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**Abstract:**

**Improvement of the curriculum for physical education and sport for  
arts-vocational primary school students**

**Keywords:** arts-vocational primary school, physical education, psychomotricity, stage of motor development (motor skills age), chronological age, evaluation.

**Introduction:**

Physical education and school sports represent activities of great importance within the educational system of the students in our country.

Together with the other educational disciplines, physical education contributes to (learning of life skills) the preparation of students for life with emphasis on health strengthening, harmonious physical development, motor and psychomotor skills development, the education of positive character traits.

*Part I: The theoretical, methodological and conceptual fundament* of the research presented here consists of 5 chapters. **Chapter I:** The actuality and the importance of the present work, the motivation for the choice of the theme; **Chapter II:** Scholar curriculum for physical education, characteristics of the arts oriented, vocational education – primary school; **Chapter III:** Somatosensory, motor and psychomotor characteristics for 6/7-10/11 years old; **Chapter IV:** Conceptual delimitations regarding the effort during the physical education class. **Chapter V:** Theoretical considerations regarding the valuation of the motor and psychomotor factors for the students during the physical education; Conclusions Part I.

**Motivation for the choice of theme:** An experimental research aimed at understanding the internal mechanisms specific to the motor and psychomotor organization for the primary school students, in order to further improve the educational process specific for this age group, represents in itself a strong motivation in the choice of the research theme.

**Directions of research:** The research process highlights the enrichment (growth) of information under its intellectual, motor and psychomotor aspects.

From the *intellectual* point of view, our research brings to the forefront the approach to the physical education for the primary school and the characteristics of the arts oriented-vocational education.

Curriculum aims at: equipping the students with attitudes, knowledge and skills (in the educational process the activity of the students must dominate), and the ability to easily adjust oneself to different conditions: geographical, climatic, material.

The specialized arts education takes place during especially designated classes, in addition to the classes of general culture.

The primary school education period is accompanied by ample maturing processes, the height growth and weight gain being among the most important. Concurrently, motor, psychological and psychomotor development takes place as well, each age stage featuring a set of characteristics specific to it.

From a *motric* perspective, our research highlights the goals of physical education, namely, equipping the students with competences, skills, habits and knowledge based on which they could maintain a correct body position, become knowledgeable of the optimal values of the somatosensory and functional indices characteristic to their age, become knowledgeable of and have the ability, as well, to perform physical exercises which influence selectively the locomotor system, etc.

From a *psychomotor* point of view, our research considers both the theoretical and practical aspects. Psychomotricity offers the child the adequate settings needed to acquire and develop skills which enable him/her to easily adjust and act efficiently in any given conditions during his/her life.

### **Theoretically motivated conclusions:**

Through its objectives, physical education represents an important constituent part of the general education with major influences on the developmental processes of the child. However, the objective quantification of the benefic effects of the psychomotor activity depends on the content and the practical implementation of the curriculum, on the quality of the educational process and other external factors involved directly or indirectly in the learning process.

The prepubertal period associated to the primary school cycle is an extremely important stage in the development process of the individual as it is characterized by a series of learned psychomotor skills essential to the process of acquiring motor experience necessary in life.

The analysis and assessment of the psychomotor potential of the primary school students combined with a curriculum (teaching content) adapted to the specificity of

the educational profile, represent the basic conditions in reaching the desired objectives. Therefore, the improvement of the curriculum for the physical education and sport for primary school students represents, in the given conditions, an original and necessary step directed toward the improvement of the overall educational journey of the students.

**Part II:** The preliminary research regarding original ways to improve the curriculum for physical education and sport for arts-vocational primary school children is contained in two chapters. **Chapter VI:** The operational framework of the research; **Chapter VII:** *Conclusions to the preliminary study.*

**The aim of the preliminary research:** The aim of the preliminary research is to elaborate an experiment which enables us to become intimate with the particularities of the psychomotor development specific to children in arts-vocational primary school, and to create a program which would reflect the dynamics and influence of the motor and psychomotor factors for this specific environment and age group.

The **research methods** used were the following: the bibliographical research, the observation, the conversation, the experiment and the statistical method.

**The evaluation tests** used in the second part of the thesis were the following: Motric tests: relay 5x5 m, the long jump from standing start, a complex exercises program for physical development, technical procedures isolated from the minigame, simple game structures, and 4 subtests from Bruininks-Oseretsky Test of Motor Proficiency, Second Edition (BOT-2): fine motor precision, fine motor integration, manual dexterity, upper-limb coordination.

**Conclusions to the preliminary part:** All the European states recognize the importance of physical education in school. This discipline is part of the core curriculum being mandatory in the primary school all over Europe. The teaching time devoted to physical education varies significantly from a country to another. In the vast majority of countries which set recommendations for the annual time allotted to the teaching of physical education, the relative ratio of this time to the total educational time is higher for the primary school compared to the secondary school (exp. France – 4 hours/week).

Knowledge of the growth and development stage of the children, as well as their evolution in time, is a requirement with strong favorable implications that needs to be fulfilled with the means accessible to the educator. From the tests included in the National System for Evaluation of the primary school education,

the physical education teacher can select, according to the specific conditions in which he/she operates (i.e. number of allotted hours, material facilities, level of training, students' options), the tests used to evaluate the students.

The tests contained in Bruininks-Oseretsky Test of Motor Proficiency, Second Edition, represent a novelty for the arts-vocational primary school education. This is due to the fact that the results obtained by the students at the tests will constitute the starting point of a physical education program which will offer the students the opportunity to use and develop the physical abilities required by the arts-vocational profile of their school.

The specific evaluation used at this stage of research emphasises both the necessity and usefulness of a differentiation strategy in the educational process, especially in its psychomotor component, for an optimal development of the students.

**Part III:** *The experimental approach on the improvement of curriculum for physical education for students in arts-vocational primary school. It consists of 5 chapters. Chapter VIII: The methodological and operational framework of the research. Chapter IX: The layout, time framework and implementation of the training program. Chapter X: Data presentation, processing and interpretation. Chapter XI: Conclusions. Chapter XII: Originality aspects, results dissemination and limits of the research.*

**Aim of the final research:** The goal of our work is to develop and test a new motor training program aimed at improving the efficiency of the educational process for vocational classes (music). This stage of our scientific project will focus on the execution of the research experiment, followed by the recording and analysis of the data through a series of methods.

This work aims, as well, at rendering more efficient the evaluation methods which can be used in research.

**Software programs used (informational products used):** *BOT-2 ASSIST™, Scoring and Reporting System-* a software program used specifically for the Bruininks-Oseretsky Test of Motor Proficiency, Second Edition, *MINITAB version 15.1 of MINITAB Inc company-* a software program used for statistical data processing, and *EXCEL version 2003, of Microsoft.*

### **Conclusions of the final research:**

In the curriculum for the primary school, the psychomotor factors should be the dominant ones. Our study of school policy documents revealed that there are no differences regarding the content, objectives and evaluation methods between general primary schools and vocational ones. We believe the vocational profile necessitates a differentiation; depending on the bio-psycho-motor and age related particularities, it is necessary to elaborate a curriculum adapted to the arts-vocational profile.

The verification and validation of the statistical hypotheses was realized on the basis of two types of scores, scaled and standard. These scores were both converted from the raw scores obtained by the students during testing, with the software package BOT - 2 ASSIST<sup>TM</sup>, Scoring and Reporting System.

The scaled score allowed to directly relating the research results to the eight specific subtests of the evaluation system chosen (fine motor precision, fine motor integration, manual dexterity, upper-limb coordination, bilateral coordination, balance, speed and agility, power). The standard score was used to establish the connection to the four motor skills components specific to the set of tests (fine hands coordination and control, and the complete motor skills component)

To verify our hypothesis, respectively the existence of statistically significant differences between test results, we used two groups: a control group and an experimental one. The results of our tests showed the following:

- At the level of height, weight, chest perimeter, body mass index, Pignet index (robustness index) parameters, one accepts the null hypothesis and rejects the research hypothesis according to which there are significant differences between the results obtained from the two groups (experimental, control).
- At the level of the parameters measured from the set of tests BOT-2, based on the scaled and the standard scores, the test of value performed for the statistical hypothesis by using the unifactorial analysis of variance (ANOVA) showed a statistically significant difference of the means for all the tests. The Cohen index shows there is a difference between the means of the two groups tested that ranges from large to very large.
- The results obtained by the students of the experimental group are significantly better than the ones of the control group. One, thus, rejects the null hypothesis and accepts the research hypothesis according to which the differences between the means of the two student groups are significant statistically. Therefore, we can state that the motor ability of the vocational primary school

students improved as a result of (after we applied) the program elaborated by us.

- Relative to the motor tests, respectively 5x5m relay, long jump from standing start, a complex exercise program for physical development and technical procedures isolated from the minigame, the statistical analysis showed statistically significant differences between the control group and the experimental one. Consequently, one rejects the null hypothesis and accepts the research hypothesis.
- The tests performed within the experimental group in order to verify the existence of statistically significant differences between the arithmetic mean of the chronologic age and the one of the motor skills age, revealed that at the level of all the parameters (measured based on the scaled score) one accepts the research hypothesis, the average motor skills age being higher than the average chronologic age.

**Elements of originality:** The use of Bruininks-Oseretski (second edition) set of tests in this experimental research represents a premiere for the arts-vocational education. Its primary aim was to obtain important data on the psychomotor characteristics of arts-vocational primary school students.

In order to achieve a differentiated set of physical exercises for the arts-vocational primary students, we had to select and adapt, in a ludic form, specific routines of physical preparation. The impact of these routines on the psychomotor potential of the students was then measured. The research was conducted on first grade students from arts-vocational primary schools.

The set of physical exercises developed during our research develops a series of important abilities for the future evolution of the students.

**Limits of the present research:** As we mentioned above, the use of Bruininks-Oseretski (second edition) set of tests in this experimental research represents a first for the arts-vocational education and a major opportunity to collect valuable data on the psychomotor characteristics of the students attending these schools. Nevertheless, the informational products used for the research represent major costs of acquisition and maintenance.

Another limit of research could be the relatively long duration of the set of tests needed in the evaluation process (40-60 min for one student).

Very few education institutions have allocated in the budget the funds needed for the optimization and computerization of the educational process, especially for the evaluation of specific educational objectives.

The assessment of the impact of the set of physical exercises developed by us requires a close cooperation between the physical education teacher and the persons authorized to use the instruments specific to our research. Therefore, establishing an interdisciplinary team for each educational institution might prove to be another limitation to this research.

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