PE lessons, particularly when working with children with special needs, behaviourally challenged, health-endangered or talented children. Qualification for working with students with special needs and acceptance of diversity are important characteristics of highly qualified PETs (European Agency for Development in Special Needs Education, 2011; Napper-Owen et al. 2008). At the same time, it seems that inadequate knowledge how to work with students with special needs constitutes the most important pedagogical obstacles for their successful inclusion into regular PE classes (Kovač et al. 2008). The importance of these competencies has also been emphasised by Nieminen, Takizawa, Goulimaris, and Sakashita (2008); in contrast, Spanish university teachers do not attribute particular importance to competencies related to integration of different groups of children (Sàenz-Lòpez Bunuel et al. 2009).

In the context of special didactic approaches, also present are competencies for motivating students to spend their free time more actively, to encourage their personal progress and to offer help when learning new motor skills. Nowadays, children and youth spend their free time mainly in a sedentary way (Ferreira et al. 2006); therefore, teachers perceive an ability to motivate students for PA as extremely important. According the recommendation provided in NASPE's documents PETs should provide students a foundation of skills and knowledge that can apply to many activities so that they are willing, able, and interested in seeking a lifetime of PA (Napper-

Owen et al. 2008). Slovenian PETs organise various extracurricular sports activities in addition to regular PE lessons; many also offer out-of-school sports programmes in their local environment; therefore, their qualification for organisation of such activities is also highly expressed. It is very important that we significantly increase opportunities for young people to be physically active, both in curriculum PE and outside of school sport and PETs can play the important role in such policy initiative as a School Sport Co-ordinator (Flintoff, 2010). As a part of their professional work they can develop activities to encourage schools and community sports providers to work in partnership with those in local community sports settings.

Also highly valued is the qualification for assessment students' knowledge in different ways. Assessment is an integral component of teaching-learning process (López-Pastor, Kirk, Lorente-Catalan, MacPhail, and Macdonald ,2013) and providing suitable feedback information (Tillema, 2009), which is probably connected with the reinstatement of numerical grading of PE in the Slovenian educational system and the possibility for parents to question the awarded mark. This area is completed, although with lower expression, with qualification for efficient inter-subject connection.

The second factor includes exclusively subject-specific competencies of an instrumental type in close correlation with basic (general) knowledge about wider social aspects of PA and sport; therefore, it has been named *Social science aspects of sport.* Despite the large homogeneity of the factor, teachers placed these competencies low on the scale of importance (see Table 1). The factor is particularly marked with items about the understanding of financial flow in sport (the worst placed subject-specific competency) and the influence of media on sport. Also noticeable are items, related to social, cultural, philosophical and historical aspects of sport and social circumstances in PE lessons. The findings correspond with the results of study by Kovač et al. (2008), in which teachers attributed below average importance to philosophical, sociological and historical aspects of sport as well as to connection between media and sport, presumably due to their lower influence and direct inclusion in PE lessons. Until recently, PE has been very firmly established in Slovenian educational curricula, and the conditions for work have been continuously improving since 1990 (Kovač, Jurak, Starc, and Strel, 2011); therefore, teachers did not pay attention to the wider social and financial context and the influence of governing political options, which have been observed in other countries (Hardman, 2008). Only certain financial (fewer resources for extra-curricular sports programmes) and normative (increased number of children in groups) restrictions, which are a result of the financial recession, the disinclination of certain political options and reductions in the state budget for education, will in the future perhaps change the views of teachers about the importance of a continuous struggle for the better position of PE and the importance of its social role (Kovač et al., 2011).

The third factor, *General pedagogical knowledge*, is represented by general systemic competencies, which can be subdivided in three groups. The first subgroup includes communication skills, such as the ability to work as a part of a team, leading a group and good communication. The ability to communicate well is a competency that received very high marks in this study, as it has been placed second best among general competencies (see Table 1). The second subgroup includes understanding various educational concepts and pedagogical strategies, while the third subgroup consists of the ability to flexibly use of knowledge in practice and recognition, setting and solving of problems. These two items are generally the most expressed in this group and have also been highly marked in some other researches (ANECA, 2004; Romero Cerezo et al., 2011; Sàenz-Lòpez Bunuel et al., 2009). Slightly less expressed are items describing the understanding of the school system as an entity, including its legislation, which has also been confirmed in a study by Kovač et al. (2008).

Various studies have proven that the ability to work in a team is currently one of the most important general competencies of graduates in different fields (Eurydice, 2011). It has been particularly highly valued by PETs (Cloes, Laraki, and Pieron, 2004; Romero Cerezo et al., 2011; Pazo Haro and Tajada Mora, 2012; Vitali and Spoltore, 2010), who at the same time wish

for additional training, similar as the competency for a successful team leader (Kovač et al., 2008).

The fourth factor, *Biological and physiological aspects of sport*, includes a group of subject-specific instrumental competencies, as the items are closely related with the basic professional knowledge in the area of PE (Napper-Owen et al., 2008; Romero Cerezo et al., 2011). This factor is best described with anatomical-functional and physiological aspects of sport. The factor also includes understanding of biomechanical, psychological and health aspects of sport. In particular, understanding of the health aspects of PA and sport and understanding of physical and motor development of children and youth have been marked the highest in this present study, as they have been ranked first and second among the subject-specific competencies (see Table 1). The factor represent the basic knowledge how to understand and apply fundamental movement concepts and principles to the learning and development of motor skills and physical fitness (Schmidt and Lee, 2013), as they set a theoretical basis for an efficient PE process, particularly due to the important negative effects of modern lifestyles of young people, which are expressed in their worse physical fitness (Tomkinson and Olds, 2007).

The fifth factor, *Teaching methods*, includes a group of subject-specific competencies, which are generally instrumental and are important in the narrow sense of teaching PE, mostly in demonstration skills as the most important teaching method in PE process. This factor is marked with items connected with the ability to demonstrate various sports skills, which are a part of PE curriculum or not. In particular, this item stands out due to its high expressiveness. The factor also includes an item about the understanding of teaching skills that do not form a part of curriculum. As in all post-socialistic countries (Hamar, Peters, Van Berlo, and Hardman, 2006), including Slovenian schools, performance-oriented PE is strongly emphasised (Kovač et al,. 2011). This is also true for the study process of future PETs; therefore, it is understandable that a high value has been given to the ability to demonstrate skills from the curriculum. Empirical investigations have shown that PET profession mostly is chosen by people, who have been successful in PE lessons or in sport (Edmonds and Lee, 2002). Their positive experience in sport influences their understanding of the image of PE teacher. Additionally, new sports constantly appear that are interesting for young people (e.g. snowboarding, rollerblading, in-line skating, new forms of dance and aerobics). Teachers attempt to include these contents in regular PE sessions, as they are aware that only by doing so can they increase the interest of young people. However, this requires competent demonstration and understanding of methodical ways in order to efficiently teach this content to young people. One of the key problems of PE today is the excessive inclusion of traditional content, which is not particularly related with sports that young people practice in their free time (Hardman, 2008).

The sixth factor, *General didactic knowledge*, is defined with a cluster of subject-specific competencies of a particularly instrumental nature. It is defined by the ability to set goals and standards of knowledge, and understanding methodical ways when teaching PE, which form a part of curriculum (the fourth most important subject-specific competency), and knowledge of curriculum, which is the most significant item in this cluster (the fifth place on the ranking of most important subject-specific competencies). As separate competencies, these items are thus placed in the top half in the ranking by importance of competencies (see Table 1). The importance of general didactic knowledge has also been found in other studies (Campos Mesa et al., 2011; Kovač et al., 2008; Romero Cerezo, 2009; Romero Cerezo et al., 2011; Romero Granados and Campos Mesa, 2010), whilst isolated factors include planning, implementation of curriculum and understanding of the specifics of physical and motor development of children.

The seventh factor, *Research, entrepreneurship and organisation*, includes a cluster of general instrumental and systemic competencies. The former mostly describe understanding the methodology of research work and qualification for research in the field of kinesiology. Most often, teachers do not attribute particular importance to educational research (Kovač et al., 2008) as they do not see a potential for direct inclusion of such knowledge into practice. Nevertheless,

such knowledge forms a part of PETE programmes and is sufficiently developed during undergraduate study. Being qualified for research and understanding of research characteristics are the worst placed general competencies of this study (see Table 1), which also corresponds with the results of previous study by Kovač et al., (2008). Other items are related to the ability for planning and time management, setting-up and managing projects, as well as to entrepreneurial abilities. These competencies have been marked as quite important by undergraduate students of some Spanish PETE programmes (Romero Cerezo et al., 2011). This factor also consists some less expressed items, which are also important in research work (abilities for abstract thinking, synthesis and analysis), which are crucial for good planning (qualification for setting goals and teaching achievements and understanding of various didactic principles).

In the structure of the eighth factor, *Communication skills,* the ability to communicate in foreign languages and to work internationally are particularly expressed items, although they have been placed at the bottom of the overall ranking in order of importance, as the sixth and third least important competencies, respectively (see Table 1). In addition, the use of various communications technologies and consequent qualification for working with modern teaching technologies are strongly related with the knowledge of foreign language and have also been placed low on the overall ranking order of importance in this study. It should be noted that the reliability of this factor is modest. The use of foreign language as a competency has also been marked below average among selected Slovenian PETs who moreover did not desire to enhance their knowledge (Kovač et al. 2008). Lesser importance for written and oral expressing in at least one foreign language has also been observed by Pazo Haro and Tejada Mora (2012) as well as by the Sàenz-Lòpez Bunuel et al. (2009) on a sample of university lecturers and postgraduate students, which is unusual as the basic language for communication in research is English. Knowing (and using) foreign languages in pedagogical practice is a complex problem, which is closely related with age and (indirectly) with length of working experience, as it seems that younger generations have significantly fewer problems in mastering foreign languages (Eurydice 2011) and using ICT (Nicholson ,2007).

Studies show that many teachers have negative attitudes toward the use of ICT (Ince, Goodway, Ward, and Lee ,2006). Whilst foreign studies revealed that both graduates and students of Spanish PETE programmes evaluated the importance of ICT use with low marks (Campos Mesa et al., 2011; Romero Granados and Campos Mesa, 2010); in contrast, selected Slovenian PETs have marked the use of ICT with above average marks. Furthermore, they wished to acquire additional knowledge in this area (Kovač et al., 2008); therefore, the score for competency connected to the use of ICT, which in this study was revealed as of medium importance, is surprising. In the context of an e-competent *European teacher*, there are quite a few dilemmas about the new approaches to the use of ICT in teaching and working, particularly in multicultural groups (Eurydice, 2002; Eurydice, 2011). Although Kovač et al. (2008) found that the systematic introduction of changes at the time of the overhaul of curricula in 1998 has shown desired effects and confirmed a positive trend in accepting innovations in pedagogical practice, the use of ICT and e-learning are among the weakest points both in Slovenia and Europe (Eurydice, 2011; Thomas and Stratton, 2006). In Slovenia, the qualification process in the area of ICT is left to decisions of individual educational institutions. Although the use of ICT in teaching is greatly encouraged on the European level and the effects of a technology-focused professional development intervention produced significant gains in total technology competency, integration of technology competency, and affinity to technology from pre- to post-intervention (Ince et al. 2006), teachers rarely use it (Eurydice, 2011), presumably also because of a shortage of knowledge for its efficient use (Yaman, 2007).

The ninth factor, *Planning*, is defined with two subject-specific instrumental competencies: analysis (physical fitness and prior students' knowledge and skills) and planning of PE process, which are a basic professional knowledge in PE (Gower, 2010), directly linked to successful

implementation of the PE curriculum in the classes.

The tenth factor, *Responsible behaviour*, consists of the cluster of general competencies of a mostly systemic type, which are connected with ethical behaviour, multiculturalism, criticism and self-criticism as well as with responsible acting on both a personal level between teacher and student as well as on a general social level (Napper-Owen et al., 2008). The item about safe principles can also be understood as an expression of responsible behaviour (and thus ethical approach) to students. From this point of view, the factor appears relatively homogeneous, despite various emphases and poorer expression of the items of safe principles and abilities for criticism and self-criticism.

Due to the important influences of PA and sport on the individual, the importance of ethical and responsible behaviour is a highly rated competency among teachers (ANECA, 2004; Pazo Haro and Tajada Mora, 2012). Because of the educational potentials of PETs, encouragement and conveying values, such as hard work, discipline and persistence are also highly rated (Romero Cerezo et al., 2011). Following safety principles and ethical and professional attitudes are generally two highest ranked competencies in this study (first and third place, see Table 1). Sports ethics and safety factors stand out as important recommendation also in NASPE's standards for highly qualified PET (Napper-Owen et al., 2008).

In line with the guidelines related to working in a mixed race environment, which encourage respect for multicultural cooperation (Official Journal of the EU, 2009), a cluster of competencies of an ethical nature is in Slovenia very important, as in some areas the population is very multicultural (officially recognised Italian and Hungarian minorities, Romani, immigrants from former Yugoslavia).

The eleventh factor, *Leadership and motivation*, includes general and subject-specific items connected to the ability to lead the class and motivate the participants in the process of pursuing common goals. Kovač et al. (2008) found that PETs wish to acquire additional knowledge in this area due to its perceived extreme importance. Similarly, the present study revealed this competency to be placed high on a ranking list, i.e. third among the most important subject-specific competencies (see Table 1). The importance for leading and motivating groups, particularly those less motivated for PA and sport, has also been emphasised in the study by Nieminen et al. (2008), as the cluster with aforementioned competencies (*Interaction skills*) has been marked the highest by future PE programme graduates from Finland, Greece and the Netherlands. *To be able to manage the group* was considered as the most important competence in the study among 2525 PE teachers of the French Community of Belgium (Cloes et al., 2004).

The results of the study show the perceptions of professional competencies among the Slovenian PETs. They rate highly the importance for understanding health, biological, physical and motor principles of the development of child/youth and pedagogical and didactic aspects of teaching. The focus is on safety and ethics in teaching PE, good communication and adaptability of one's own pedagogical ideas according to the individual needs of children and youth. At the same time, PETs do not show particular interest in communicating in foreign languages, scientific research work and some wider social aspects of sport. From the point of view of European demands and recommendations, which encourage the improvement of teacher's competencies for more qualitative approaches (Official Journal of the EU 2009), a sophisticated system of lifelong training should be designed in order for teachers to bring PE to various target groups of students in a more efficient way and to develop of adequate combinations of clusters of competencies (particularly ICT, entrepreneurial spirit and permanent professional training).

At the same time, the inclination of PETs to view their own demonstration of motor skills is still very highly rated, which is a basic characteristic of PE in post-socialistic countries (Hamar et al., 2006). This could present a problem for two reasons. First, the focus of modern PE is mostly on providing healthy development of children and encouraging them to regularly engage PA (Ferreira et al., 2006; Napper-Owen et al., 2008); therefore, the focus of PETs and educators at PETE programmes will have to be shifted from the importance of various (sometimes

insignificant yet demanding) motor demonstrations onto sports practice that will be adjusted to particularities of an individual student, who will then be able to practice in his/her own free time. With this, PE will become closer to the free time PA, in which students will participate to adulthood (Hardman, 2008). Second, teachers should be aware that the use of ICT can efficiently replace demonstrations; moreover, with the prolonging of working years teachers will have to use indirect demonstration in later years to a greater extent, thus reducing the number of potential risks for injuries, which increase with age (Lemoyne, Laurencelle, Lirette, and Trudeau, 2007).

When interpreting the results and defining the contents of individual factors, a certain degree of care is required, mainly because of the different levels of reliability of individual factors and also due to the different degrees of expression of individual items. Furthermore, it should be mentioned that a relatively small dispersion of results has been observed in some items with a quite high average score.

Care is also needed when comparing the findings of this study with similar foreign studies, as different research and methodological approaches should be considered as well as specific social contexts, which formed a basis of individual study; finally, dilemmas in translation and presentation of terminological specifics should also be considered.

5. REFERENCES

ANECA (Agencia nacional de evaluacion de la calidad y acreditation) (2004). *Propuesta de Titulo de Grado En Ciencas de la Actividad Fisica y del Deporte.* [Proposal for the Title of the graduate in The Physical Activity and Sport Science. In Spain.] [Available online at: www.aneca.es/var/media/150296/libroblanco_deporte_def.pdf], Retrieved on 6 July 2012.

Campos Mesa, M. C., Ries, F., & Del Castillo, O. (2011). Analisis de las competencias adquiridas y utilizadas por los agresados maestros en educaciòn Fisica. [Analisys of the skills acquired and used by graduated teachers in physical education. In Spain.] *Revista Internacional de Cencias del Deporte*, *24*(7), 216–229.

Chen, W. (2006). Teachers' knowledge about and views of the national standards for physical education. *Journal of Teaching in Physical Education*, *25*, 120–142.

Cloes, M., Laraki, N., & Pieron, M. (2004). PE teachers competencies: which ones are considered as the most important and where are they acquired? *Athens: Pre-olimpic congress.* [Available online at: http://cev.org.br/biblioteca/pe-teachers-competencies-which-ones-are-considered-as-the-most-important-and-where-are-they-acquired], Retrieved on 30 January 2009.

Cochran, K. F., De Ruiter, J. A., & King, R. A. (1993). Pedagogical content knowing: An integrated model for teacher preparation. *Journal of Teacher Education*, *44*(4): 263–72.

Edmonds, S., & Lee, B. (2002). Teacher feelings about continuing professional development. *Education Journal*, *61*, 28–29.

European Agency for Development in Special Needs Education, (2011). *Teacher Education for Inclusion. Profile of Inclusive Teachers (TE41)*. [Available online at: http://www.european-agency.org/publications/ereports/te4i-profile/TE4I-Profile-EN.pdf], Retrieved on 12 October 2012.

Eurydice (2002). *Key competencies – a developing concept in general compulsory education.* Brussels: Euryidice.

Eurydice (2003). *Defining competencies and curriculum. European reference points for the teaching profession*. Prepared by Eurydice for study visit (England, April 2003).

Eurydice (2011). Key data on Learning and Inovation through ICT at School in Europe 2011. [Available online at: http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/134EN.pdf], Retrived on 15 October 2012.

Ferreira, I., Van der Horst, K., Wendel-Vos, W., Kremers, S., van Lenthe, F.J., & Brug, J. (2006). Environmental correlates of physical activity in youth – a review and update. *Obesity Reviews*, *8*, 129–154.

Flintoff, A. (2010). The school sport co-ordinator programme: Changing the role of the physical education teacher? *Sport, Education and Society*, *8*(2), 231–250.

Gallardo, A. M. (2006). Evaluating professional competencies for labor placement of the physical education teacher. *Electronic Journal of research in Educational Psychology*, *10*(3), 469–492.

González, J., & Wagenaar, R. (2003). *Tuning Educational Structures in Europe. Final Report.* Bilbao: Universidad de Deusto.

Gower, C. (2010). Planning in PE. In S. Capel, & M. Whitehead (Eds.), *Learning to Teach Physical Education in the Secondary School: A Companion to School Experience* (pp. 24–45). London: Routledge.

Hamar, P., Peters, D. M., Van Berlo, K., & Hardman, K. (2006). Physical education and sport in Hungarian schools after the political transition of the 1990s. *Kinesiology, 38*(1), 86–93.

Hardman, K., Klein, G., Patriksson, G., Rychtecky, A., & Da Costa, F. C. (2008). Implementation of the Bologna Process and Model Curriculum Development in Physical Education. In K. Petry, K., Froberg, A. Madella & W. Tokarski (Eds.), *Higher Education in Sport in Europe. From labour Market demand to Training Supply* (pp. 56–79). UK: Meyer & Meyer Ltd.

Hardman, K. (2008). Physical education in schools and PETE programmes in the European context: Quality issues. In G. Starc, M. Kovač & K. Bizjak (Eds.), *4th International Symposium Youth Sport 2008 – The Heart of Europe. Book of Abstracts* (pp. 9–26). Ljubljana: Faculty of Sport.

Ince, M. L., Goodway, J. D., Ward, P., & Lee, M. A. (2006). The effects of professional development on technological competency and the attitudes urban physical education teachers have toward using technology. *Journal of Teaching in Physical Education, 25*(4) 428–440.

Kovač, M., Jurak, G., Starc, G., & Strel, J. (2011). The importance of research-based evidence for political decisions on physical education. In K. Hardman & K. Green (Eds.), *Contemporary issues in physical education: International perspectives* (pp. 47–68). Maindenhead, UK: Meyer & Meyer Sport.

Kovač, M., Sloan, S., & Starc, G. (2008). Competencies in physical education teaching: Slovenian teachers' views and future perspectives. *European Physical Education Review, 14*(3), 299–323.

Laporte, W. (1997). The physical education teacher for secondary schools in the EU. *Journal of the International Council for Health, Physical Education, Recreation, Sport, and Dance, 3*, 43–46.

Lemoyne, J., Laurencelle, L., Lirette, M., & Trudeau, F. (2007). Occupational health problems and injuries among Quebec's physical educators. *Applied Ergonomics, 38*(5), 625–634.

López-Pastor, V., Kirk, D., Lorente-Catalan, E., MacPhail, A., & Macdonald, D. (2013). Alternative assessment in physical education: a review of international literature. *Sport, Education & Society, 18*(1), 57–76.

Ministry of Education and Sport. (2010). Database of teachers /on-line/. [Available online at: http://krka1.mss.edus.si/RegistriWeb], Retrieved on 15 September 2010.

Napper-Owen, G. E., Marston, R., Volkinburg, P. V., Afeman, H., & Brewer, J. (2008). What constitutes a highly qualified physical education teacher? *Journal of Physical Education, Recreation & Dance (JOPERD), 79*(8), 26–32. [Available online at: http://www.csuchico.edu/kine/documents/TroutHighlyQualifiedTeacher016.pdf.

Nicholson, P. (2007). A History of e-Learning: Echoes of the Pioneers. In B. Fernandez-Manjon, J. M. Sanchez-Perez, J. A. Gomez-Pulido, M. A. Vega-Rodriguez, & J. Bravo-Rodriguez (Eds.), *Computers and education: E-learning, From theory to practice* (pp. 1–11). Dorderecht: Springer.

Nieminen, P., Takizawa, K., Goulimaris, D., & Sakashita, R. (2008). PE students' perception of the importance of the competencies of quality physical education teacher: A cross-cultural study. AIESEP 2008 World Congress–Sport pedagogy research, policy & practice: International perspectives in physical education and sports coaching. Sapporo, Japan.

Official Journal of the European Union (28.5.2009). Council – Notices from European Union institutions and bodies. Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training ("ET 2020") (2009/C 119/02). [Available online at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF], Retrived on 11 September 2012.

Pazo Haro, C. I., & Tejada Mora J. (2012). Las competencias profesionales en Educaciòn Fisica. [The professional skills in Physical education. In Spain.] *Nuovas tendencias en Educaciòn Fisica, Deporte y Recreatiòn*, *22*, 5–8.

Perrenoud, P. (2002*). Dieci nuove competenze pe rinsegnare.*[Ten new competencies for teaching. In Italian.] Roma: Anicia srl.

Rychen, D. S., & Salganik, L. H. (2003). *Key Competencies for a Successful Life and a Well-Functioning Society*. Seattle: Hogrefe & Huber Publishers.

Romero Cerezo, C. (2009). Definiciòn de mòdulos y competencias del maestro con menciòn en Educaciòn fisica. [Modules and competencies of the physical education teacher. In Spain.] *Revista Internacional de Medicina y Ciencas de la Actividad Fisica y el Deporte*, 9(34), 179–200.

Romero Cerezo, C., Zagalaz Sànchez, L., Romero Rodriguez, M. N., & Martinez Lòpez, E. J. (2011). Importancia de las competencias profesionales de los Maestros en Educaciòn Fisica expresadas por los estudiantes [Importance of the professional competencies of the Primary Teachers in Physical Education expressed by the students. In Spain.]. *Retos. Nuevas tendencias en Educaciòn Fisica, Deporte y Recreaciòn, 19,* 62–68.

Romero Granados, S., & Campos Mesa, M. C. (2010). Los egresados de magisterio especialistas de educaciòn fisica y sus competencias. [The higher education graduates of physical education teachers and their competencies. In Spain.] *Journal of sport and Health Research*, *2*(2), 167–182.

Sàenz-Lòpez Bunuel, P., Carmona Marquez, J., Coronel Llamas, J. M., Funtes-Guerra, J. G., Sierra Robles, A., & Castillo Viera, E. (2009). La percepciòn de la evoluciòn en las competènçias en el alumnado de màster ed educaciòn fisico-deportiva [The opinion about the evolution in the student skills in the Physical Education and Sports Master. In Spain.]. *Revista de Ciencias del Deporte*, 5 (3), 123–135.

Schmidt, R., & Lee, T. (2013). *Motor Learning and Performance, 5E With Web Study Guide: From Principles to Application*. Human Kinetics.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*, 4–14.

Tillema, H. (2009). Assessment for learning to teach. *Journal of Teacher Education, 60*(2), 155–167.

Thomas, A., & Stratton, G. (2006). What we are really doing with ICT in physical education: a national audit of equipment, use, teacher attitudes, support, and training. *British Journal of Educational Technology, 37*(4), 617–632.

Tomkinson, G. R., & Olds, T. S. (2007). Secular changes in pediatric aerobic fitness test performance: The global picture. *Medicine and Sport Science, 50*, 46–66.

Torre, E. M., & Ricchiardi, P. (2007). *Le competenze dell'insegnante. Strumenti e percorsi di autovalutazione.* [Teacher's competencies. Ways and means of self-evaluation. In Italian.] Roma: Centro studi Erickson.

Vitali, F., & Spoltore, L. (2010). Da un'esigenza sociale ad una figura professionale: competenze e spazi di occupabilità del laureato in Scienze Motorie. [From social needs to professional figure: competencies and employability of the graduate in The Sport Science. In Italian.] *Giornale Italiano di Psicologia dello Sport*, *8*, 32–42.

Wang, C., & Ha, A. (2008). The teacher development in physical education: A review of the literature. *Asian Social Science*, *4*(12), 3–18.

Weinert, F. E. (2001). Concept of Competence: A Conceptual Clarification. In L. H. Salganik & D. S. Rychen (Eds.), *Defining and Selecting Key Competencies*. Seattle: Hogrefe & Huber Publishers.

Wiegand, R. L., Bulger, S. M., & Mohr, D. J. (2004). Curricular issues in physical education teacher education: Which foundational courses do PETE students really need? Should more time be spent on pedagogical content knowledge? Is the curriculum presented in the best order? Read on. *The Journal of Physical Education, Recreation and Dance*, *75*(8), 47–56.

Yaman, M. (2007). The competence of physical education teachers in computer use. *The Turkish Online Journal of Educational Technology (TOJET), 6*(4), 5. [Available online at: http://www.tojet.net/articles/v6i4/645.pdf], Retrived on 14 August 2007.

Extended Abstract

From the aspect of education of future human resources and the organisation of lifelong learning, it is extremely beneficial to know the competency profile of individual professions in detail. This cross-sectional study was designed to evaluate perceived importance of Slovenian physical education teachers' (PETs) professional competencies with the aim of diagnosing the main needs of practising PETs and preparing continued professional development programmes. For this purpose, a self-administered questionnaire has been designed to examine a wide scope of general and subject-specific competencies among 672 Slovenian PETs. The participants evaluated the importance of competencies on a five-level scale. Cronbach's alpha coefficient of internal consistency was used to estimate the reliability of a questionnaire, and factor analysis was used in order to examine an internal structure of competency field. The results point to the high degree of reliability of the entire questionnaire (Cronbach alpha=.97), whereas the values of individual segments of variables vary between .62 and .92. The competency profile of teachers consists of 11 factors, which together explain 57.6% of the total variance. In the majority of cases, the factors are homogenous in their contents and represent uniform constructs.

Didactic approaches as the subject-specific competencies, which represent the first factor, seemed to be the most informative for PETs, explaining 33.8% of the total variance. It is formed by specific competencies, particularly of the instrumental type, related to special pedagogical and didactic approaches in physical education lessons, such as creativity in teaching and encouraging the ability of students to solve motor tasks. Particular importance within the first factor is also seen for respect for inclusion, individualisation and differentiation in physical education (PE) lessons, particularly when working with children with special needs, behaviourally challenged, health-endangered or talented children. In the context of special didactic approaches, also present are competencies for motivating students to spend their free time more actively, to encourage their personal progress and to offer help when learning new motor skills. Also highly valued is the qualification for assessment and grading students' knowledge in different ways. This area is completed, although with lower expression, with qualification for efficient inter-subject connection. The second factor, *Social science aspects of physical activity (PA) and sport*, includes exclusively subject-specific competencies of an instrumental type in close correlation with general knowledge about wider social aspects of sport. Despite the large homogeneity of the factor, teachers placed these competencies low on the scale of importance, presumably due to their lower influence and direct inclusion in PE lessons. The third factor, *General pedagogical knowledge*, is represented by general systemic competencies, which can be subdivided in three groups. The first

subgroup includes communication skills, such as the ability to work as a part of a team, leading a group and good communication. The second subgroup includes understanding various educational concepts and pedagogical strategies, while the third subgroup consists of the ability to flexibly use of knowledge in practice and recognition, setting and solving of problems. The fourth factor, *Biological and physiological aspects of PA and sport*, includes a group of subject-specific instrumental competencies, as the items are closely related with the basic professional knowledge in the area of PE. The fifth factor, *Teaching methods*, includes a group of subject-specific competencies, which are generally instrumental and are important in the narrow sense of teaching PE, mostly in demonstration skills as the most important teaching method in PE process. The sixth factor, *General didactic knowledge*, is defined by the ability to set goals and standards of knowledge, and understanding methodical ways when teaching PE, which form a part of curriculum, and knowledge of curriculum, which is the most significant item in this cluster. The seventh factor, *Research, entrepreneurship and organisation*, includes a cluster of general instrumental and systemic competencies. Being qualified for research and understanding of research characteristics are the worst placed general competencies of this study. In the structure of the eighth factor, the ability to communicate in foreign languages and to work internationally are particularly expressed items, although they have been placed at the bottom of the overall ranking in order of importance. Knowing and using foreign languages in pedagogical practice is a complex problem, which is closely related with age and (indirectly) with length of working experience, as it seems that younger generations have significantly fewer problems in mastering foreign languages. The ninth factor, *Planning*, is defined with two subject-specific instrumental competencies: items analysing and planning of PE process, which is a basic professional knowledge in PE. The tenth factor, *Responsible behaviour*, consists of the cluster of general competencies of a mostly systemic type, which are connected with ethics, multiculturalism, criticism and self-criticism as well as with responsible acting on both a personal level between teacher and student as well as on a general social level. The item about safe principles can also be understood as an expression of responsible behaviour (and thus ethical approach) to students. The eleventh factor, *Leadership and motivation*, includes general and subject-specific items connected to the ability to lead the class and motivate the participants in the process of pursuing common goals.

The results of the study reveal that the general profile of Slovenian PETs is very complex with the majority of them feeling sufficiently competent in the areas they consider crucial in fulfilling quality education. From the point of view of European demands and recommendations, which encourage the improvement of teacher's competencies for more qualitative approaches, a sophisticated system of lifelong training should be designed in order for teachers to bring PE to various target groups of students in a more efficient way.

Citation Information

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