



Research Article

Gifted and talented students in sports in the Slovenian primary school system

Tadeja Volmut¹, Nika Rajovec², and Mojca Kukanja Gabrijelčič^{3*}

Faculty of Education, University of Primorska, Slovenia

Article Info

Received: 09 September 2020
Revised: 25 January 2021
Accepted: 15 February 2021
Available online: 15 March 2021

Keywords:

Gifted education
Physical education
Primary school
Sports talent

2149-360X/ © 2021 The Authors.
Published by Young Wise Pub. Ltd.
This is an open access article under
the CC BY-NC-ND license



Abstract

The aim of this study was to determine the attitudes of the educational staff and their assessment of their competence in the field of discovering and working with gifted and talented students in sports. Forty classroom teachers and 40 physical education teachers were included in the study. We used a questionnaire designed for the purposes of this study. The results show that teachers are aware of the role and importance of discovering and working with gifted and talented students, but that they need additional professional training to avoid possible mistakes and problems they might encounter in their work. The teachers believe that their school takes the serves the area of discovering gifted and talented students ($\bar{X} = 3.50 (0.91)$; $p < 0.001$), somewhat less the area of educational work with them ($\bar{X} = 3.39 (0.77)$; $p < 0.001$) and for the systemic and operational regulation of the education of gifted and talented students ($\bar{X} = 3.35 (0.94)$; $p = 0.001$). Physical education teachers identified more children who were gifted or talented in sports than class teachers ($t_{(78)} = -5,979$, $p < 0,000$). The scientific contribution represents an important contribution in the field of work with talented and talented students, as for the first time in Slovenia the views of the pedagogical staff and their assessment of competence with such a group of students are presented. We conclude with a critical presentation of some gaps and an overview of the existing situation as well as with some guidelines for further pedagogical and scientific research.

To cite this article:

Volmut, T., Rajovec, N., & Kukanja Gabrijelčič, M. (2021). Gifted and talented students in sports in the Slovenian primary school system. *Journal for the Education of Gifted Young Scientists*, 9(1), 27-36. DOI: <http://dx.doi.org/10.17478/jegys.792203>

Introduction

For the success, talent, giftedness or ability of the student to achieve exceptional learning outcomes, the school is most important, only then the family (Čotar Konrad & Kukanja Gabrijelčič, 2015; Kukanja Gabrijelčič, 2015a). The process of discovering talented and gifted students and adapting the pedagogical work begins immediately after entering school, where teachers must create suitable conditions for teaching by adapting the contents, methods and forms of work, and must enable admission to additional classes, other forms of individual and group help and other forms of work (Act Amending the Primary School Act, 2011). In Slovenia in 2019 there were major changes in the area of modernizing work with gifted and talented students. The basic legislative and programmatic starting points and other documents that have contributed to the renewal of the starting points are: (i) Concept: Discovery and work with gifted students in a nine-year primary school (1999); (ii) White Paper on education in the Republic of Slovenia (2011); (iii) Some modern talent theories of selected authors such as Gagne, Heller, Pfeiffer, Renzulli, Robinson, Subotnik, Sternberg, Ziegler; (iv) Recommendations of the Economic and Social Council European Union, Expert Group on Employment Social Affairs and Citizenship on unlocking the potential of students and young people with high intellectual capacities in the EU (García-Caro, 2013). The essence of discovering, encouraging and supporting gifted students is that they achieve optimal learning outcomes, are self-actualising according to their natural potential,

¹ Dr., Assistant Professor of didactics of sports at the Faculty of Education of the University of Primorska, Slovenia. tadeja.volmut@pef.upr.si ORCID: 0000-0003-0682-613X

² Master class teacher, Slovenia. E-mail: nika.rajovec@gmail.com

³ Corresponding Author, Ph.D., Assoc. Prof., Senior Research Fellow, e-mail: mojca.k.gabrijelcic@pef.upr.si phone: 0038631707131, Slovenia. ORCID: 0000-0002-6639-1513

values and goals, while contributing responsibly to social development. Indeed, it is assumed that the entire educational system has a duty to support the intellectual, emotional, social, moral, ethical and motor - i.e. holistic - development of students along the entire educational vertical.

In the Slovenian primary school system, gifted and talented students are enabled to harmonize school duties and sport in two ways:

- With special forms of organization, such as additional sports programs (more diversified sports, usually with five hours a week and additional courses or schools in nature) and
- With legal status rights of the student sportsman (Kovač & Jurak, 2012). For talented and gifted primary school sportsmen and women, special adaptations are provided for in the school legislation, which will be regulated by the [Act Amending the Primary School Act \(2013\)](#).

The inclusion of students in the additional sports program is voluntary and at the request of parents and students. A sports pedagogue and a class teacher participate in the implementation of the program in the first educational period, and two sports pedagogues in the second educational period ([Curriculum, 2011](#)). Another way of reconciling school commitments and sport is that the application for the status of a student to be awarded to a promising or top athlete is submitted by the student's parents. The school's rules on the adaptation of school obligations regulate the procedure for obtaining the status of a promising or top athlete and the adaptation of school obligations, such as participation in lessons and other activities and the methods and deadlines for assessing knowledge ([Act amending the Law on Primary Education, 2013](#)).

Giftedness and Sports Talent

More modern explanations of talent and holistic approaches on which the updated Slovenian guidelines are based refer to some foreign definitions, such as (i) Renzulli's three-circle model of talent ([Renzulli, 1998](#)), which points out the difference between school talent and the t.i. creative-productive talent; (ii) Gagné's model of talent and giftedness ([Gagné, 1999](#)), in which he clearly distinguishes between talent, which he understands as natural abilities or potentials, and talents that are developed from natural abilities through learning or through the development process; (iii) the definition of R. Subotnik, who says that talent is a manifestation of an achievement or product at the top of the talent distribution ([Subotnik, Olszewski-Kubilius & Worrell, 2011](#)); (iv) the definition of [Pfeiffer \(2012\)](#), who says that talent is tied to certain basic cognitive traits that manifest optimally together with certain personality traits, and so on.

Understanding and demonstrating talent in the general field requires (i) high general intelligence, (ii) creativity and (iii) personal characteristics ([Renzulli, 2016](#)), and the demonstration of talent (giftedness) requires not only a cognitive component, but above all: (i) mental and physical dispositions; (ii) the influence of the environment and (iii) the self-activity of the individual ([Kukanja Gabrijelčič and Volmut, 2020](#)). We speak of an athletically gifted individual if he or she reaches the top 10% of the distribution in the reference group in the area of motor (ability to move, manipulate and stabilize), psychomotor or sensomotor abilities and is characterized above all by sensitivity (senses), motor skills and abilities (coordination, precision), balance, mobility, speed, strength and endurance), accuracy of observation, hearing, sense of movement, etc. ([Vaeyens et al. 2008](#)).

[Baker \(2003\)](#) defines talents in sport on the basis of four groups of indicators: (i) anthropometric predictors, (ii) physiological-motor predictors, (iii) psychological predictors and (iv) sociological predictors. For a child to be talented in sport, he or she must have, in addition to motivation, endurance and environmental support, appropriate basic dispositions or innate abilities and characteristics from all three groups: (i) morphological characteristics (height, body weight, skin fold, circumference - joint diameter, body surface, longitudinal measurement of limbs); (ii) motor skills (coordination, strength, speed, precision, mobility, balance); (iii) functional skills (endurance: aerobic, anaerobic) ([Kukanja Gabrijelčič & Volmut, 2020](#)). The structure of psychomotor abilities of children must include a number of sensory, motor and cognitive abilities, namely (1) effective self-control and self-regulation of motor activities; (2) fine differentiation of sensitivity and adaptation of movements to the main control parameters (time, space, effort, speed, rhythm); (3) responsiveness and efficiency of motor activity regulation; (4) good motor memory; (5) strong will to regulate movement; (6) psychomotor performance and reliability ([Petkova & Grebennikovaa, 2016](#)). [Škof \(2010\)](#) names the most important motor skills, such as: muscle strength, agility, coordination, balance, mobility and functional ability (endurance). [Schmidt and Lee \(1999\)](#) point out not only the mentioned motor skills and abilities but also the precision of movement, reaction time, manual skills, dexterity and timing. The following points are therefore very important for motor skills: (i) Exceptional responsiveness and strength, which is reflected in the individual's speed; (ii) Performance, characterized as endurance or the ability to resist fatigue; (iii) Coordination of movement, which

manifests itself as agility (Petkova & Grebennikovaa, 2016). We point out that the entire identification and development process depends on the body constitution, biological and behavioral development and their various interactions (Kukanja Gabrijelčič & Volmut, 2020). Škof (2014) therefore emphasizes that resounding sporting successes can only be achieved by people who possess exceptional biological and psychosocial abilities for a particular sport that are hereditary (conditioned). It is also worth mentioning that each individual has his or her own unique dynamics of both biological and psychosocial development. As the differences in developmental dynamics between individuals increase sharply during puberty, they make it very difficult to predict sporting creativity in adulthood with regard to the situation in childhood (Kukanja Gabrijelčič & Volmut, 2020). Individual differences in biological development therefore have a direct and indirect impact on the process of talent recognition (Cumming et al. 2012), physical and functional characteristics are an important social stimulus for those involved in the recognition and development of young sports talents.

Identification Sport Talent

Identifying athletically gifted and talented students is a challenging process involving teachers, parents, a counseling service and, if necessary, external experts (e.g. a sports coach). The most appropriate period for discovering and promoting talent in a child is the early stages (Čotar Konrad & Kukanja Gabrijelčič, 2015). Experts do not entirely agree on the early detection of gifted and talented children, as some believe that early detection leads to greater chances of error in younger children due to the rapid and unpredictable development (Kovač & Jurak, 2012). However, the authors warn that if we start to discover talents and gifts too late, we could miss the best years that allow the athlete to develop in a particular sport.

When discovering and later identifying outstanding achievements in the psychomotor and sensomotor field in Slovenia, (i) sports competitions from individual sectors or areas (participation and good results in regional and national competitions) and (ii) outstanding achievements in the field of physical activity can be demonstrated.

The discovery of talented and gifted students, also in the field of sports, is done in three stages: (1) Discovering, (2) identification and (3) communication with parents and obtaining their opinion (Koncept, 1999).

Discovering

Discovering is based on various criteria, excluding tests or the use of specific assessment tools (Koncept, 1999). The criteria are (Koncept, 1999; Štemberger and Filipčič, 2014): (i) the consistent evidence of excellent learning success in the subject of sport; (ii) the professional opinion of the teacher about the student during the educational process (the observation focuses on the quality of movement and performance). Particular attention should be paid to those students who show signs of talent and/or aptitude but do not show excellent learning outcomes, who come from a different cultural or socially disadvantaged background, who have specific learning or behavioral problems; (iii) the sporting performance of the student in regional and national competitions; (iv) Hobbies - a strong interest of the student in more permanent activities in the field of sport, in which the student achieves above-average results; (v) the opinion of the school counseling center, formed on the basis of existing student records, with kindergarten teachers, class and other teachers, interest mentors and other activities.

Students must meet at least one of the above criteria to be accepted into the enrolled group. Records of these students are kept by the school counseling center (Koncept, 1999).

Identification

The identification of gifted and talented students (in the field of sport) involves a more detailed treatment of registered students and includes the following criteria: (i) Evaluation of already registered students by teachers using a specific evaluation tool covering the following areas: thinking skills, creativity, motivation and interests, leadership skills, physical abilities, excellence in various fields. Different methodologically sound instruments can be selected for the assessment, covering the above mentioned areas; (ii) aptitude test - individual or group test and (iii) creativity test.

In the first criterion, teachers assess students' motor skills with the help of a sports pedagogical map (Štemberger & Filipčič, 2014) or OLNADO7 assessment scales prepared by a group of experts from the Institute of the Republic of Slovenia for Education. A student who received an above-average grade in an individual area on the OLNADO7 assessment scale for teachers was classified as gifted or talented. The appropriateness of the assessment is assessed by the School Advisory Service together with the teacher who assessed the student (Koncept, 1999).

Greater emphasis is placed on the tests of the sport-pedagogical map, as it allows a systematic review of the performance and developmental opportunities of the students. The sports pedagogical card is a national system by means of which we regularly monitor and evaluate the physical and motor development of children and adolescents aged between six and 19 years (Štemberger & Filipčič, 2014). Children and adolescents and their parents can use data

from physical education to observe physical and motor development, and sports educators receive important information on the basis of which they can provide professional advice. The sports pedagogy card therefore plays an important role in identifying talented students in the Slovenian school system, as there are no specific areas where the specific abilities of the entire student population are regularly monitored and assessed (Štemberger & Filipčič, 2014).

We note that the processes of identifying and selecting sports talents are among the important factors of sports excellence.

In practice, two different approaches or methods of identifying and selecting young talent have developed, namely (i) the natural method and (ii) the scientific method (Škof & Bratina, 2016).

In natural or spontaneous selection, the recognition of the sporting potential of children and young people and the involvement of young talents in sport is usually based on the results of competitions in various school and other competitions. In natural selection, the actual level of athletic fitness of the individual is taken into account, which can be considered an advantage. At the same time, however, it is also its biggest problem and shortcoming, as it does not take into account differences between children in the amount and intensity of sporting activity, the degree of biological maturity, differences in the development of the individual and his or her abilities. In natural selection, people with an early biological development, people who are or have been in training for a long time, children from a wealthier family, etc. have an advantage in various sports (Bishop & Brother, 2016).

Another approach to identifying and selecting talent is the scientific method. Many systems have emerged in which the selection process is based on scientifically defined criteria. Such identification and selection of talents, based on tests of various abilities, traits and characteristics, is called planned selection. In order to help coaches, parents and school teachers to identify talents for individual sports, a computer-based system "Talent - an expert system for guiding children and young people in sport" has been developed in Slovenia.

Information to Parents and Obtaining Their Opinion

The final step in identifying gifted and talented students is to get to know the parents and obtain their opinion. The counseling center, together with the class teacher, informs the parents that their child has been recognized as gifted and/or talented and asks for their opinion about the child (Štemberger & Filipčič, 2014). In this way, we obtain written consent for further monitoring of the child's development and for the preparation of an individualized program (Kukanja Gabrijelčič, 2017).

Preparation of an Individualized Programme

The individualized program for gifted students is adapted to the characteristics of each individual (Kukanja Gabrijelčič, 2017), whereby teachers of a particular profession, school counseling services and external experts must participate in the preparation for an individual subject area (e.g. for physical education).

In the following, it is agreed which topics are planned specifically for individualisation, and strategies are presented for adaptation at the content and process level, and for testing and evaluating knowledge.

Purpose of Research

According to the exposed problem starting points, we aimed to describe systemic regulation of the education of gifted and talented students at selected schools in the Republic of Slovenia, find teachers' opinion about working with sports gifted and talented students, describe how class teachers and physical education teachers recognize and discover gifted and talented students; and find how pedagogical work with them takes place at the primary school level in Slovenia.

Method

Research Model

The research is a descriptive research in survey model. With this research, a descriptive survey model was used to determine teachers' opinions about how gifted and talented students are diagnosed in the field of sports in Slovenia, how classroom and physical teachers implement pedagogical approaches. Because survey models are suitable for researches aiming to describe a past or present situation as it exists (Cohen, Manion, & Morrison, 2007).

Research Sample

The sample of respondents (N = 80, from where 40 primary school teachers (39 females) and 40 sports pedagogues (18 females)) was selected randomly and purposefully, as it included only primary school teachers and sports pedagogues of selected primary schools in the Štajerska region. Most of the teachers have been at work for 25 years or more (21 class teachers and 13 sports pedagogues), while the shortest working time (1-5 years) was reported for six sports pedagogues, whereas one class teacher reported 6-10 years for shortest working time.

Data collection

Data was collected from May to December 2018 by the means of anonymous survey send by email. Email consists of link to electronic form with the website www.1ka.si.

Questionnaire

The research data was collected by means of an anonymous questionnaire that was prepared for primary school teachers and sports pedagogues working at elementary schools. The questionnaire consisted of 22 questions. It contained six demographic questions (gender, age, education, occupation, seniority and class), eight closed questions, two open questions, three combined questions and three Likert scales.

Data Analysis

The questionnaire data were manually entered into Excel and then downloaded and processed with the computer program SPSS (IBM SPSS Statistics 22). The following statistical procedures were used to evaluate the questionnaire: Frequency distribution (f, f%) - averages, scatter measures; inferential statistics (t-test). A t-test for a single sample and a t-test for an independent sample were used to analyze the data. The data obtained are presented in the form of tables. All decisions were made at $p \leq 0.05$ and Bonferroni correction where multiple tests were used (see Tables for specific p-value being used).

Results

Opinion on the Systemic Regulation of the School Education of Gifted and Talented Students

The respondents answered on a five-point scale of positions, with 1 not at all, 5 being excellently provided for. In these statements, there are differences between the actual average and the hypothetical average that we calculated ourselves (3 - partly taken into account).

Table 1.

Teachers' Opinion on the Systemic Regulation of the Education of Gifted and Talented Students at Their School

Label variables	\bar{X} - sd	p
Systemic and operational regulation of the education of gifted and talented students.	3.35 (0.94)	0.001
The area of discovering talented and gifted students.	3.50 (0.91)	< 0.001
Educational work with gifted and talented students.	3.39 (0.77)	< 0.001
Concern for the empowerment of educational staff.	3.03 (0.95)	0.815
Help for the pedagogical staff at the school and in supporting external institutions. Support for the pedagogical staff at the school and in supporting external institutions.	3.14 (1.04)	0.241

Legend: The mean value (standard deviation) is displayed. All decisions were made after Bonferroni correction of p-value to 0.01.

Teachers believe that their school best serves the area of discovering gifted and talented students ($\bar{X} = 3.50$ (0.91); $p < 0.001$), somewhat less the area of educational work with them ($\bar{X} = 3.39$ (0.77); $p < 0.001$) and for the systemic and operational regulation of the education of gifted and talented students ($\bar{X} = 3.35$ (0.94); $p = 0.001$). We assume that the systemic and operational regulation of the education and training of gifted and talented students is well provided for at their school. The least care is taken in the area of support of the pedagogical staff at the school and in the support of external institutions ($\bar{X} = 3.14$ (1.04); $p = 0.241$) and in the area of care of the skills of the pedagogical staff ($\bar{X} = 3.03$ (0.95); $p = 0.815$).

Teachers' Opinions on Working with Sports Gifted and Talented Students

We were interested in the teachers' attitude towards gifted/talented students in relation to their length of service. We divided the teachers into two groups. The first group of teachers included teachers with a length of service of 1 to 15 years; the second group included teachers with a length of service of 16 years and more.

Table 2.*Teachers' Attitudes Towards Working with Gifted and Talented Students in Terms of Seniority*

Label variables	»1–15 years«	»16 years and more«	P
Work is a burden to me.	2.38 (1.20)	2.14 (0.86)	0.400
Work is a pleasure for me.	4.38 (0.64)	4.09 (0.76)	0.115
My work represents an extended area of pedagogical work.	3.25 (1,18)	3.21 (1,18)	0.902
My work represents a greater complexity of pedagogical work.	3.33 (1.12)	3.82 (0.93)	0.048
My work represents a greater responsibility for the pedagogical work.	3.50 (1.02)	4.04 (0.91)	0.023
My work represents less knowledge in the field of learning differentiation, individualisation.	2.38 (0.92)	2.68 (1.01)	0.211
The work is more interesting and diverse.	4.21 (0.72)	4.05 (0.74)	0.394
My work presents me with new professional and personal challenges.	4.42 (0.50)	4.23 (0.66)	0.225

Legend: The mean value is given by age (standard deviation). All decisions were made after Bonferroni correction of p-value to 0.0062.

Using the Likert scale of attitudes (1 - not applicable at all, 5 - fully applicable) we found no differences between teachers with shorter length of service and teachers with longer length of services.

Discovering Athletically Gifted and Talented Students at School

Below we present the views of classroom teachers and physical education teachers on discovering gifted and talented students in sports at their school.

Table 3.*Differences between Class Teachers and Physical Education Teachers in Their Attitudes Towards Discovering Gifted and Talented Students in Sports*

Label variables	Classroom teachers	Physical education teachers	P
The process of discovering gifted and talented students in sports at school is extremely demanding.	2.78 (1.05)	2.50 (0.75)	0.182
I work with other educational staff to discover gifted and talented students in sports.	4.03 (0.89)	3.88 (0.96)	0.473
I encounter various problems when registering (nominating) students who are gifted or talented in sports.	3.03 (1.02)	3.00 (1.06)	0.915
My assessment in the process of registering a student as gifted or talented in sport proved to be correct in the further identification process.	3.83 (0.78)	4.00 (0.59)	0.264
I encourage both students who are already successful in sports and those who show potential in sports.	4.75 (0.43)	4.65 (0.62)	0.409
When identifying younger students who are gifted or talented in sports, it is appropriate to take measurements of motor skills.	4.05 (0.84)	4.18 (0.93)	0.531
The results of motor skills measurements are a good indicator of talent in sports.	3.63 (0.83)	3.98 (1.05)	0.103
I have a student in the class who is identified or is in the process of being identified as gifted or talented in sports.	2.35 (1.14)	3.88 (1.13)	< 0.001
I have attended a training to discover and work with gifted and talented students in the field of sports.	1.58 (0.90)	2.03 (1.23)	0.066

Using the Likert's scale of views (1 - I do not agree at all, 5 - I fully agree) we find that there are no major differences between the groups of primary school teachers and physical education teachers, only in the statement "I have a student

in the class who is identified as gifted or talented in sports or who showed statistically significant differences in the recognition process (t -test = - 5,979; $df = 78$; $p < 0,001$). Physical education teachers identified more children who were gifted or talented in sports than class teachers.

Adapting Physical Education for Gifted and Talented Students

Table 4.

Differences between Classroom Teachers and Physical Education Teachers According to the Frequency with Which Physical Education Lessons are Adapted to Gifted and Talented Students in Sports

Label variables	Classroom teachers	Physical education teachers	P
How often do you tailor physical education to gifted and talented students?	2.98 (0.76)	3.20 (0.82)	0.210

Comments. The mean (standard deviation) is displayed.

The T-test for independent samples, taking into account the assumption of homogeneity of variance ($F = 1.148$; $p = 0.287$) between physical education teachers and classroom teachers, showed no differences in the frequency of tailoring physical education lessons to gifted and talented students ($t = - 1.265$ $g = 78$; $p = 0.210$).

In the context of this question we were also interested in which part of physical education the respondents differentiate learning most often, when they differentiate and individualize physical education most often and how often they adapt different forms of learning. The results show that the respondents in the central part of physical education most often differentiate learning ($f = 71$; 88.8%), while in the introductory part (introductory game, special heating) 5% ($f = 4$) of the respondents differentiate learning, but in the final part ($f = 2$) only 2.5% ($f = 2$) of the respondents differentiate learning. Three respondents (3.8%) replied that they do not adapt physical education. We also found that teachers most often differentiate and individualize physical education by consolidating or repeating the acquired subject ($f = 57$; 71.3%). Only 21.3% ($f = 17$) of the respondents differentiate and individualize physical education when dealing with new learning material, while only 5% ($f = 4$) of the respondents adapt physical education when testing and evaluating knowledge.

Discussion and Conclusion

Discovering and accompanying talents for sport and involving them in the coaching process of the sport that best suits their abilities at an early stage is one of the most challenging procedures modern sports science deals with. The desire for early sporting success can lead to a tendency towards rapid specialization. Ambitious encouragement of the child to coach only the chosen sport and thus to give up other leisure activities may hinder the child's concentration on the chosen sport. This, in turn, can increase the risk of recurrent injury and limit further motor, physical, emotional-social and cognitive development.

With a critical review of some Slovenian professional starting points we found this out:

- there are large terminological gaps in the definition of terms referring to talented and gifted students in the field of sport;
- we do not (yet) have a unified conceptual/curricular model in the Slovenian educational area in the field of definition, identification and work with talented students in the field of sport.

From the analyzed quantitative research data we have found that the systemic and operational regulation of the education of gifted and talented students in selected schools is good and that teachers are less well supervised in supporting and developing their competences and skills. Teachers involved in our research report that they are not well enough trained in the subject matter, pedagogical-psychological and didactical-methodological aspects of discovering and working with gifted students, including sports.

We can observe that schools are aware of the importance of discovering these students. On the other hand, the least attention is paid to developing the teacher's skills and abilities in the field of talents and gifts, which may consequently affect the teacher's discovery and work with talented and gifted students. A teacher's competence in working with talented and gifted students is a key factor in ensuring quality work with these children, as it requires maximum adaptation in the pedagogical process. It should be mentioned that higher education programs in Slovenia do not offer a specific subject or training (e.g. specialized studies) on talent, but the contents of this area are embedded

in various study subjects. It is therefore important that teachers attend a variety of training courses to discover and work with gifted students in order to deepen or acquire important knowledge for their higher professional competence.

We must point out that we strengthen the professionalism of the teacher and his or her sense of competence in working with the gifted through high quality training and continuous professional development. Kukanja Gabrijelčič (2015a) even points to a detailed analysis of the current state of a teacher's professional competence and notes that teachers who report a greater number of problems in working with gifted students also feel significantly less competent to work with them. It would be good to provide teachers with several years of additional training for working with gifted and talented students in order to avoid possible problems and thus feel more competent in working with them. Which would probably also influence the fact that they would not have a problem or that they would work with gifted and talented students at all. In this case, however, the following problem arises, which Kukanja Gabrijelčič (2015a) points out on the basis of the analysis of programs for professional development of teachers, namely: the programs offered are not suitable from the point of view of content and didactic-methodological approach; thematic conferences organized by the Institute of the Republic of Slovenia for Education offer rich and interesting content in the field of talents, but the organizer of the thematic conference is a school and not the Institute of the Republic of Slovenia for Education. It is also the burning prize for a particular thematic conference. great interest among educational workers for its implementation. Considering this, we believe that it would be necessary to offer teachers compulsory and multi-year and free or cheap educational opportunities in the field of giftedness, which would have a positive effect on the teacher and at the same time on the optimal development of the students.

We note that teachers do not draw up an individualized learning program for identified gifted and talented students, although the starting points of the program prescribe otherwise, and that teachers with a longer professional life feel more demanding and responsible in their work with gifted and talented students than teachers with a shorter professional life. . We assume that teachers with a longer working life do not have as much knowledge of sports talent and talent as teachers with a shorter working life. We conclude that younger teachers have had content on talent during full-time studies, while older teachers have not acquired much knowledge in this area. Authors and lecturers at the Faculty of Physical Education are increasingly writing about this topic and thus probably also about more awareness and sensitivity of young teachers. The authors Kukanja Gabrijelčič and Čotar Konrad (2015) point out that all teachers must be aware of their basic responsibility in teaching (sports) talent and talented students.

For teachers, working with athletically gifted and talented students means joy, different challenges, interest and diversity. However, despite the fact that the teacher's work is more demanding and extensive, we can conclude from the results obtained that this is not an additional burden for them. On the other hand, teachers agree that they pay too little attention to these students, for example due to lack of time and space, lack of sports equipment and accessories, class size, poorer professional skills, etc.

We also note that the most common problems in discovering and working with athletically gifted students are mainly due to lack of experience, sexual bias, various errors of assessment, one-dimensional assessment of students' talents, overestimation of diligence, more behaviorally oriented students and personal defensiveness towards students. The results of the survey indicate a larger gap, as there is the least agreement of all assertions in determining teacher involvement for continuing education.

On the basis of the results, we make proposals for further pedagogical and scientific research in the field of sports gifted and talented students: i) teachers must provide continuous professional education and training in the field of discovery of and work with sports gifted and talented students in order to facilitate and make work with them more successful; ii) it is necessary to systematize the system of discovery of talented and talented students in the field of sports. As a suggestion we cite e.g. tests that would be updated compared to the sports pedagogy card test and would also be suitable for testing a particular sport; iii) gifted and talented students in sport need to be provided with a more stimulating learning environment and more opportunities to develop talent / giftedness.

Early diversification can also lead to the success of sporting talent and bring important benefits for further participation in sport and the cognitive and personal development of the individual. In order to be able to assess the characterisation of the microstructure of the activities of outstanding sports talents, retrospective reports of young sportsmen and sportswomen must be defined primarily from the perspective of a systematic observation of sports activities. In future studies, it will be necessary to operationalize conceptually the common criteria for determining (discovering and identifying) sports talents (Kukanja Gabrijelčič & Volmut, 2020).

Biodata of Authors



Dr. Tadeja Volmut, assistant professor of didactics of sports at the Faculty of Education of the University of Primorska. Her research interests include lifestyle, motor development and movement and sports habits of children and adolescents. She has published several scientific and professional works, which she presents at domestic and foreign scientific and professional conferences. She is also one of the editors and authors of scientific and professional monographs. E-mail: tadeja.volmut@pef.upr.si Orcid no: 0000-0003-0682-613X



Nika Rajovec, master class teacher. She is involved in teaching children in primary school. The acquired knowledge comes from the Faculty of Education of the University of Primorska. In collaboration with the co-authors, she publishes her first scientific article. E-mail: nika.rajovec@gmail.com



Dr. Mojca Kukanja Gabrijelčič, Assoc. Prof., Senior Research Fellow of Social Sciences at the Faculty of Education, University of Primorska. She is dedicated to educational, professional research and journalism, especially talented and gifted children at pre-school and school level. She also gains research and work experience abroad. She presents her results at domestic and foreign scientific and professional meetings, seminars and conferences. So far, it has written five scientific monographs and more than 60 articles in the field of giftedness in domestic and foreign scientific and professional journals and scientific periodicals. E-mail: mojca.k.gabrijelcic@pef.upr.si Orcid no: 0000-0002-6639-1513

References

- Baker, J. (2003). Early specialization in youth sport: A requirement for adult expertise? *High Ability Studies*, 14(1), 85–94.
- Bela knjiga o vzgoji in izobraževanju v Republiki Sloveniji (2011). Ljubljana: Zavod RS za šolstvo.
- Cumming S. P., Sherar L. B., Pindus D. M., Coelho-e-Silva M. J., Malina R. M., in Jardine P. R. (2012). A biocultural model of maturity-associated variance in adolescent physical activity. *International Review Sport Exerc. Psychology*, 5, 23–43.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge/Taylor & Francis Group.
- Čotar Konrad, S., and Kukanja Gabrijelčič, M. (2015). Professional Competences of Preschool Teachers for Working with Gifted Young Children in Slovenia. *Journal for the Education of Gifted Young Scientists*, 3(2), 65–78.
- Gagné, F. (1999). My convictions about the nature of abilities, gifts, and talents. *Journal for the Education of the Gifted*, 22(2), 109–136.
- García-Caro, R. (2013). *Unleashing the potential of children and young people with high intellectual abilities in the European Union (own-initiative opinion of the Section for Employment, Social Affairs and Citizenship)*. Brussels: European Economic and Social Committee of the European Union.
- Koncept. Odkrivanje in delo z nadarjenimi učenci v devetletni osnovni šoli (1999). Taken from http://www2.arnes.si/~osljik1s/06a_svetovalna_sluzba/gradiva_1415/spletna_stran/nadar/7_konc_nadarjeni.pdf. (25. 4. 2020).
- Kovač, M. in Jurak, G. (2012). *Izpeljava športne vzgoje – didaktični pojavi, športni programi in učno okolje*. Ljubljana: Fakulteta za šport.
- Kovač, M., Jurak, G., Starc, G., Leskošek, B. in Strel, J. (2011). *Športnovzgojni karton. Diagnostika in ovrednotenje telesnega in gibalnega razvoja otrok in mladine v Sloveniji*. Ljubljana: Fakulteta za šport.
- Kukanja Gabrijelčič, M. (2015a). *Nadarjeni in talentirani učenci. Med poslanstvom in odgovornostjo*. Koper: Univerzitetna založba Annales.
- Kukanja Gabrijelčič, M. (2015b). Profesionalni razvoj učiteljev in težave pri delu z nadarjenimi učenci. *Pedagoška obzorja*, 30(1), 112–127.
- Kukanja Gabrijelčič, M. (2017). *Poučevanje nadarjenih učencev v osnovni šoli*. Koper: Založba Univerze na Primorskem.
- Kukanja Gabrijelčič, M. in Volmut, T. (2020). *Poskus konceptualizacije talentiranosti na športnem področju*. Revija za elementarno izobraževanje, prispevek je v pripravi za objavo.
- Petkova, V. A. in Grebennikovaa, V. M. (2016). *Development and assessment of young children's motor giftedness. Annual International Scientific Conference Early Childhood Care and Education, ECCE 2016, 12-14 May 2016, Moscow, Russia*.
- Pfeiffer, S. I. (2012). Current perspectives on the identification and assessment of gifted students. *Journal of Psychoeducational Assessment*, 30(1), 3–9.
- Renzulli, J. S. (1998). *The three-ring conception of giftedness*. In S. M. Baum, S. M. Reis in L. R. Maxfield (ed.), *Nurturing the gifts and talents of primary grade students* (pp.79–96). Mansfield Center, CT: Creative Learning Press.
- Renzulli, J. S. (2016). *The three-ring conception of giftedness*. In: Reis, S. M. (ed.), *Reflections On Gifted Education* (pp. 55–86). Waco: Prufrock Press.

- Schmidt, R. A. in Lee, T. D. (1999). *Motor Control and Learning: A Behavioral Emphasis*. Human Kinetics.
- Subotnik, R. F., Olszewski-Kubilius, P. in Worrell, F. C. (2012). A proposed direction forward for gifted education based on psychological science. *Gifted Child Quarterly*, 56(4), <http://dx.doi.org/176-188>, 10.1177/0016986212456079
- Škof, B. (2010). *Spravimo se v gibanje – za zdravje in srečo gre: Kako do boljše telesne zmogljivosti slovenske mladine?*. Ljubljana: Univerza v Ljubljani, Fakulteta za šport, Inštitut za šport, Fundacija za šport, Center za vseživljenjsko učenje.
- Škof, B. (2014). Značilnosti tekmovalnega športa otrok in mladostnikov ter nekatera zdravstvena tveganja mladih v tovrstnem športu. *Mednarodni razgledi*, 53(4), 565–583. Taken from http://medrazgl.si/arhiv/mr14_4_09.pdf. (25. 4. 2020).
- Škof, B. in Bratina, N. (2016). *Šport po meri otrok in mladostnikov: pedagoški, didaktični, psiho-socialni, biološki in zdravstveni vidiki športne vadbe mladih*. Ljubljana: Univerza v Ljubljani, Fakulteta za šport.
- Štemberger, V. in Filipčič, T. (2014). *Nadarjeni učenci na področju športa v šolskem sistemu*. V M. Juriševič (ur.), Spodbudno učno okolje. Ideje za delo z nadarjenimi v osnovni šoli (pp. 241–249). Ljubljana: Pedagoška fakulteta.
- Učni načrt. Program osnovna šola. Športna vzgoja (2011). Retrieved from http://www.mizs.gov.si/fileadmin/mizs.gov.si/pageuploads/podrocje/os/prenovljeni_UN/UN_sportna_vzgoja.pdf
- Vaeyens, R., Leonir, M., Williams, M. in Philippaerts, R. M. (2008). Talent Identification and Development Programmes in Sport Current Models and Future Directions. *Sports Medicine* 38(9), 703–714.
- Zakon o osnovni šoli (1996). Retrieved from <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/1996-01-0570/zakon-o-osnovni-soli-zosn?h=zakon%20o%20osnovni%20%C5%A1oli>
- Zakon o osnovni šoli (2006). Retrieved from <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2006-01-3535/zakon-o-osnovni-soli-uradno-precisceno-besedilo-zosn-upb3?h=zakon%20o%20osnovni%20%C5%A1oli>
- Zakon o spremembah in dopolnitvah Zakona o osnovni šoli (2007). Retrieved from <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2007-01-5073/zakon-o-spremembah-in-dopolnitvah-zakona-o-osnovni-soli-zosn-f?h=zakon%20o%20osnovni%20%C5%A1oli>
- Zakon o spremembah in dopolnitvah Zakona o osnovni šoli (2011). Pridobljeno <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO6129>
- Zakon o spremembah in dopolnitvah Zakona o osnovni šoli (2013). Retrieved from <http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO6680>