

EFFECTIVE MODIFICATIONS FOR CREATIVE PHYSICAL AND HEALTH EDUCATION

UDC: 37.015.31:796.035

(Original scientific paper)

Viktor Mitrevski¹, Aleksandar Aceski²

Faculty of Education, University St. Kliment Ohridski – Bitola, Macedonia

Faculty of Physical Education, Sport and Health, University Ss. Cyril and Methodius – Skopje, Macedonia

Abstract

One of the most frequently asked questions after the changes in physical and health education of the youngest students is, whether and what effects will be achieved and how much the changes will contribute to the comprehensive and harmonious development of students of this age. A question that is debated not only by experts and competent people, but also by the general public, and we believe it deserves much broader attention, including deeper research analysis, on the basis of which relevant conclusions can be drawn. Current knowledge indicates that teaching is mainly focused on recreational exercise, and the content of the lesson is often based on children's games that are often not aligned with the goals and needs. In the context of all this, we conducted a preliminary research aimed at discovering two important components: the teacher's creativity and willingness to organize and deliver the teaching process and its role in the process of knowledge management.

Keywords: *change, management, effects, need, education*

Introduction

So far findings indicate that physical and health education in the youngest school age is insufficiently effective and does not meet the set goals. There are several reasons for such situations: a). Insufficient teacher promptness, expertise, and commitment to physical and health education classes often followed by superficial demotivation and improvisation; b). Conducting traditional instruction that is more focused on managing and guiding students, rather than leading where the teacher will participate in managing physical exercise processes and activities; c). Lack of working conditions and incomplete implementation of curricula and meeting the needs and requirements of students.

The question remains after the introduction of specialized and competent persons in the teaching process in the youngest student categories (1st-5th grade), whether the predictions in the concept of physical education will be achieved and to what extent the freedom of the teacher's creativity can be expressed in the planning of teaching, in consideration of the reasons or factors affecting the implementation of the curricula. Certainly, taking into account the influence and the fact that the teacher is a key component to the successful dissemination and use of students' knowledge. The achievements of the students in the educational process are the basic indicator of the efficiency of the teaching process. In physical and health education it is important to monitor educational outcomes, where student outcomes represent a unity of several components, each of which has its own significance.

It is usual to monitor and assess sports-technical knowledge (skills), motor abilities, and components such as: general and particularly knowledge of students' physical education; motivation to participate in games and sports activities (exercise - physical activity); the student's attitude towards physical activities and the students' adopted and acquired habits of practicing physical activities (Visnić, 2004).

The subject of our research was assessments, statements and attitudes of qualified physical and health education teachers in primary and secondary education and elementary school teachers (1st-5th grade), which have insights into the changes in the implementation of physical and health education in the youngest students. The purpose of the research was to determine the knowledge, creativity and willingness of the teacher to organize and deliver the teaching process and its role in the process of knowledge management.

Problem

Predictions in the concept of physical education allow for freedom and expression of the teacher's creativity in the planning of teaching, where on the basis of its expert assessments he chooses the contents of the teaching planning. One of the primary tasks of the physical and health education class is the proper application of physical exercises to achieve positive transformational changes that will enable the correct psychophysical development of the student. Proper prevention and correction of adverse appearance that are mostly present at an early school age largely depend on the teacher's knowledge. In conditions of lack of adequate teaching, there are often deviations from normal growth and development with lasting effects on students. Physical and health education in the lowest grades of primary education, specifically in early school age, aims precisely at creating a well-designed and controlled basis for proper psychophysical growth and development. Creating a good basis for preserving and improving health, morphological characteristics and motor abilities, raising the level of adaptive and developmental abilities in modern living conditions, as well as the level of educational and sport-technical education. Early school age at children is a period of intense and accelerated development, strongly influenced by external and internal factors and largely accompanied by negative and positive changes. A characteristic period in which children care is necessary to be watched by parents as well as by school or teachers. What must be kept in mind is the timely undertaking of all necessary measures to ensure proper and normal physical growth and development for students, which is one of the primary tasks of physical and health education.

The current period indicates that big part of the care for the physical development of students is left to teachers, who are praised but also criticized for their ability and responsibility in the desired effects and satisfaction of students' needs and demands. Some authors regularly raise concerns about the quality of teaching in primary school students, explaining this situation most often with the inadequacy of teachers (Stamatović, Šekeljić i Marković, 2013). However, should the reasons always be sought only in the expertise and engagement of teachers. How much and how well the teacher knows and is capable of managing his / her knowledge, a problem that may never or be paid very little attention, and is one of the key elements for delivering quality teaching.

Knowledge management can be seen as a generator or a driving force that blends the enthusiasm of the individual with the institutional abilities to innovate and follow modern trends in educational developments. It is a process of following and integrating new knowledge and changes that can only lead to the advancement and improvement of educational effects and which appear as a result of new knowledge and experience that can be gained (Mitrevski, 2018). Crucial to the teaching process is intellectual or intangible capital which basically consists of three components: human, structural and relational capital. What is particularly important to us in the teaching process is human and structural capital. Human capital is perceived through the knowledge, competence, skills and abilities of the teaching staff, which is actually a driving force in the educational process, that is, the knowledge and skills that the individual possesses through education, training and experience. While structural capital is perceived through the application of technical and technological models and systems which in combination with methodological procedure and processes constitute a common whole. But let's not forget about the tangible or tangible capital (buildings, terrains, sports trails, tackles, etc.) without which the process becomes impossible to accomplish.

The teacher plays a key role in knowledge management through the successful application of program contents and their implementation in the teaching process. A process that is an integrated functional entity in which there is a connection between people (human resources), the processes taking place and the technologies applied, that is the working methods and techniques applied. The knowledge management process goes through several phases that are in one shared indivisible interaction: (Creation) knowledge creation; (Capture) the acquisition of knowledge; (Storing) the expansion and preservation of knowledge; (Sharing) transfer and sharing of knowledge to and with others and (Application) application of knowledge. Of course, it is not enough just to have the knowledge, the ability of the teacher is accurately reflected in knowledge management and its implementation as a final product in the teaching process. Theoretical and practical consciousness in the process of knowledge management in addition to the competence available to the teacher, several additional factors have been identified that depend on the success of the knowledge management: the nature of the knowledge available; motivation to share knowledge; opportunities and conditions for sharing knowledge and culture in the school or educational institution.

Obtained research indicators

The research presented here relies on two important components that can find their scientific justification for the role, place and significance of knowledge management in the teaching of physical and health education in the discovery of new scientific knowledge, which above all, they will contribute and improve the process of teaching.

For these reasons in the research we wanted to consider two components that we think are very important for the successful realization of the teaching process:

- The creativity and ability of the teacher to organize the teaching process;
- The importance of knowledge management in the process of teaching physical and health education.

Materials And Methods

The research covered a total of 62 respondents, specialized teachers in the subject of sport and physical education and teachers from 1st-5th grade in some of the elementary schools in the Pelagonija region of the country. The first sample consists of 42 teachers from 1st-5th grade, while the second sample consists of 20 teachers who are specialized and competent in sports and physical education and other subject teachers who have direct insight into the actual performance of the subject in physical and health education. The respondents were randomly selected.

In order to provide relevant indicators and data, the research instruments used a survey questionnaire that provided a total of 14 statements, attitudes and assertions. Out of them 7 qualitative (attributive) statements and as many (seven) quantitative attitudes and assertions, which were assessed on a scale of 1 to 4. The survey questions took into account: objectivity, expediency, cost-effectiveness and practicality and applicability.

The chi-square test was conducted to determine the differences between two groups in the qualitative indicators. As the results of the quantitative attitudes deviated from the normal distribution, the Man Whitney U Test was used to calculate the differences between the two samples.

The statistical analyses were performed with SPSS 18.0 (SPSS Inc., Chicago, IL, USA).

Results And Discussion

By using a chi-square test (Table 1) to determine the differences in the attributive statements between the respondents (teachers from 1-5th grade and specialized physical and health education teachers), it was found that there are statistically significant differences in five indicators of the total seven as follows: VAR00001 - Essential resource in educational institutions-schools ($\chi^2 = 14,793$, $df = 2$, $Sig = 0.001$); VAR00002 - The most important steps in knowledge management ($\chi^2 = 15,915$, $df = 5$, $Sig = 0.007$); VAR00004 - Sharing knowledge with colleagues ($\chi^2 = 10.491$, $df = 3$, $Sig. = 0.015$); VAR00005-Required assistance for physical education classroom ($\chi^2 = 17,493$, $df = 4$, $Sig = 0.002$) and VAR00007-Introducing health and physical classroom expert ($\chi^2 = 17,255$, $df = 5$, $Sig = 0.004$).

The results of the research indicate that respondents have an identical attitude in both indicators, i.e., the most important factors in knowledge management are highlighting opportunities and conditions for sharing knowledge and working conditions. According to the findings, it can be concluded that in some schools there are solid and good working conditions, where the teaching can be smoothly and completely realized, while in other schools the realization of the learning is primarily conditioned by the weather conditions.

The elementary teachers (1st-5th grade) consider the most important resource in the education institutions to be human (human resource) and the processes that take place, while the specialized teachers in the subject teaching, although to a certain extent agree with their attitude, attach great importance as well to the technologies that follow the modern trend of life. There are different views among the respondents in the statements about the most important steps in knowledge management, the only common view from the statements given on this issue exists only for the use of knowledge for further needs. Differences were also noted in the statements about sharing knowledge with colleagues, with the highest percentage pointing out that it was quite common in both samples. Respondents also have different views on the need for assistance with health and physical education classes, or more precisely, there are consultations with other colleagues and the use of professional literature, and a certain percentage of the elementary teachers (1st-5th grade) stress that they do not need help. In the indicator indicating improvements with the introduction of an expert of physical and health education on the class, respondents disagree in the attitudes: c) to acquire new motor skills, for which the elementary teachers (1st-5th grade) are of the opinion that there will be no significant improvements, although the other respondents claim the opposite, d) to improve the

development of motor skills where there is a reverse picture, although the elementary teachers (1st- 5th grade) expect improvement, others do not share their opinion, and f) the attitude of some elementary teachers (1st-5th grade) who do not expect changes to occur.

Table 4 shows the results of the Man Whitney U Test, from which it can be noticed that out of seven indicators statistically significant differences were observed in six indicators. The two samples of respondents have a common attitude on the second indicator VAR00002 - In our institution-school knowledge is a key factor for promotion of work) with approximately identical assessments, which may indicate that the students' knowledge is at the forefront of their advancement.

What can be noticed in the attribution indicators, and in the numerical indicator assessments is the identical negative attitude of some of the elementary teachers (1st-5th grade) in the indicators that define the effectiveness and the improvements in the teaching process when including an expert in the teaching process, a condition which should of course be subject to further analysis.

Table 1. Differences in the statements of the qualitative indicators

	Value	df	Asymp. Sig. (2-sided)
VAR00001- Essential resource in educational institutions-schools (a. Human Resources; b. Processes occurring; c. Technologies)	14,793 ^a	2	,001
VAR00002- The Most important steps in knowledge management (a) Identification of knowledge required; b. Systematic knowledge collection; c. Knowledge organization; d. Knowledge sharing; e. Adaptation of knowledge; f. Knowledge utilization for further needs)	15,915 ^a	5	,007
VAR00003- The most important factors in knowledge management at school (a. The nature of knowledge; b. Motivation for knowledge sharing; c. Opportunity and conditions for knowledge sharing; d. Culture in the environment and institution),	,825 ^a	2	,662
VAR00004- Sharing knowledge with colleagues (a. Very rare; b. Sometimes; c. Frequently; d. Always)	10,491 ^a	3	,015
VAR00005- Required assistance in performing physical education classes (a. I use professional literature; b. I consult professionals in the field; c. I consult other colleagues; d. I use professional literature and consultations; e. I do not need help)	17,493 ^a	4	,002
VAR00006- Working conditions (a. Good-teaching in the hall and on the sports grounds; b. Bad; c. Depending on the weather - the teaching is performed on the sports grounds or a customized teaching space)	,330 ^a	2	,848
VAR00007- Introducing health and physical classroom expert (a. Organization of class; b. Improving health component; c. Gaining new motor skills; d. Improving motor skills development; e. Acquiring work habits; f. I do not expect change to occur)	17,255 ^a	5	,004

Table 3. Mean Rank and Sum of Ranks

		N	Mean Rank	Sum of Ranks
VAR00001 Realization of physical and health education classes is in line with planning	1,00	42	34.40	1445.00
	2,00	20	25.40	508.00
	Total	62		
VAR00002 In our institution (school) knowledge is a key factor in promoting our work	1,00	42	31.93	1341.00
	2,00	20	30.60	612.00
	Total	62		
VAR00003 The school has a mutual knowledge-sharing knowledge with knowledge providers(teacher / teacher / professor)	1,00	42	24.74	1039.00
	2,00	20	45.70	914.00
	Total	62		
VAR00004 HPE teaching sharing knowledge of the relation between providers and users of knowledge (teachers / teacher with student)	1,00	42	28.17	1183.00
	2,00	20	38.50	770.00
	Total	62		
VAR00005 Trust in the knowledge provider (teacher / professor) facilitates the learning process	1,00	42	26.36	1107.00
	2,00	20	42.30	846.00
	Total	62		
VAR00006 Knowledge Provider (teacher / professor) is most responsible for the effects of interaction in teaching lessons in physical education and upbringing	1,00	42	26.55	1115.00
	2,00	20	41.90	838.00
	Total	62		
VAR00007 By introducingan innovative change (expert) in HIF teaching at the youngest school age the effectiveness of the class has increased	1,00	42	27.12	1139.00
	2,00	20	40.70	814.00
	Total	62		

Table 3. Differences in the statements of the qualitative indicators

	Realization of physical and health education classes is in line with planning	In our institution (school) knowledge is a key factor in promoting our work	The school has a mutual knowledge-sharing knowledge with knowledge providers(teacher / teacher / professor)	HPE teaching sharing knowledge of the relation between providers and users of knowledge (teachers / teacher with student)	Trust in the knowledge provider (teacher / professor) facilitates the learning process	Knowledge Provider (teacher / professor) is most responsible for the effects of interaction in teaching lessons in physical education and upbringing	By introducing an innovative change (expert) in HIF teaching at the youngest school age the effectiveness of the class has increased
Mann-Whitney U	298.000	402.000	136.000	280.000	204.000	212.000	236.000
Wilcoxon W	508.000	612.000	1039.000	1183.000	1107.000	1115.000	1139.000
Z	-2.084	-.300	-4.578	-2.300	-3.553	-3.475	-2.920
Asymp. Sig. (2-tailed)	.037	.764	.000	.021	.000	.001	.004

Conclusion

Contemporary physical and health education largely depends on the teacher's expertise and competences and skills that should be continually develop. One of the major steps towards improving the quality of Physical and Health Education is the introduction of tandem classes in the classroom, which is expected to significantly increase the effects on the proper psychophysical development of children.

The most important link in the process of delivering innovative tandem classes at Physical and Health Education is the synergy between the elementary teachers (1st-5th grade) and the specialized teacher, who in the coming period should be raised to the highest level, because only with an integrated approach of all participants in the educational process can be expected that the main goals of the Physical and Health Education will be fulfilled and whose main imperative is the health of the children.

References

- Martinović, D. (2003). *Postignuća u nastavi fizičkog vaspitanja, motoričke, morfološke i psihološke karakteristike*. Beograd: Interprint.
- Митревски, В., Улогата на менаџментот на знаење во реализацијата на програмите по ФЗО од одделенска настава. **Во зборник на трудови „Менаџментот и современите практики“** Скопје: Петти меѓународен симпозиум, 2017, стр. 251-259.
- Mitrevski, V. & Stojanovska, V. (2017). The role of the Lesson Plan in the Class of Physical Education in the Student's Development. Journal of „INTERNATIONAL JOURNAL OF SCIENCE AND RESEAREH (IJSR)“; (India), Vol. VI, Issue - 3, 2017. Str. 1709-1713.
- Митревски, В., Значењето на менаџментот на знаење за успешноста на образовните институции. *Во зборник на трудови „Современите менаџерски предизвици и организациските науки“*, Битола: Петта меѓународна научна конференција, 2018, стр. 355-363.
- Митревски, В. и Митревска, М., Улогата на наставникот во процесот на менаџирање со знаењето. *Во зборник на трудови „Менаџментот и современите практики“ со предметен фокус Предизвици и можности во современите услови на работење – Шести меѓународен симпозиум*, Скопје: 2019, стр. 108-112.
- Stamatović, M., Šekeljić, G. i Marković, Ž., Ishodi nastave fizičkog vaspitanja u IV razredu osnovne škole u zavisnosti od organizacije nastave. *U zbornik radova „Učiteljski fakultet u Užicu“*, Užice: 2013, Volume 16, Number 15, стр. 237-248.
- Višnjić, D. (2004). *Teorija i metodika fizičkog vaspitanja*. Beograd: Fakultet sporta i fizičkog vaspitanja.

