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Articles

The Opinions of Primary School Teachers on Teaching Physical Education and Sports According to Their Qualifications

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Abstract

Introduction: This survey aimed to assess and compare the views of primary-level physical and sports education teachers regarding the teaching of thematic units (TU) in ISCED 1. We specifically examined variations in opinions based on teachers' educational backgrounds, seeking to gain insights into diverse perspectives and contribute to a comprehensive understanding of teaching practices in this context.

Materials and Methods: The survey included teachers from the Prešov and Košice regions of Slovakia, totalling 341 participants, representing 8.17 % of the teacher population. Age distribution ranged from under 30 to over 50, with 63 men (18.48 %) and 278 women (81.52 %). Two groups were identified: the 1st group with a master's degree in elementary and preschool pedagogy (or equivalent), and the 2nd group with a full university education in a related field or a bachelor's degree. The survey, conducted in 2023, utilized both distributed and electronic formats. Statistical analysis involved percentages, the $\chi 2$ test, and correlation assessments for questions on thematic unit popularity and difficulty.

Results: In the results section, it was found that manipulative, preparatory, and sports games was the most popular thematic units among teachers, chosen by more than half of the respondents from both surveyed groups. Conversely, psychomotor and health-oriented exercises were identified as the least popular TU. Basic movement skills were considered the least demanding TU in terms of teaching, while psychomotor and health-oriented exercises were perceived as the most demanding.

Discussion: In terms of statistical significance, we have not noticed any significant differences when comparing responses of teachers with a degree in another field or a bachelor's degree in the field of elementary and preschool pedagogy and teachers with a master's degree in the field of elementary and preschool pedagogy. Notably, we identified a very strong direct correlation between the most demanding taught Thematic Unit (TU) and the least popular taught TU. Furthermore, our observations revealed a very strong indirect correlation between the most demanding and the least demanding taught TU.

Keywords: physical and sports education, primary education teachers, thematic units.

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1. Introduction

1. The teaching profession is a fundamental component of the education sector, recognized as one of the oldest professions. Teachers bear collective responsibility for the preparation, management, organization, and outcomes of the teaching process. According to Průcha, Walterová & Mareš (2013), teachers are expected to actively contribute to the educational environment, organize and coordinate student activities, and monitor the learning process. According to Nelešovská (2005), the challenge of the teaching profession primarily stems from the ever-evolving requirements associated with it, which can be characterized as highly variable at present. In the context of contemporary society, there is a growing demand for a more profound professionalization of the teaching profession.

Professional competences play a fundamental role in defining the teaching profession. They guide the establishment of qualification requirements, influence preparatory and ongoing education, contribute to the evaluation of teachers' quality, and impact efforts to enhance social prestige and financial rewards (Vašutová, 2004). Additionally, Kolář & Vališová (2009) highlight the noteworthy trend of transferring many responsibilities that were previously held by other institutions or social units to the teaching profession.

Among the essential qualities of 1st-grade elementary school teachers, we should not overlook attributes such as a high level of empathy, a positive attitude towards working with children, a commitment to continuous self and student development, a broad perspective, versatility, and multi-functionality. At this stage, teachers play a crucial role in laying the foundation for quality work that significantly contributes to the overall development of their students. In addition to theoretical subjects and didactics, teachers must also excel in the field of teaching education, an integral part of the overall educational system (Průcha, 2019).

As education continues to evolve, the significance of school physical education is also on the rise today (Fialová et al., 2015). According to Vilímová (2009), physical and sports education represents a purposeful educational and developmental endeavor. It influences not only the physical and movement development of an individual to enhance health, increase physical fitness and performance but also aims to establish a lasting relationship between individuals and physical activity. Fialová (2010) contends that school physical and sports education (PE) stands as the most prevalent form of organized physical activity among the young population. This educational subject is characterized by a specific pedagogical objective.

The primary focus of physical and sports education in primary education is predominantly directed toward physical, functional, and movement improvement. At this level of education, it is expected to offer foundational theoretical and practical knowledge in the realm of physical activities and sports. Furthermore, it plays a significant role in fostering the psychological, social, and moral development of students and shaping a positive attitude toward physical activity. Lastly, it fulfills a crucial compensatory function within the overall education process (Zdravie A Pohyb).

Marques (2021) emphasizes the pivotal role of physical and sports education, particularly in the context of the Covid-19 pandemic. During this period, many children experienced social isolation and were unable to participate in physical activities through sports clubs. Consequently, online physical education classes became the sole outlet for students to engage in physical activity.

In their publication, Antala, Šimonek, Čillík & Labudová et al. (2014) perceive physical and sports education as a distinct school subject. They argue that through this subject, the motor skills of children and young people are developed. The lessons provide students with essential information for taking care of their health, offering what is referred to as movement education. This subject plays a crucial role in forming a lifelong relationship with movement activities and, not least, serves as one of the ways to prevent health disorders. Additionally, as noted by Sekota (2015), individuals responsible for teaching physical and sports education classes should recognize the significance of their mission. They play a pivotal role in influencing whether or not students will actively participate in physical activities, even during their free time.

In their studies, Alderman, Benham-Deal, Beighle, Erwin & Olson (2012) and Long, Sobol, Cradock & Subramanian et al. (2013) emphasize that the level of daily and weekly physical activity among young people is significantly influenced by school physical and sports education. For these reasons, our study aims to investigate the popularity of the subject of physical and sports education from the perspective of teachers. The findings of Šimonek (2006) and Verešová (2007) highlight that for many children, school physical education is the primary context in which they engage in physical

activity. Simultaneously, they emphasize that this underscores the significance of fostering positive attitudes toward physical and sports education, a responsibility that extends not only to teachers but also to parents, educators, and coaches. At this juncture, we would like to present the findings of Devahl, King & Williamson (2006), who assert that students' interest in physical activities is heightened through a consistent provision of physical activities within the school environment.

The objective of the survey was to investigate and compare the opinions of teachers instructing physical and sports education at the primary level regarding the teaching of thematic units (TU) included in ISCED 1 within the subject of physical and sports education, focusing on their educational attainment.

2. Materials and methods

Participants

The survey sample comprised teachers from the Prešov and Košice regions of Slovakia. The addressed respondents willingly agreed to complete the questionnaire voluntarily, without the expectation of any reward or financial gain. Simultaneously, they consented to the inclusion of their completed data in the research study and its subsequent publication in relevant analyses.

A total of 341 teachers participated in the survey, representing 8.17 % of the total population of teachers in the Prešov and Košice regions of Slovakia (4169; Štatistická ročenka). The sample size was determined based on conventional criteria, considering the known population size, an estimation error of ± 6 %, a variance of 50 %, and an estimation reliability of 95 % (1 $- \alpha$). The age distribution of the teachers in the sample is as follows:

- 16.72 % of teachers were in the age category under 30 (n = 57),
- In the age category from 31 to 40 years, 30.50 % of teachers (n = 104),
- In the age category 41-50 years, 31.09% of teachers (n = 106),
- -21.70% (n = 74) were in the over 50 age category.

Other characteristics of our survey group reveal that there were 63 men (18.48 %) and 278 women (81.52 %). According to statistics from the SR (Štatistická ročenka) for the 2020/2021 school year, in the given regions, 3,884 women (93.16 %) and 285 men (6.84 %) were employed at the primary level. The survey group is further categorized into two supporting groups of teachers:

- The 1st group consists of teachers with a master's degree in the field of elementary and preschool pedagogy (or teachers with education for the 1st grade of primary schools), totaling 207 respondents.
- The 2nd group comprises teachers with a full university education in a related teaching field or other higher school focus (e.g., Engineering) and a group of teachers with only a bachelor's degree, totaling 134 respondents.

Procedure

The survey was conducted through both distributed and electronic formats. The questionnaire was developed by the authors who administered the survey in 2023.

Statistical analysis

We quantified the results of our study using percentages and employed statistical analysis, including the χ^2 test at the significance levels of p < 0.01 and p < 0.05. Additionally, for questions related to the popularity and difficulty of thematic units (TU), we assessed mutual correlations.

3. Results

The results of our study indicate that the subject of physical and sports education is the most popular subject for a quarter of teachers (see Figure 1). Specifically, the frequency of responses was 30.60 % for respondents with a university degree in another field and 20.29 % for teachers with a full university education in the field of elementary and preschool pedagogy (MA). Figure 1 illustrates that the subject of physical and sports education is equally popular as other subjects for the majority of teachers in both monitored groups, with a response frequency exceeding 60 %. Less than 3 % of respondents do not teach this subject, while almost 10.63 % of teachers with a degree in elementary and preschool pedagogy consider it the least popular. We attribute this perception to the teachers' awareness of the difficulty of teaching this subject, given its specific nature. In terms of statistical evaluation, we did not find significant differences (p > 0.05) when comparing our sets of teachers (see Figure 1).

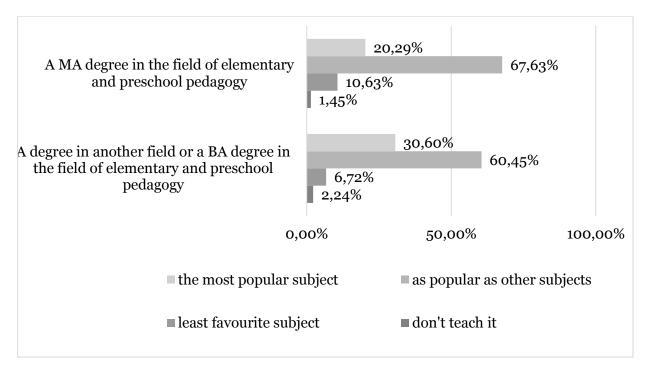


Fig. 1. Popularity of teaching the subject of physical and sports education by teachers (p= 0.1188; $\chi^2_{(3)}$ = 5.855)

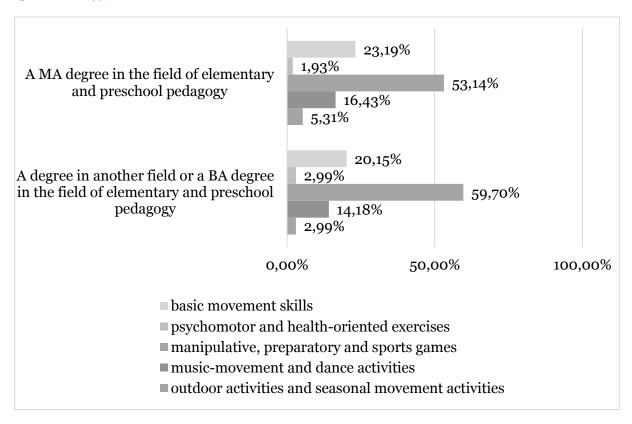


Fig. 2. The most popular taught TU from the Sports activities in the movement regime by teachers (p=0.623; $\chi^2_{(4)} = 2.621$)

In other sections of our survey, we directly addressed the teaching of fundamental thematic units, which, as outlined in the state educational program for physical and sports education, fall under the category of sports activities in the movement regime. Our findings reveal that over half of the respondents consider manipulative preparatory and sports games as the most popular thematic

group taught (see Figure 2). The second most popular thematic unit, across both monitored groups of teachers, was basic movement skills. Conversely, the thematic unit of psychomotor and health-oriented exercises received the lowest frequency of responses, not exceeding 3% in any of the evaluated sets. We anticipate that in the subsequent question, this thematic unit will be identified as the least popular among teachers. Our statistical analysis did not reveal significant differences at the p > 0.05 level (see Figure 2).

In the subsequent question of our survey, we aimed to identify the least popular thematic unit among teachers. Our earlier assumption, based on the evaluation of the popularity question, was validated, as both groups of teachers assessed psychomotor and health-oriented exercises to be the least popular teaching thematic unit. The response frequency for teachers with an education in the field of elementary and preschool pedagogy (MA) was 38.65 %, and for teachers with education in other higher fields, it was 35.07 %. The second least popular taught thematic unit, in order, was music-movement and dance activities, with an average marking of nearly 33 % of respondents in their answer forms. Notably, there was a higher frequency of responses among teachers with a full education in the field of elementary and preschool pedagogy.

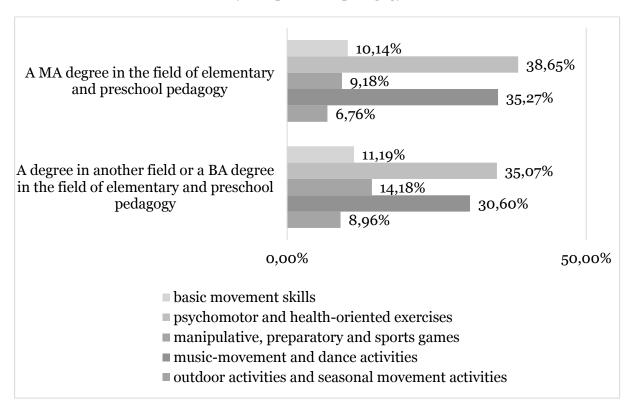


Fig. 3. The least popular taught TU from the Sports activities in the movement regime by teachers (p= 0.519; $\chi^2_{(4)}$ = 3.231)

In our survey, we sought to determine from the respondents which thematic unit they consider the least demanding from the perspective of teaching. We discovered that both groups of teachers we monitored identified the TU basic movement skills as the least demanding, with over 40 % of teachers indicating it in their response forms (see Figure 4). In order, the second least demanding taught thematic unit, from the viewpoint of teachers with a master's degree in the field of elementary and preschool pedagogy, was 'outdoor activities and seasonal movement activities, with a response frequency of 24.15 %. The third least demanding thematic unit was manipulative preparatory and sports games, receiving 18.36 % of responses. In the group of teachers with an education of a different focus, the order in 2nd and 3rd place was reversed. The frequency of responses for the thematic unit of outdoor activities and seasonal movement activities reached the value of 18.66 %, while for the thematic unit of manipulative preparatory and sports games, the value was 23.88 %. Figure 4 further illustrates that psychomotor and health-oriented exercises and games received the lowest average score in terms of the difficulty of teaching, with a frequency of responses

less than 5 %. Even when evaluating this question from the perspective of the observed groups of teachers, we did not observe significant differences (p > 0.05; p = 0.476; $\chi^2_{(4)}$ = 3.511).

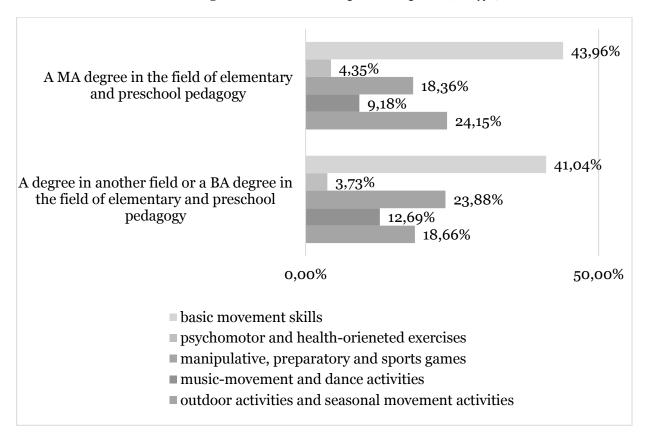


Fig. 4. The least demanding TU taught by teachers from the Sports activities in the movement regime

As part of the survey, teachers were asked to identify the most demanding thematic unit from the perspective of teaching. Figure 5 unmistakably illustrates that psychomotor and health-oriented exercises and games were marked as the most demanding thematic unit taught, according to both sets of teachers monitored by us, with a response frequency exceeding 41 %. The second most demanding thematic group taught was the group of music-movement and dance activities, which, on average, was marked by 24 % of the teachers. The thematic unit Basic movement skills received the lowest average response score from the perspective of the difficulty of teaching, with a frequency of responses not exceeding 7 %. When evaluating this question from the viewpoint of the teachers in the observed groups, we did not observe any significant differences in the answers, indicating a statistically insignificant chi-square value ($\chi^2_{(4)} = 3.082$; p = 0.544).

Among teachers with experience up to 15 years, the most demanding taught thematic group was Activities in nature and seasonal physical activities, with 31.94 % of teachers indicating it. In the order of the second most demanding taught thematic group, Basic movement skills received 29.17 % of responses. We attribute this observation to the fact that teachers in this age group encountered the issue of teaching psychomotor skills during their studies at university.

The final question of our survey aimed to determine whether teachers would be interested in participating in training on the issue of teaching physical and sports education at the primary level. The results presented in Figure 6 clearly show that more than 50 % of teachers from both groups we monitored express interest in expanding their knowledge and understanding through such training. Almost a quarter of teachers have already completed training of a similar nature, while 17 % of teachers stated that they are not interested in training and can acquire the knowledge independently. On average, 5 % of teachers consider the training to be ineffective and unnecessary. Notably, when evaluating this question (see Figure 6), the teachers' answers from the perspective of

the observed groups were very balanced and close, a trend also reflected in the statistical evaluation, where no significant differences in the answers were observed (p = 0.601; $\chi^2_{(3)}$ = 1.861).

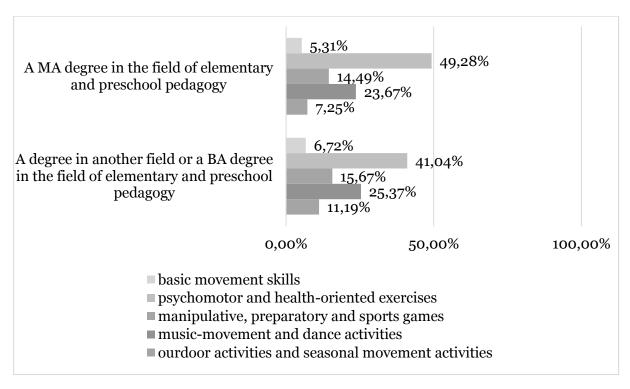


Fig. 5. The most demanding TU taught by teachers from the Sports activities in the movement regime

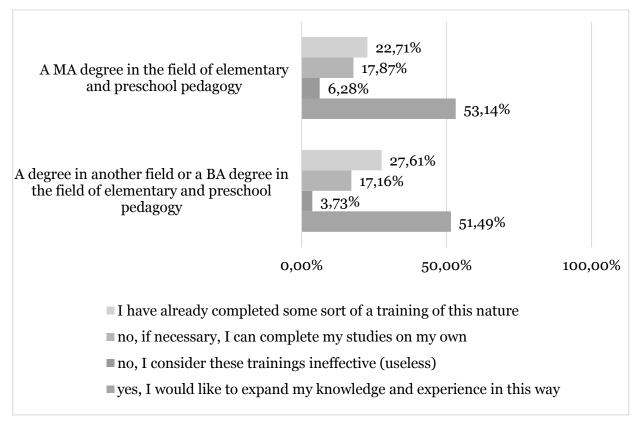


Fig. 6. Teachers' interest in further education dealing with the issue of physical education at the primary level of education

We subsequently delved into exploring correlation relationships (Tables 1 and 2) to investigate the dependence of the popularity or unpopularity of taught Thematic Units (TU) in relation to the level of difficulty in teaching. In the group comprising teachers with a university degree in a related field and teachers with only a bachelor's degree in the field of elementary and preschool pedagogy (see Table 1), we identified a very strong direct dependence between the most demanding taught TU and the least popular taught TU. Additionally, we observed a very strong indirect dependence between the most demanding and the least demanding taught TU. Simultaneously, a moderately strong correlation between the least demanding and the least popular teaching TU was also recorded.

Table 1. Correlation analysis of the responses from teachers with university studies of a different focus and those with a bachelor's degree in elementary and preschool pedagogy (n = 134)

	Most popular TU	Least popular TU	Least demanding TU	Most demanding TU
Most popular TU	1			
Least popular TU	-0.32382355	1		
Least demanding	0.382726041	-0.772631	1	
TU				
Most demanding TU	-0.32377794	0.93951576	-0.875393	1

Notes: + direct correlation dependence; - indirect correlation dependence; *** very strong dependence (r = 0.8 to 1 or -0.8 to -1); ** moderate dependence (r = 0.4 to 0.8 or -0.4 to -0.8); * weak dependence (r = 0 to 0.4 or -0.4 to 0)

In the group of teachers with a master's degree in the field of elementary and preschool pedagogy (see Table 2), we observed a very strong direct dependence in the relationship between the most demanding taught TU and the least popular taught TU. Additionally, there was a very strong indirect dependence between the most demanding taught TU and the least demanding taught TU. A moderately strong indirect correlation was also noted between the least demanding taught TU and the least popular taught TU.

Table 2. Correlation analysis of teachers' responses with a master's degree (MA) in the field of elementary and preschool pedagogy

	Most popular TU	Least popular TU	Least demanding TU	Most demanding TU
Most popular TU	1			
Least popular TU	-0.46218535	1		
Least demanding TU	0.223951561	-0.75835498	1	
Most demanding TU	-0.40043206	0.87528793	-0.8081550	1

Notes: + direct correlation dependence; - indirect correlation dependence; *** very strong dependence (r = 0.8 to 1 or -0.8 to -1); ** moderate dependence (r = 0.4 to 0.8 or -0.4 to -0.8); * weak dependence (r = 0 to 0.4 or -0.4 to 0)

4. Discussion

Our findings align with those of several studies. For instance, Adamčák & Kozaňáková (2019), in their survey conducted in the Stropkov district, discovered that up to 73 % of female teachers and almost 39 % of male teachers view the subject of physical and sports education as popular as other subjects. Notably, for 38.89 % of teachers, physical education and sports education are considered the most popular subjects. According to Novotná & Adamčák (2020), nearly half of the interviewed teachers consider physical and sports education to be as popular as other subjects. Furthermore, Novotná & Mačáková (2020) assert that for over 60 % of teachers,

physical and sports education is their favorite subject, akin to other subjects. Michal (2021), in a study involving 145 participants, also observed high popularity of teaching this subject, particularly in terms of teaching experience among primary-level teachers. The study found that 15.28 % of teachers with up to 15 years of experience and 34.25 % of teachers with more than 16 years of experience stated that physical and sports education is their most popular subject. Additionally, over 30 % of teachers with experience up to 15 years and more than 40 % of teachers with experience over 16 years regard physical and sports education as popular as other subjects. The study also notes that for teachers with up to 15 years of experience, over 30 % consider it the least popular subject, and up to 18.06 % of teachers do not teach this subject.

Insights into the popularity of physical and sports education from the students' perspective are gleaned from numerous research studies. For instance, Rychtecký & Fialová (2002) confirmed that 51-66 % of pupils include it among the five most popular subjects. Bartík (2007), examining the attitudes of primary-level students toward physical and sports education in six selected schools in Banská Bystrica, found that up to 72.35 % of pupils expressed a very positive or positive attitude. Adamčák & Nemec (2010), with a sample of 1,095 elementary school students, noted that school physical and sports education ranks among the favorite subjects for the majority of students, with popularity exceeding 68 % among boys and over 32 % among girls. Antala, Labudová, Šimonek & Strešková et al. (2012) highlight that the subject of physical and sports education is very popular (52.8 %) or a favorite (33.8 %) subject, particularly among elementary school boys.

Similar findings were also documented in the study conducted by Novotná & Adamčák (2020), where, with a sample of 300 primary education teachers, preferences for teaching Thematic Units, specifically manipulative, preparatory, and sports games, were noted to be the highest among all TUs taught, with an average of 47 % of responses indicating their popularity. In his survey, Michal (2021) delved into the popularity and difficulty of TUs taught at the primary level. He found that teachers with more than 16 years of experience show a preference for teaching TU basic movement skills (31.51 %), while teachers with up to 15 years of experience favour TU activities in nature and seasonal physical activities, garnering 36.11 % of responses. Additionally, psychomotor and health-oriented exercises, along with music-movement and dance activities, received the lowest response scores among TUs.

In a survey conducted by Adamčák, Kozaňáková & Kollár (2018) in selected regions of Slovakia among teachers of physical and sports education at the 2nd grade of primary schools (n = 151), the popularity of teaching TU sport games was evident, with up to 65 % of teachers expressing a preference for this TU. Moreover, research studies from the perspective of pupils, including those by Slezák & Melicher (2008) and Antala, Labudová, Šimonek & Strešková et al. (2012), as well as Nemec & Adamčák (2013), emphasize that TUs with content focused on movement or sports games are highly popular among students.

Our findings align with previous observations made by Novotná & Adamčák (2020), where we discovered that TU music-movement and dance activities is the least popular among teachers, not only in rural schools (38.24 % of responses) but also in urban schools (41.46 % of responses). This trend is consistent with the findings of Michal (2021), indicating that TUs music-movement and dance activities, along with psychomotor and health-oriented exercises, are among the least popular among teachers, both with up to 15 years of experience and those with experience exceeding 16 years. Palovičová (2006) suggests that the insufficient preparation of teachers during university studies could be one of the reasons for the low popularity of music-movement and dance activities.

The study conducted by Novotná, Hubinák & Kollár (2015), focusing on teaching units dedicated to psychomotor skills, reveals that such classes often lack dynamism and playfulness in practice. This deficiency is evident as students tend to lose interest in these activities relatively quickly. Blahutková, Kücheleva, Nadolská & Sližik (2017) highlight the importance of considering psychomotorics within the broader system of physical education. As a movement activity, psychomotorics can be integrated into all parts of the teaching unit, including the introductory, busy, main, or final stages, with particular attention to the age characteristics of the pupils.

According to Michal (2021), teachers with up to 15 years of experience (n = 72) find TUs basic movement skills and psychomotor and health-oriented exercises and games (27.78 %) to be the easiest to teach. On the other hand, teachers with more than 16 years of experience (n = 73) consider basic movement skills as the easiest TU to teach, with a response rate of 21.92 %.

In the research conducted by Kremnický (2019) among teachers of the 2nd grade of elementary schools, it is revealed that, from the perspective of female teachers, 64 % believe that gymnastics is among the demanding TUs, while only 36 % think it is not more demanding than other TUs. Conversely, among male teachers, 64 % believe that gymnastics is more demanding than other TUs, with 27 % of teachers considering general gymnastics to be among the demanding thematic units.

According to teachers, the most common reasons for the difficulty of TUs include the potential risk of injury, challenges in performing demonstrations, difficulties in correcting mistakes, lack of interest, and insufficient overall preparation of pupils.

Novotná, Hubinák, and Kollár (2015) addressed the challenges of teaching TUs at the primary level, specifically focusing on psychomotor and health-oriented exercises and games. They identified a significant problem – teachers' lack of interest in the content, insufficient theoretical and practical skills, and limited experience in teaching this particular TU. Additionally, they noted that teachers often struggle to distinguish between psychomotor and movement games. The use of non-traditional aids and the teacher's shift to a new role as a manager further contribute to the difficulty of teaching these TUs (Blahutková et al., 2017). Palovičová (2006) and Michal (2021) echoed these challenges, highlighting issues such as inadequate material conditions and insufficient preparation of teachers during university studies.

Michal (2021) discovered that 33.33 % of teachers with up to 15 years of experience express interest in further education, while 27.78 % believe they can acquire knowledge independently. Among teachers with over 16 years of experience, 20.55 % show interest in further education, while 8.33 % of those with less than 15 years and 10.96 % of those with more than 16 years express no interest. Additionally, the survey reveals that almost 21 % of teachers with over 16 years and 13.89 % of those with up to 15 years lack sufficient financial resources for additional education. Novotná-Mačáková (2020) indicates that the majority of teachers (51.85 % from urban schools and 44.44 % from rural schools) welcome further education on teaching physical and sports education at the 1st grade of primary schools. While 37.04 % of teachers from rural schools consider it unnecessary, only 3.7 % of teachers in urban schools share this view. Novotná-Adamčák (2020) found that teachers with up to 5 years of experience (n = 300) are interested in training for physical education and sports education at the primary level, with 56.62 % of teachers in rural areas and 63.41 % in cities showing interest. On the other hand, 11.76 % of rural teachers and 2.44 % of urban school teachers consider the further education ineffective.

5. Conclusion

While we did not observe significant differences in responses based on the level of education, certain key findings stand out in our survey:

- On average, 64 % of primary level teachers consider physical education and sports as popular as other subjects, and 25 % regard it as the most popular subject;
- The most popular TU taught by teachers in both observed groups is manipulative, preparatory, and sports games, with an average response frequency of 56 %;
- Psychomotor and health-oriented exercises and games, along with music-movement and dance activities, were identified by over 30 % of teachers as the least popular TUs in both groups;
- Basic movement skills TU is perceived as the least demanding by teachers, with over 41 % of responses;
- Psychomotor and health-oriented exercises and games emerged as the most demanding TU, with more than 41 % of teachers expressing this view;
- More than 50 % of teachers indicated an interest in practical training related to teaching physical and sports education, particularly at the primary level;
- Mutual correlation analysis revealed a very strong direct correlation dependence between the most demanding and least popular TUs in both groups, indicating a noteworthy relationship.

The findings from our study underscore the need for a more comprehensive focus on specific TU – notably psychomotor and health-oriented exercises, as well as music-movement and dance activities – not only in the training of future teachers specializing in physical and sports education at the primary level but also in the design and implementation of ongoing professional development courses. These TUs pose challenges for teachers with a master's degree in preschool and elementary pedagogy, as evidenced by our results. The inherent difficulty in teaching these

subjects correlates with their high level of unpopularity among teachers, which likely impacts the quality of instruction during these lessons.

The substantial interest expressed by almost 50 % of teachers in practical training courses underscores the significance of opportunities to enhance their theoretical and practical skills, particularly concerning these challenging subjects. Such training initiatives have the potential to contribute significantly to the improvement of the overall quality of physical education and sports instruction at the primary level.

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