

## EVALUATION OF MUSIC EDUCATION IN THE FIRST CYCLE OF PRIMARY EDUCATION IN REPUBLIC OF MACEDONIA

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**Abstract:** For this purpose, scientifically formatted, reliable questionnaires were used, with the aim to gather valid data about the process of evaluation Music Education. The ultimate goal is to create relevant criterions for the assessment and evaluation in this teaching subject.

Based on the research subject, we defined particular aims of the research:

- To determine the criteria of descriptive evaluation in the first, second, and third grade in primary school.
- To determine the criteria of numerical evaluation in the fourth and fifth grade in primary school.
- To examine the attitudes of teachers for the standards of evaluation of student's achievements from first to fifth grade in primary school.
- To realize quantitative analyses of attitudes of the teachers in primary school in Macedonia in relation to the professors of the Pedagogical faculty.
- To defined parameters for the evaluation of student's achievements in Physical and Health Education from first to fifth grade in primary school.

### **Sample of participants**

To determined descriptors for evaluation of student's knowledge, skills and abilities. A stratified sample of population of teachers in Macedonia participated in the research. Primary teachers was N= 501 in total number.

### **Methods**

1. For each implemented variable central and dispersive parameters are analyzed.
2. Regressive analyses were implemented to determine the structure and relation. Influence of predictive and criteria variables for evaluation of the student's success.

Our opinion is that introducing the new additional trainings for teachers from elementary schools, realized by expert staff of Pedagogical Faculties in the Republic Macedonia, supported by Ministry of Education and Bureau for Development of Education will raise the level of technology in the teaching process in all its aspects.

**Key words:** descriptive, regressive, training, teachers, evaluation

## **1. INTRODUCTION**

Reform processes in primary school context tends to implement the organization of the educational process which is fundamentally different than it was in the past – nine-year education in primary school (3 cycles with 3 teaching years) instead previous system of 8 teaching years. Evaluation of the student's results and achievements in the first three years is descriptive, and in the fourth and fifth year of primary education is numerical. Evaluation have to be quality, profitable, result of student's effort, result of their total psycho - motoric and intellectual abilities, their knowledge, skills and habits.

To objectivize the follow-up, appreciation and evaluation in contemporary methodology in Physical and Health Education, teachers need objective and quality solutions. Evaluation as an integral part of educational process – evaluates quality of teaching, teacher's interest for teaching subject, students involment in the provided activities, general knowledge, abilities, efforts, attendance, equipment, fulfilling teaching obligations and work habits.

In the contemporary real and digital world, the borders of various teaching subject became blurred and unclear. Actual opinion goes in the direction that the connection between different teaching areas have to be realized for the benefit and the best student's interest. Top world scientist and educators highlight the influence of Visual Art Education, Physical and Health Education and Music Education on the development of different aspect of student's individual potentials.

Faust (2014), the president of Harvard University, claims that attitude to Sport and Health Education, as well as artistic education are changing in the benefit of these areas. She pointed that the influence of these subject is evident in the use of successful methods which transmit knowledge and enable students to imagine, create, be persistent, practice and reach goals. These abilities and attitudes in life are necessary as an important approach in other areas in life.

Wilkins, Graham, Parker, Westfall, Fraser, Tembo (2003) researched the relationship of student's achievements in correlation with time they spend in artistic or sports activities in 1167 primary school in USA. Results presents findings that statistical trend is positive, suggesting that students that are involved in teaching subjects Physical and Health Education, Visual Art Education and Music Education reach the better results in standardized tests in other subjects.

Richmond, Bartell, Dunn (2016) research is focused on the actual attitudes about standards in specific subject areas. They confirmed that fastest and easiest implementation is

when the evaluation standards are determinant on national level.

In this research, we organized inspection on various manifest and latent predictive variables on one-dimensional and multidimensional defining of the evaluation in Physical and Health Education.

Following-up, appreciation and evaluation as a methods are based on the assumption for optimal planning, programming and control of educational process with clearly positioned goals and objectives, cycles and conditions. Diagnostic, as well as evaluation of actual conditions was implemented with determined conditions, models and systems.

For this purpose, scientifically formatted, reliable questionnaires were used, with the aim to gather valid data about the process of evaluation Physical and Health Education. The ultimate goal is to create relevant criterions for the assessment and evaluation in this teaching subject.

Based on the research subject, we defined particular aims of the research:

- To determine the criteria of descriptive evaluation in the first, second, and third grade in primary school.
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- To examine the attitudes of teachers for the standards of evaluation of student's achievements from first to fifth grade in primary school.
- To realize quantitative analyses of attitudes of the teachers in primary school in Macedonia in relation to the professors of the Pedagogical faculty.
- To defined parameters for the evaluation of student's achievements in Physical and Health Education from first to fifth grade in primary school.
- To determined descriptors for evaluation of student's knowledge, skills and abilities.

## **2. METHODS**

### **2. 1. Sample of participants**

A stratified sample of population of teachers in Macedonia participated in the research. Primary teachers (in first to fifth grade of primary school) was - N= 501 in total number, from which – 462 were primary teachers, 38 pedagogues and 8 teachers were with other education.

### **2. 2. Instruments**

The data was gathered with Likert scale survey questionnaire which was transformed in parametrical data which can be used in adequate statistical procedures.

Questionnaire consists form total number of 30 questions divided in three subject areas

– physical and health education, visual art education and music education, with 10 question dedicated to each of them. To ensure validity investigation was realized anonymously (appendix).

### **2. 3. Variables**

Predictive variables represent teachers opinions and beliefs for evaluation of physical and health education. The views were obtained using a questionnaire (attached).

The first part of questionnaire contained:

- Municipality - (VAR15),
- Gender - (VAR11),
- Education - (VAR12),
- Teaching class - (VAR13) and
- Work experience - (VAR14).

The survey consists of 10 claims (opinions) which reflected teacher opinion about the assessment in these teaching subject. There are five possible answers to each question:

- Strongly disagree,
- I agree,
- Ambiguous,
- I agree and
- Totally agree.

Teachers put mark (X) in the chosen answer. Only correctly filled questionnaires are taken into consideration.

Thus, the attitude ranges:

- From 1 to 2.50 - a negative attitude,
- From 2.51 to 3.50 - a neutral position,

Consideration- From 3.51 to 5 - positive attitude.

The examination was done in morning hours. Assessment scale in the questionnaire was filled with a pen, the duration of the test was 45 minutes.

This is Likert tip Scale.

### **2. 4. Methods**

**For each implemented variable central and dispersive parameters are analyzed:**

arithmetic means (AS);

standard deviation (SD);

Assessment of the distribution of the results is tested Skewness (Sk);

- homogeneity of the results tested with Kurtosis (Ku);
- minimum (Min) score;
- maximal (Max) result.

#### Correlation Analysis

Regressive analyses were implemented to determine the structure and relation: Influence of predictive and criteria variables for evaluation of the student's success. The data were analyzed with statistical packages with current use in our country at present (SPSS, Statistical).

### 3. RESULTS

3.1. Central and dispersive parameters for the standards of evaluation of student's achievements in Musical Education in Macedonia.

Analise of the Table. 1 presents that central and dispersive parameters as a general indicators of evaluation standards of student's achievement of the subjects - Physical and Health Education in R. Macedonia are fully presented.

Calculated measurements of variability presents relatively acceptable level of homogenization of the distribution, which leads to the supposition that individual parameters of the respondents are placed within the allowed limits.

Distribution of the results in distinct number of variables partly resigns form normal distribution. In such of variables, slight tendency of inclination of the results on the positive or negative side of coordinate system is present. Visible asymmetrical results in some variables presents negative asymmetry, presented with values of Skewness (Sk).

Indicative is the fact that the two sub-samples have a tendency to relative mirroring – presentation of homogenic results in sub-samples relatively repeats itself (Ky). With the inspection of the results in the variables, interesting data, valuable for further interpretation can be analyzed.

At Variable 21 (In addition to the existing textbooks, you need to have additional assessment literature according to the musical - Chart 21), it is noted that the dispersion of the results (SD) - the variation is not in the standard values of 1/3 of the AS and is 1.12. The values of the arithmetic mean (AS) are 2.67.

We note the variable 22 (When evaluating, evaluating memorizing and reproduction of a pre-existing teaching subject), the arithmetic mean (AS) is 3.86. The asymmetry of the results - Skunis Sk is -0.83. We also note that the homogeneity of the results is Ku 0.90 and is relatively normal.

Variable 23 (The composite element-musical rhythm affects the assessment) has an

arithmetic mean (AS) of 2.25, and (SD) 0.81. What constitutes a negative claim to this subject.

(Musical hearing, the main prerequisite for assessment) is a twenty-fourth variable. In this variable, we notice relatively neutral values of (AS), which is 3.14.

The values of the arithmetic mean (AS) indicate that the respondents in the variable 25 (Composited element-music memory, have no influence in the assessment) are relatively undefined and it is 3.40.

We note the variable 26 (Reproduction of a pre-worked subject has an impact on the assessment), a certain positivity of the students - AS 3.88, which is also indicated by the values of the asymmetry of the result (agree) SK -1.41.

Relative mesocircular homogeneity of the values of the cursosis (KU) -0.81 is observed in variable 27 (Practical music playing accompanied by DMI is a crucial moment for the assessment). The value of the (AS) arithmetic mean is 3.40.

According to variable 28 (The criterion for the assessment of music is exclusively the achievement of students), the respondents have relatively non-negative values of the arithmetic mean (AS) 2.38.

At Variable 29 (The student predetermined for music influences the assessment of the other students), it is noted that the dispersion of the results (SD) is within the limits of symmetry (0.95), as well as the values of the arithmetic mean (AS), which is 3.56 - a certain positivity . The homogeneity of the results is negative, with moderate asymmetry, to which the values of the cursosis indicate (Ku -0.84).

The values of the arithmetic mean (AS) indicate that the respondents in the variable 30 (when assessing the musical success compare with the criterion) are relatively negative, which is 2.31, i.e. they have a negative attitude towards this claim. From the dispersion of the results (SD) we note that it has relatively acceptable values (SD 0.93).

**Table 1.**

Variable	N	AS	SD	Min	Max	Sk	Ky
21. Besides the existing textbooks need to own additional literature evaluation of music	5 01	2.97	1.12	1	5	0.16	-1.12
22. In its assessment, rate memorizing and reproducing the previous business curriculum topic	5 01	3.86	0.75	2	5	-0.83	0.90
23. Composited element-music rhythms influence the assessment	5 01	2.25	0.81	1	5	0.99	1.32
24. Musical hearing, is the main prerequisite for assessment	5 01	3.14	1.02	1	5	-0.38	-0.79
25. Composited element-musical memory, no impact assessment	5 01	3.40	0.94	1	5	-0.35	-0.63
26. Playing a previous business curriculum topic impact assessment	5 01	3.88	0.76	1	5	-1,41	3.11

27. The practical musicianship accompanied by DMI is a watershed moment for evaluation	5 01	3.40	1.12	1	5	-0.33	-0.81
28. Criteria for evaluation of music exclusively student achievement	5 01	2.38	0.96	1	5	0.47	-0.76
29. A student destined for music affects the assessment of other students	5 01	3.56	0.95	2	5	-0.29	-0.84
30. In assessing the music compare success criterion	5 01	2,31	0.93	1	5	0.99	0.78

### 3.2. Correlation analysis of attitudes for assessment after music education

By checking the correlation matrix (Table 2), it can be noticed that there are no relatively high coefficients. Relatively medium has 1 coefficient, while 12 are relatively low, of which 4 are with negative sign.

On the basis of the obtained results, grouping within the musical rhythm that treats the variable 23, with two relatively low and one negative, is recorded. Also, grouping the coefficients of achievement, var. 24 is a negative and one positive connection.

**Table 2.**

	VAR21	VAR22	VAR23	VAR24	VAR25	VAR26	VAR27	VAR28	VAR29	VAR30
VAR21	1,00									
VAR22	-, 14	1,00								
VAR23	-, 18	<b>-, 20</b>	1,00							
VAR24	-, 16	-, 05	<b>, 24</b>	1,00						
VAR25	-, 10	, 03	<b>-, 34</b>	, 02	1,00					
VAR26	-, 03	, 18	-, 08	-, 18	<b>-, 22</b>	1,00				
VAR27	<b>, 23</b>	, 11	, 05	<b>-, 36</b>	-, 18	<b>, 24</b>	1,00			
VAR28	<b>-, 31</b>	-, 02	, 18	<b>, 26</b>	-, 06	-, 08	-, 08	1,00		
VAR29	-, 13	<b>, 22</b>	-, 10	, 09	<b>, 30</b>	, 02	-, 03	-, 06	1,00	
VAR30	-, 13	, 05	<b>, 44</b>	<b>, 38</b>	-, 01	-, 02	-, 12	, 15	, 02	1,00

From Table 3 in the total sub-sample, there is a connection between the system of predictor variables for assessing the assessment in the teaching of music education and the criterion variable "type of education", at the level of statistical significance  $Q = .00$ . The coefficient of multiple correlation is  $RO = .33$  which explains the overall variability of the system from predictors of the criterion variable 9% ( $DELTA = .09$ ).

The remaining 91% in explaining the total variability of the criterion variable can be attributed to other characteristics and abilities of students.

Analyzing the individual influences of predictor variables, based on the (Beta) coefficients of partial regression, it can be concluded that the statistically significant influence on the criterion variable are the variables: 29 and 30 at a level of statistical significance of .00.

By analyzing the individual predictor variables, through their results on the partial regression coefficients, it was possible to conclude that from this predictor system the variables determining the predetermined music variable influence the criterion variable and

influence the evaluation as well as the variable comparison success with the criterion .

**Table 3.**

	Beta and	Part.Cor	Tolerance	St.Err.of B	T (490)	(Q) BETA
VAR21	, 12	, 05	, 09	, 04	2.44	, 02
VAR22	-, 11	, 05	-, 13	, 05	-2.45	, 01
VAR23	-, 16	, 06	-, 16	, 06	-2.82	, 01
VAR24	-, 09	, 05	-, 07	, 04	-1.72	, 09
VAR25	, 03	, 05	, 03	, 04	, 63	, 53
VAR26	, 10	, 05	, 11	, 05	2.13	, 03
VAR27	-, 12	, 05	-, 09	, 04	-2,51	, 01
VAR28	-, 03	, 05	-, 03	, 04	-, 73	, 47
VAR29	-, 17	, 05	-, 15	, 04	-3.73	, 00
VAR30	, 15	, 05	, 13	, 04	2.90	, 00

**RO = .33 DELTA = .09 F = 6.34 df1 = df2 = 10 490 Q = .00**

### 3.3. Regression of the criterion variable "assessment after music education"

Inspection of Table 5 in the total sample shows the connection of the overall system of predictor variables for assessing the assessment of music education and the criterion variable "assessment after art education" at the level of statistical significance  $Q = .00$ . The coefficient of multiple correlation is  $RO = .49$  which explains the overall variability of the system from predictors on the criterion variable 24% ( $DELTA = .24$ ). Such a link is at the level of statistical significance from  $Q = .00$ .

The remaining 76% in explaining the overall variability of the criterion variable can be attributed to the other characteristics and abilities of the respondents.

Analyzing the individual influences of the predictor variables, based on the (Beta) coefficients of partial regression, it can be concluded that the statistically significant influence on the criterion variable have the variables: 3, 6, and 9 at the level of statistical significance  $Q = .00$ , while At the level of  $Q = .05$  have variables: 2, 5, and 7.

By analyzing the individual predictor variables, through their results on the partial regression coefficients, it was possible to conclude that from this predictor system the influence on the criterion variable - assessment after art education is 5, that is, the systems show a certain mirror.

**Table 4.**

	Beta and	Part.Cor	Tolerance	St.Err.of B	T (490)	(Q) BETA
VAR1	-, 08	, 04	-, 08	, 04	-1.90	, 06
VAR2	-, 11	, 05	-, 16	, 07	-2,38	, 02
VAR3	-, 25	, 04	-, 41	, 07	-5.93	, 00
VAR4	-, 08	, 04	-, 09	, 05	-1.70	, 09



VAR5	-, 11	, 05	-, 11	, 05	-2.09	, 04
VAR6	, 53	, 06	, 53	, 06	9.58	, 00
VAR7	-, 13	, 06	-, 17	, 07	-2,39	, 02
VAR8	-, 05	, 04	-, 05	, 05	-1,01	, 31
VAR9	, 12	, 04	, 12	, 04	2.98	, 00
VAR10	, 05	, 04	, 05	, 05	1.05	, 29

**RO = .49 DELTA = .24 F = 15.83 df1 = df2 = 10 490 Q = .00**

Analyzing Table 6 in the total sample, the respondents showed a connection to the overall system of predictor variables for assessing the assessment in music education and the criterion variable "assessment of HIF". The coefficient of multiple correlation is RO = .45 which explains the overall variability of the system from the predictors of the criterion variable of 20% (DELTA=.20). Such a link is at a level of statistical significance from Q=.00.

The remaining 80% in the explanation of the total variability of the variable M Auger criteria be attributed to other characteristics and abilities of students.

Analyzing the individual effects of the predictor variables based on (Beta), the coefficients of partial regression, it can be concluded that statistically significant influence on the criterion variable at the level of statistical significance Q = .00 have the variables: 12, 14 and 20, while The variables 17 and 18 are at the level of statistical significance Q = .05.

Overall, from the results of the partial regression, on the impact of the assessment in the teaching of music education on the assessment of music education, we can conclude that among the respondents - teachers, the influence has five predictor variables, that is, the predictor system has statistically significant influence on the criterion Variable - assessment after music education.

**Table 5.**

	Beta in	Part.Cor	Tolerance	St.Err.of B	T (490)	(Q) BETA
VAR11	-,00	,06	-,00	,06	-,04	,97
VAR12	-,28	,06	-,29	,06	-4,69	,00
VAR13	-,02	,05	-,03	,06	-,50	,62
VAR14	-,40	,05	-,61	,07	-8,75	,00
VAR15	,05	,04	,06	,05	1,23	,22
VAR16	,01	,05	,01	,05	,26	,80
VAR17	-,10	,05	-,10	,05	-2,08	,04
VAR18	-,11	,05	-,13	,06	-2,29	,02
VAR19	-,02	,05	-,02	,06	-,40	,69
VAR20	,15	,05	,20	,06	3,19	,00

**RO=.45 DELTA=.20 F=12.65 df1=10 df2=490 Q=.00**

#### 4. DISCUSSION & CONCLUSION

Implemented character of attitudes and diognostical statements for the inspection of the

evaluation in the teaching subjects: Physical and Health Education, based on the gathered questionnaires, presents acceptable dispersion around central values of the results.

Some variables presents findings in the range from slight, tolerante tendencies of grouping around better values, to the ones which are close to the extremly positive values. Certain numbers of variables are neutral.

Despite the fact that bigger number of variables depart from the normal distribution, it is necessary to highlight that these deviation does not produce unwonted effects of the final results in the processing of data in this research, because these variables in multidimensional space have multivariate normal distribution.

This is valuable to mentioned because of the selection of the methods for processing the findings which are based on multivariate normal distribution.

Important is the fact that teachers are ambiques opinions about the influences of motoric abilities of students in the process of evaluation – variables 1. and 9.

Discipline and collective spirit on the classes did not influenced the process of evaluation in Physical and Health Education (Var. 2).

In the process of evaluation of the student achievement in Physical and Health Education, according to the participants, bigger influences are in: reached health habits (Var. 3), active participation in the activities (Var. 4),and the socialization of the students (Var. 8).

Teachers didn't considered time needed for worming-up and time for following-up of the students in the evaluation (Var. 5, 10) and they evaluated the students in the special classes dedicated to evaluation (Var. 7).

The analysis of the results gathered from the central and from the dispersive parameters presents certain deviation from the theoretical assumptions of the evaluation and their practical implementation in the Physical and Health Education. Participant have undefined opinion about influences of motoric abilities, discipline, health habits and extra-curricular activities in the evaluation process.

Socialization and active participation in the activities inPhysical and Health Educationhave the biggest influence on the evaluation.

We have to point out teacher's opinions that worming-up is unnecessary in the realization of the subject, which is totally opposite standpoint form the national program and structural direction for the implementation of the subject. Similar results are find in teacher's opinions about the need of follow-up and evaluation of student's achievements in Physical and Health Education with the argument that students grow up anyway. This attitude is in

positive dimension for only 0,05.

General overview of the data analysis leads to the conclusion of lack of participant's practical and theoretical complement on the acquired knowledge from the studies.

Results gathered with regression analyses focused on the interconnection in relation with criteria variable that treats the working experience and the type of completed education of the teachers in the Republic Macedonia. The results indicate some differences in assessment in several specified variables that treats type of education, that there are statistically significant differences in assessment between participants with diplomas from pedagogical faculty and diplomas from other institutions.

Based on the evidence of the results, this research presents three noticeable tendencies: fundamental, developmental and applicative.

Results of this research, realized with various statistical procedures, emphasize the possibility for generalization on the hypothetical population from which the sample is gathered.

The research is fundamental, especially in the sphere of influence of the teacher's attitudes in the evaluation process - we gained some new information's which will hopefully become beneficial in scientific understanding in this educational area. We hope that research will contribute in determination of common standards for evaluation on the quality of the whole educational process. The importance of the findings goes to the process of complete evaluation of the quality of the student's achievements and for the aspect and level of the adoption of the program by the students.

We hope that the findings will contribute to the quality of the future process of complete evaluation of student's achievement as well as the scope and level of its adoption by the students.

This initial research will contribute to the development of the science of docimology not only in these three teaching subject areas, but in the whole education process in primary schools in Republic of Macedonia.

Based on the research, we can assume that unified standards of evaluation will contribute significantly in the educational process in Physical and Health Education, Visual Art Education and Music Education in primary school context.

Our opinion is that introducing the new additional trainings for teachers from elementary schools, realized by expert staff of Pedagogical Faculties in the Republic Macedonia, supported by Ministry of Education and Bureau for Development of Education

will raise the level of technology in the teaching process in all its aspects.

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