

## Review

*by Prof. Dr. Habil Stela Dermendzhieva*

VTU „St. st. Cyril and Methodius“, Department of „Geography“

### OF DISSERTATION WORK

### FOR OBTAINING THE EDUCATIONAL AND SCIENTIFIC DEGREE „DOCTOR“

Field of higher education: *1. Pedagogical sciences*

Professional direction: *1.3. Pedagogy of training in ...*

Scientific specialty: *Methodology of training in geography*

Faculty: *Geology and Geography*

Training unit: *Department of „Regional Development“*

Title of the dissertation: *„Application of Maria Montessori methodology in geography teaching“/„Application of Maria Montessori's methodology in geography training“*

Doctoral student: Stanislava Plamenova Misheva

Supervisor: Assoc. Prof. PhD. Maya Petrova Vasileva

*The review was prepared and presented in accordance with the Order of the Rector of Sofia University „St. Kliment Ohridski” - № ПД 38-662/19.12.2022 and according to the legal requirements (ZRASRB, Regulations for the implementation of ZRASRB, Regulations of Sofia University „St. Kliment Ohridski”)*

## **I. Doctorate and publication data**

### **1.1. Doctorate data**

In accordance with the legal state requirements and internal university rules and normative documents, I note the basis of the procedure for acquiring the educational and scientific degree „doctor” on ... by scientific field: 1. Pedagogical sciences, professional direction: 1.3. Pedagogy of training in ... (Methodology of training in geography) at the Department of „Regional Development” at the Faculty of Geology and Geography.

The training for the acquisition of the educational and scientific degree „doctor” is carried out according to a doctoral program accredited by the National Agency for Assessment and Accreditation.

Doctoral student Stanislava Plamenova Misheva was enrolled by Order No. RD 20-1820/28.10.2020 in free form Assoc. Prof. PhD. Maya Petrova Vasileva has been appointed as the scientific supervisor.

The dissertation work was discussed and directed for public defence at an extended meeting of the „Regional Development” department at the Faculty of Geology and Geography of Sofia University „St. Kliment Ohridski”, held on 30.11.2022.

The doctoral student is an assistant in the Department of „Regional Development” at the Faculty of Geology and Geography of Sofia University „St. Kliment Ohridski”.

In the attached documents, there is an opinion from the research supervisor, Assoc. Prof. PhD. Maya Vasileva, in connection with the procedure for non-detection of plagiarism.

At the first meeting of the scientific jury, determined by order No. RD 38-662/19.12.2022 of the Rector of Sofia University „St. Kliment Ohridski” I have been designated as a reviewer.

## **1.2. Data for the dissertation and the Authors abstract**

The dissertation work must represent an independent and original study with scientific and applied results that can make an original contribution to the scientific specialty: Methodology of geography teaching.

The work is presented in a form and volume that meets the specific requirements of the training department.

In structural terms, it consists of title page, content, introduction, 3 chapters, conclusion, used sources. Key content highlights and empirical data are visualized through 8 figures and 18 tables integrated into the text.

The additional evidence of systematized research results is presented through 5 appendices.

The total volume of work is 219 pages.

Title in English: Application of Maria Montessori's methodology in geography education.

Key words: Maria Montessori's methodology, training geography, innovative training, interactive training methods.

**The authours abstract** is an independent product that correctly reflects the essence of the dissertation work, the intermediate and final results of the research activity. It is designed in accordance with the requirements and fully reflects the main results reflected in the dissertation work.

The authours abstract has a volume of 50 pages.

The approbation of the dissertation work includes three (3) publications: „*Applicability of the Montessori method in geographical education*” (with a volume of 5 pages), „*The natural environment - the main didactic resource in the methodology of Maria Montessori*”, „*The student researcher in the context*

*of geographical education*” (with a volume of 11 pages). They were published in 2020-2021.

In the attached reference on the implementation of the minimum national requirements under Art. 2b, para. 2 and 3 of ZRASRB for the acquisition of the educational and scientific degree „doctor” of doctoral student Stanislava Misheva in group indicators G under item 7. - articles and reports published in non-refereed journals with scientific review or published in edited collective volumes are correctly indicated 30 points.

The topic of the dissertation has not been developed so far in the Bulgarian scientific-methodical and didactic-geographical literature and is a significant, important topic for the training methodology in geography, which requires up-to-date arguments in the private didactic and methodical heritage of geography, building up with separate up-to-date scientific productions derived from the methodology of Maria Montessori.

The chosen problem and topic of the presented dissertation work are significant for improving the system of school geographic education in our country towards the junior high school stage.

The **introduction** presents: object, subject, purpose of the research, main tasks, hypothesis for the main tasks and methods of the research.

It would be possible to specify the research problem, justifying its relevance and significance for practice, to argue the benefits of conducting the research, as well as to state the reasons for choosing the topic of the dissertation work.

In the context of the general design of the dissertation research and the interconnectedness of the object and the subject, the main goal is defined as *„to develop concrete possibilities for the application of Maria Montessori's methodology in geographical education, which will serve as a basis for constructing a technology for self-development in the training of geography.”* (p. 5).

The proposed dissertation conforms to the standard for style and language layout. The logic and the argumentativeness demonstrate the dissertation student's ability to succinctly present appropriately selected theoretical theses from secondary sources of information and analytical results from

independently processed primary sources, without deviating from the research topic.

In terms of content, the work is a well-composed whole, including all the necessary applied and theoretical components. With real pragmatism and the necessary literacy, Stanislava Misheva has tried to polemicize the interdependence between some questions of theory and practice.

*The first chapter* (a volume of 62 pages) „**Theoretical foundations of the problem of educational technologies in training**” is structured in 3 paragraphs: *Technology, pedagogical technology, training technology; School technology. Learning strategies and techniques; General subject technology of geography training.*

In the first paragraph, an attempt is made to characterize the concepts of „technology”, „pedagogical technology”, „training technology”, „school technologies”, „learning strategies and techniques”. Unfortunately, it has not been developed in fullness and depth due to the fact that it refers to limited sources of information from Bulgarian and Russian authors with a publication period from 1985 to 2001, which limits the modern interpretation from the point of view of the methodology of geography training.

*In the second paragraph* there is a main reference to Petrov; Atanasova, 2001 and some types and varieties of technologies and their conceptual bases (table 1/pages 19-31) and theories of learning and their conceptual bases (table 2/pages 33-40) are presented in a summarized tabular form. It is noteworthy that table 3/pages 43-44 and table 4/page 49 confirms the temporal reference of authors from 20 or more years ago and the lack of modern interpretation.

Due to the fact that, structurally and content-wise, the object of research – (p. 5) is limited to the junior high school stage, it would be more appropriate in the formulation and characterization of school technologies, strategies and learning techniques to concretize, specify and supplement „in junior high school stage”.

The outlined summaries and conclusions on page 51 need argumentativeness.

*The third paragraph* to the first chapter is defined as the general subject technology of geography training.

It is imperative to present the structure and logic of the theoretical justification of the general subject technology of geography training in a concise and expedient way with selected theoretical arguments from various sources of information, as well as to thoroughly analyse modern publications mainly in the field of Methodology of geography teaching, in order to achieve correctness and adequacy of the academic text on the research topic.

Mainly pedagogical sources, partially methodological-geographical, productions of selected authors are traced, without argumentation in chronological-time section. The dynamics of modern publications are neglected. If it was necessary to include a retrospective analysis of the general subject technology of geography training, then it should very skilfully and efficiently be included as part of the main subject and not present as a historical reference.

Accent should be on the qualitative analysis of modern geographical education, in concreteness and refinement by summarizing the more important theoretical propositions, and modern ones, necessary to prove the dissertation thesis.

The conclusion indicated on page 64 (paper version) sounds quite reasonable: *„The general technology of training justifies another educational paradigm, which is based on a new interpretation of classical didactic concepts, on the examination of concepts established in didactics in a new context, as well as on the introduction of new concepts.“*

However, both the *„new interpretation of classic didactic concepts“* and the *„introduction of new concepts“* should be clearly detectable in the preceding text.

It is necessary that the summarizing statements are in harmony with the constructive presentation of the author's views.

*The second chapter* (in the content from page 65 – 127, volume of 62 pages) is the Montessori Method - a technology of self-development.

The chapter is structured in four paragraphs.

*In the first paragraph „General scientific pedagogical and psychological foundations of the methodology of Maria Montessori“* a general description of

the methodology of Maria Montessori, the general pedagogical and psychological basis of her methodology is made.

In *the second paragraph* the main attributes of Maria Montessori's methodology are identified: working materials; Montessori teachers; lessons (educational process); evaluation; freedom and discipline; natural environment; „Educazione cosmic” (an adequate designation and name in Bulgarian could be proposed).

*The third paragraph* outlines the factors of the external and internal educational environment for the implementation of the Montessori methodology in geography training.

In *the fourth paragraph*, the adaptability of Maria Montessori's methodology in the general subject technology of geography training is sought, and it is assessed on the basis of a comparative analysis of all of its main attributes with those of the methodology of geography training, partially presented in tabular form.

The comparative analysis made here could also be specified at the junior high school stage and at the subject area of **geography and economics**.

It would be good to form generalized conclusions and judgments at the end of the second chapter.

*Chapter three* has a volume of 70 pages: „*A basis for constructing the technology of self-development in the training of geography. Author's scientific workshops based on the methodology of Maria Montessori.*”

An attempt has been made to substantiate the basis for constructing a technology of self-development in the training of geography.

Here it can be problematized by searching for an answer to the question „*What are the arguments for defining the four pillars based on the philosophy of geography education in the new realities*” (p. 127) and are they generally valid for the geography and economics training in grade 5, 6, 7 or 8, 9, 10 of the general education, or are they valid for the profiled preparation?

It is necessary to clarify „*the unity of the technology of self-development as a submodel of the general subject technology of geography training*” and

whether it should lead to „*ideas for qualitative change in the functioning of subject training*” (the subject of geography and economics as a whole in general education or in individual classes under the new realities). It is also necessary to specify and determine all three dimensions of the technology of self-development as a submodel in the general subject technology in geography training in relation to the object of study – „*the system of geography education in its junior high school stage*”.

We note with interest the author's scientific workshops based on Maria Montessori's methodology.

On page 130 it is stated that: „The developed workshops are adapted to STEAM education in view of the current trends in the new state policy and the implementation of the new STEAM technologies in the country”. It would be good to clarify the main difference between STEM and STEAM education/training and STEAM technologies. As well as follows, the adaptation of the scientific workshops presented in the dissertation study: *Workshop 1. Building the Earth. Tectonics; Workshop 2. Relief - external forces; Workshop 3. Relief - internal forces.*

From a modern point of view, it is good to substantiate the proposed scientific workshops with the current curricula in geography and economics - in the case of 5th grade.

In the proposed sample methodological developments on pages 133 – 140/ table 8, pages 144 – 157/ table 10, pages 162 – 173/ table 12, it is necessary to specify the fourth column and the sources of information included in it, which can hardly to be accepted as such, for example: introductory text?, working materials ?, presentation ? In the indicated 3 tables, the doctoral student refers to *Tsankova, L. and others, 2016, pages 51-53/table. 8; pages 55-58/ tab. 10; pages 55-58/tab. 12*, as there is no type and kind, name of the publication, the same is missing in the literature and there is a repetition of the mentioned pages in tables 10 and 12.

An experimental study was conducted regarding the application of Maria Montessori's methodology in geography classes in only one school in the city of Sofia - 93 SU „Alexander Teodorov-Balan”. There is no specific data on the participants in the workshops. Why were „fifth and sixth grades from 93



„Alexander Teodorov-Balan” secondary school observed as a control group, when the so-called workshops are designated only for the 5th grade?

If the structure and logic of the presentation were followed, it would be possible to present appropriately selected theoretical arguments and empirical summaries, and their systematization at different hierarchical levels according to certain indicators and characteristics.

The presented dissertation is in the Field of Higher Education: 1. Pedagogical Sciences and Professional Direction: 1.3. Pedagogy of training in... which obliges the application of a certain methodological toolkit for empirical research in certain stages - diagnostic, formative and concluding stage.

According to the normative-procedural requirements, correct citation and the ability to summarize, systematize, analyze and interpret on the basis of in-depth theoretical knowledge are imperative to be present in the complete dissertation work.

Omissions and inaccuracies are noticed compared to the current Bulgarian standard for bibliographic references and citation.

## **II. Scientific contributions**

The dissertation is an independent and original research in a specific field - methodological heritage.

The contributions of the dissertation research could be summarized in the following performance indicators: theoretical-methodological; empirical; practical-applied.

With great conditionality, I accept the reference for the doctoral student's declared contributions to the dissertation research (p. 46/author's abstract), due to insufficient reasons to specify and argue from the point of view of the Methodology of geography teaching, especially regarding the mentioned first contribution. What is needed is a focused study, a summary, and a modern theoretical formulation of the subject.

The second and third contributions should be summarized and refined until the scientific-methodological statements and generalization are made.

The fourth contribution should be edited, dropping the claim of „*up-to-date educational content from the geography and economics curricula for junior high school stage*”, and specifying the author's model.

### **III. Conclusion**

Taking into account the observed normative and procedural requirements and the quality of the research, I propose to vote positively „FOR” the award of the degree of „Doctor” of Education and Science to Stanislava Plamenova Misheva in the scientific field. 1. Pedagogical sciences, professional direction: 1.3. (METHODOLOGY OF TRAINING IN GEOGRAPHY).

**27.02.2023**

**Veliko Tarnovo**

**Prepared the review:**

**(Prof. Dr. Habil Stela Dermendzhieva)**