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The Teachers' Approach to the Theoretical Knowledge Taught in Online Physical Education Classes during the Covid-19 Pandemic

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Abstract: Context: In the current period, researchers in the field of physical education (PE) have highlighted the need for a theoretical component to support practical activity. This aims to provide students with a rational understanding of the objectives, principles and concepts underlying this discipline. Objective: The Covid-19 pandemic forced the Romanian government to move the educational process to the online environment. So, given this situation, we tried to find out if the PE teachers chose to teach theoretical content during this period. Procedure: A two-part questionnaire was designed for PE teachers: in the first part demographic information is requested, and in the second part, they were asked to provide answers to 8 items. For each item in the second part, teachers had to choose from 5 answer options built on the likert scale: <Not at all>, <A little>, <Enough>, <Much>, <Very much>. Results: The teachers said that they taught <Much> or <Very much> nutritional knowledge (43%), behavioral knowledge 48% and information about famous athletes (46%). But, 53% of them said they used the PE textbook <A little> or <Not at all>. Conclusion & Recommendations: During the period in which physical education took place online, the teachers stated that they taught a vast theoretical content. However, for the most part, the contents taught were not those in the PE textbook. In the future, clearer delimitations of the importance of theoretical knowledge are needed, as well as clarifications regarding the theoretical contents that must be mastered by students.

Keywords: *physical education, theoretical knowledge, covid-19, online physical education.*

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1. Introduction

Society's perception of physical education (PE) has always been one that many experts consider flawed. For example, Kirk & Tinning (1990) notice that this school subject has always seemed to be struggling to exist, and specialists in the field have had to make a constant effort to regularly demonstrate the role of physical education in the school curriculum. Following the same line of thought, Paechter (2000) observes that school subjects that involve the use of the body, such as physical education, usually have an inferior status, even if most of the time they are compulsory. But what is worrying is that this perception is encountered just as strongly even in the academic world of the school, among teachers and school managers.

In an overview of the macro-structure on which the process of teaching physical education is built, there are several models such as: "Sport Education", "Teaching Games for Understanding (TGfU)", "Teaching Personal and Social Responsibility (TPSR)" and "Adventure Based Learning". In addition to these, in response to contemporary requirements, another model, called "Health-Related" was born (Landi et al., 2016; Metzler et al., 2013) In addition to all these models, Kirk (2010) highlights an approach that can be adapted to all, one in which practical activity is supported by a theoretical one that gives the former a complete and rational understanding.

In any learning process, regardless of the subject, there is a mix between a theoretical and a practical component - which mutually support each other (Alexe et al., 2020; Predoiu et al., 2019). So, when one of them is neglected, the other suffers. In physical education, the two components (i.e. the theoretical and practical ones) have their own representations and their complementarity is as important as in any other field. On this topic, more and more researchers draw attention to an imbalance between the theoretical and the practical components regarding PE (Cale & Harris, 2018; Castelli & Valley, 2007; Corbin, 2002; Jones & Penney, 2019).

The role of theoretical knowledge in the physical education lesson is presented by Corbin (2021) in the form of a six-step stairway. (Fig.1)

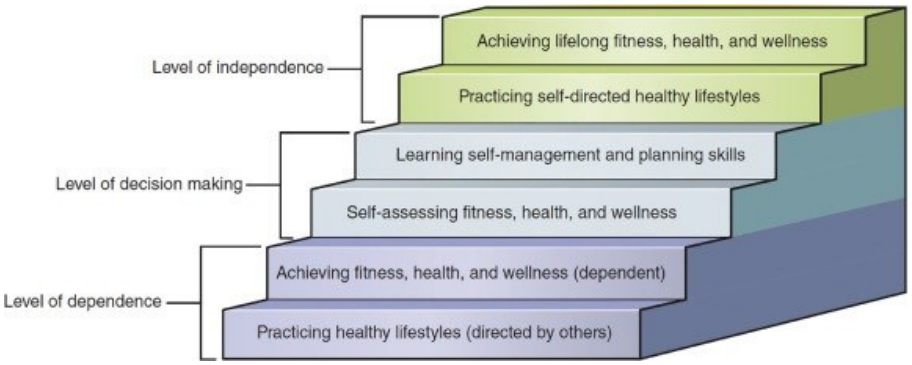


Fig.1. Stairway to Lifetime Fitness, Health and Wellness (Corbin, 2021, **p.** 3)

In this interpretation, the first two steps represent the level of dependence on the activity leader, in the case of the physical education lesson being the physical education teacher. At this level, the student practises physical activity under the guidance of the teacher (step 1) and thus can obtain the benefits associated with practising physical activity. (step 2) But all this occurs under the sign of a relationship of dependence on the teacher that runs the activity. The second level is the level of decision-making, and this level involves the acquisition by the student of some theoretical notions. Here, the student learns how to self-asses his fitness, health and wellness (step 3) and he also learns self-management and planning skills (step 4). The last level refers to the level of independence, here the student is able to practise physical activity autonomously (step 5) and thus obtain benefits for the entire life (step 6). From this representation, it can be seen that the level of decision-making makes the transition from a level of dependence to a level of independence. And this level of decision-making involves mastering specialized theoretical knowledge.

The need to deepen the theoretical component of the physical education subject is supported by the research of Hargreaves (2003), who emphasizes the differences between contemporary society, for which he uses the term "post-modern", and the previous one, which he calls "modern". The author refers to the latter as having an industrial character, in which, in the process of education, the student received a predetermined content that he had to learn by heart or execute without asking "why". On the other hand, post-modernism is characterized by critical thinking and, in the educational process, the student must learn how to learn. Hargreaves' (2003) observations may be extrapolated in the physical education field as far as the importance of a rational understanding by the student of the whole process is concerned. And this understanding implies emphasizing the approach of a

theoretical component in the physical education class, as a necessity of the contemporary society that Hargreaves (2003) calls "knowledge-society".

In Romania, the theoretical component of PE is increasing in popularity, starting with the educational reform that brought significant changes to the curricula (Ministry of Education, 2013; 2014; 2017a) These curricula also include some theoretical content, in addition to the practical content that should be taught to students. In addition to these changes, there is a specialized textbook for 5th and 6th grades - and this textbook contains only theoretical knowledge (Ministry of Education, 2017b; 2017c; 2017d; 2018).

Given the fact that the pandemic generated by the SARS-COV 2 virus forced the Romanian government to move the entire educational process to the online environment, we wanted to find out if physical education teachers chose to teach this theoretical component in the current context.

So, we set out to: (1) ask teachers what theoretical content they chose to teach during their online classes, (2) the extent to which they taught each content, and (3) ask them if they used the specialized textbook as a source of information for the theoretical knowledge.

2. Procedure

In the first stage, a questionnaire was developed, which aims at obtaining the necessary data to meet the objectives set by this study. The questionnaire was developed on the Google Forms platform and consists of two parts: the first requires demographic data about each teacher (Table 1), and the second part requires answers related to the theoretical component taught during online physical education classes (Table 2).

Table 1. Demographic information
Source: Authors' own conception

1st part - Demographic information	
Section no.	Requested information
1.	The gender
2.	The county in which he/she teaches
3.	Experience in teaching physical education
4.	The area where he/she teaches (urban / rural)
5.	The age group he/she teaches

Table 2. The theoretical component
Source: Authors' own conception

2nd part – The theoretical component	
No.	Item
1.	During online PE classes, the rules of sports games are taught.
2.	During online PE classes, hygiene notions are taught.
3.	During online PE classes, nutrition notions regarding students' general development are taught.
4.	During online PE classes, information on famous sportspeople from different sport branches are taught.
5.	During online PE classes, notions regarding the behaviour are taught.
6.	During online PE classes, sport-specific notions are taught. (the history of PE, the Olympics, fair-play, etc.)
7.	During online PE classes, PE-specific notions are taught.
8.	During online PE classes, I use the PE textbook.

To answer each item in the second part of the questionnaire, the one related to the theoretical component, the teachers had to choose from five possible answers, designed according to the Likert scale: <Not at all>, <A little>, <Enough>, <Much> or <Very much>.

In the second stage, after being drawn up, the questionnaire was distributed in the form of a link to physical education teachers in 6 counties of Romania: Galați, Brăila, Vrancea, Vaslui, Iași and Botoșani. The data collection took place between December 1, 2020 and January 15, 2021.

This study was approved by the Ethics Committee of the Faculty of Physical Education and Sport, "Dunărea de Jos" University of Galați, and all the procedures were conducted in accordance with the Declaration of Helsinki and participants to research gave informed consent before participating in the study.

3. Results and discussions

A number of 400 teachers who teach physical education responded to our request to fill in the questionnaire. Regarding the first part, in which demographic data were requested about the teachers who answered, 55.5% (N = 222) were men and 44.5% (N = 178) were women. The distribution on the counties they come from was as follows: from Galați there were 35.5% (N = 142), from Brăila 8% (N = 32), from Vrancea 4% (N = 16), from Vaslui 24.5% (N = 98), from Iași 11.5% (N = 46) and from Botoșani were 16.5% (N = 66). Related to the work experience of teachers within the physical education department, 22% (N = 88) have between 0 and 5 years of

experience, 25.4% (N = 102) have between 5 and 10 years of experience, 23.8% (N = 95) between 10 and 15 years, 17.3% (N = 69) between 15 and 20 years, and 11.5% (N = 46) have over 20 years of experience in teaching this subject. Also, among the responding teachers, 62.5% (N = 250) teach in urban areas and 37.5% (N = 150) teach in rural areas. At the last item, that requested demographic data, the one related to the level of students they teach, 54.5% (N = 218) of teachers teach 0-4th graders, 19.5% (N = 78) teach grades 5-8, whereas 26% (N = 104) teach grades 9-12.

From these data it can be seen that the teachers who responded to our request come from various backgrounds. In terms of gender, there were a few more men but, nevertheless, the percentage of female teachers (44.5%) brings a balance. The distribution by counties is a less balanced one and the differences are due to the updates of the databases with the contacts of the physical education teachers from each county. However, the highest percentage is 35.5% (Galați), so none of the counties has a percentage of over 50%.

The 5 thresholds of experience of the responding teachers are all quite well represented, so that the percentages vary from the lowest being 11.5% (over 20 years of experience) and the highest 22% (between 0 and 5 years of experience). The school levels taught by the 400 teachers are also represented, with a majority of 54.5% in grades 0-4. Also, both urban and rural areas find representations among teachers (62.5% and 37.5%, respectively).

All these results, in the first part of the questionnaire, give it a high degree of relevance, given the fact that it presents an image from a significant group of physical education teachers who represent different typologies, according to several classification categories.

The second part of the questionnaire focused on the theoretical content taught by each teacher during the online PE lessons. (see Table 2) The results of the teachers' answers to the items of the second part of the questionnaire are presented in Fig. 2. We chose to group the percentages of teachers who answered <Not at all> or <A little> and to represent them with the help of the red bar, with the yellow bar we kept the percentages of teachers who answered <Enough>, and the green bar represents the percentage of teachers who answered <Much> or <Very much>.

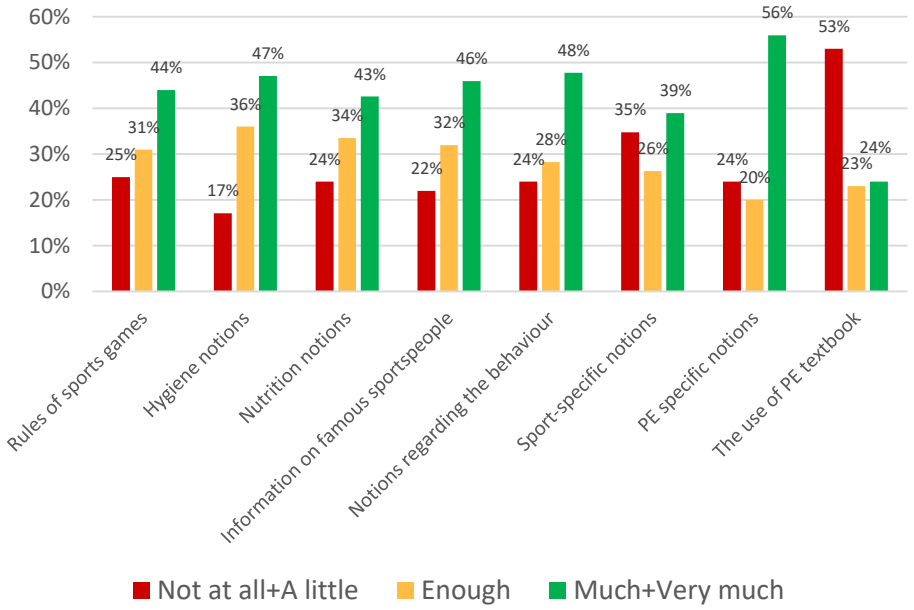


Fig. 2. The theoretical component
Source: Authors' own conception

From the teachers' answers to the first 7 items, it can be seen they state that during the period when the physical education lesson took place online, they taught a rich theoretical content that covered all 7 topics we chose to ask about.

According to the main authors who guide the training of Physical Education and Sports teachers, all the topics covered by the first 7 items (rules of sports game, hygiene notions, nutrition notions, etc.) are notions that any student should master, having in view the component of the educational process called "specialized theoretical knowledge" (Cârstea, 2000; Dragnea et al., 2003).

Teachers have chosen to teach this theoretical content even though they have never been trained how to teach this theoretical component. In college, future physical education teachers in Romania are trained in teaching only a practical component.

This fact highlights the need for future physical education teachers to be trained regarding the necessary techniques used in teaching a theoretical component of this school subject. Universities such as Arizona State University, Appalachian State University or The Ohio State University

have already taken action in this direction and offer courses for future physical education teachers covering topics such as: methods of presenting theoretical content; use of materials and conducting discussions; tools for assessing the level of theoretical knowledge (Corbin et. al, 2020).

On the other hand, regarding the last item (no. 8), the one in which we asked about the use of the specialized textbook, 53% of the teachers answered that they used it <A little> or <Not at all>. This situation indicates the fact that these teachers have decided to teach theoretical content that comes from sources outside the textbook. Now, the question arises as to the quality of this information. We can also ask ourselves if these teachers have the ability to select, order and program this theoretical content, reminding once again that no one was prepared to teach this theoretical content.

The results obtained at item no. 8, can be attributed to the fact that, during the professional training of these teachers, there was no specialized textbook, and therefore such material represents a novelty. Another reason is the lack of a methodology for working with the textbook. In the absence of instructions, teachers seem to ignore the textbook - as our results show.

By way of conclusion, we would like to point out that the teachers participating in our study, by choosing to teach important theoretical content during online education, seem to align with what Hargreaves (2003) calls the "knowledge-society" – within which any practical application must be supported by a thorough theoretical understanding of the phenomenon.

In a similar study, Jeong & So (2020) highlighted the lack of experience and problems faced by physical education teachers when they are put in the situation of teaching this discipline online. In the conclusion of the paper, the authors draw attention to the need for clarification on the content to be taught in online physical education lessons, but also on teaching methods and forms of assessment.

In another study, which also focuses on teaching the subject of physical education online, Yu & Jee (2021) presents a series of problems that occur in the educational process among both students and teachers. Among the solutions proposed by these researchers are the continuous feedback from students and the preparation of teachers to teach in this format.

The main aspect that stands out both in our paper and in the studies presented above, is the need for teachers to be better prepared for the types of content that should be taught in physical education lessons conducted online.

4. Limitations

One of the limitations of our study is that the questionnaire used could not establish the amount of theoretical notions taught. Another limitation is that, in the absence of a standardized assessment, teachers performed a self-assessment of their activity during online teaching. Regarding the sample of teachers participating in the survey, we consider that the results are only representative in order to highlight the perception of Romanian teachers towards a theoretical component that will complement the practical one, in teaching Physical Education and Sports.

5. Conclusion & Recommendations

Given that, in the international environment, the approach according to which the discipline of physical education is regarded as a mix between theory and practice (Corbin et al., 2020; Jones & Penny, 2019) has become increasingly common, our study shows that Romanian physical education and sports teachers adhere to this approach, considering the theoretical component an important one in the educational process. This fact is highlighted by the vast content of theoretical subjects that they chose to teach in this period of online education.

The textbook proposed by the Ministry of Education seems to be more rejected than used, and here an important factor is the lack of a methodology for working with the textbook. Even during this online teaching period, when teachers found themselves in a confusing situation, more than half of them chose to ignore it or use it just a little. All this leads to the need for a clear regulation both of the place that the textbook occupies in teaching this subject, but also of the theoretical content that the students should acquire.

The specialized textbook should be the official document that presents a unitary theoretical content to be taught to students. Using a textbook to teach physical education is not new in countries with high-performing education systems, such as Australia, America or Japan. In America, for example, we find an approach that involves, before any physical activity, theoretical study using a textbook/a printed material (Corbin, 2021).

One of the main contributions of this study is that it brings to the fore a component of the educational process in the discipline of Physical Education and Sports, to which too little attention is paid - namely "specialized theoretical knowledge".

Considering, on the one hand, this study and, on the other hand, the international trend regarding this discipline, we consider it necessary for this component of theoretical knowledge to receive more attention from the researchers in the field.

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