



REVIEW

by **Prof. Ph.D. Yuliya Georgieva Doncheva, PhD**

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regarding the materials of doctoral student Georgios Ioannis Tegos, for awarding the educational and scientific degree "Doctor", in the field of higher education 1. Pedagogical sciences, by professional direction 1.2. Pedagogy (Special Pedagogy), with supervisor Prof. Neda Zlatinova Balkanska, PhD at Sofia University "St. Kliment Ohridski", Faculty of Educational Sciences and Arts with the topic of the dissertation: "*Integration of information and communication technologies (ICT) in education and the role of school management in primary and secondary special educational institutions*".

Data, finding and assessment of the competition procedure, the doctoral studies, the dissertation, the abstract and the publications for the competition.

1. Compliance of the procedure with the current regulations. Data on the competition and doctoral studies – On the basis of Art. 4 of the Law on the Development of the Academic Staff in the Republic of Bulgaria (promulgated SG No. 38 of 21.05.2010, amended by SG No. 81 of 15.10.2010, amended by SG No. 101 of 28.12.2013 amendment No. 04.05 d.), decision of the Faculty Council of the Faculty of Educational Sciences and Arts dated 28.05.2024, Protocol No. 8 and on the basis of Order No. RD-38-276 of 03.06.2024 of the Rector of Sofia University, full-time doctoral student Georgios Ioannis Tegos was dismissed with the right of defense with a positive decision of the primary readiness unit, opening his procedure, giving a move to defend the dissertation work. All preliminary legal and regulatory rules provided for in this procedure have been complied with.

2. General biographical presentation of the candidate (education, qualifications, professional experience, etc.).

From the presented curriculum vitae regarding the **education and qualification, academic achievements** of the doctoral student in chronological order, it is evident that the educational qualification, academic growth and upgrading is active and dynamic, namely:

2000 – 2003: Graduate from 1st Integrated High School of Grevena, Greece.

2004 – 2008: Technological Educational Institute of Western Macedonia (Bachelor) Bachelor in IT Applications in Management and Economics. Overall grade: 8.27/10.00. Scholarship from the State Scholarship Foundation (Greece).

2014 – 2015: University of Nicosia (Master of Education) Master Degree in “Special Education”. Overall grade: 3.75/4.00 “Excellent” with “*Summa Cum Laude*”.

2012 – 2019: University of West Macedonia Greece (Bachelor) Bachelor in Business Management (Business IT). Overall grade: 8.41/10.00.

2017 – 2018: University of Nicosia (Master of Education) Master Degree in “Educational Leadership & Management”. Overall grade: 3.77/4.00 “Excellent” with “*Summa Cum Laude*”.

Certification documents:

Education - Certification in Educational Adequacy.

ICT - ECDL Certification. B1 Level ICT Certification. B2 Level ICT Certificate.

Foreign languages - English C2.

Braille - Braille Certification by KEAT Greece (Center for Education and Rehabilitation for Blindness).



Special education - Seminar in “Special Treatment and Education” by Aegean University

Integrated education - Seminar in “Integrated education, distinctness, acceptance, school incorporation” by Aegean University.

Counseling and guidance - Diploma of Specialization in “Counseling and Guidance” (PESYP) by the School of Pedagogical and Technological Education (ASPETE).

Working experience in chronological order:

2008: National Bank of Greece (Grevena Branch), Internship at customer service, bank account creations, statements, etc.

2010: Vocation Institution of Grevena, Greece, Teacher at the Faculty of “PC, Communications & Networks” in courses of “Communications”, “Marketing & Advertisement” and “Introduction to IT”.

2016 – 2017: Special Vocational Gymnasium of Acharnae, Athens, Greece, Special Education teacher in IT courses to children with special needs or/and with learning difficulties.

2017 – 2018: 1st Special Primary School of Nea Makri, Athens, Greece, Special education teacher in IT courses to children with special needs or/and with learning difficulties.

2018 – 2019: Integrated Special Vocational Gymnasium – Lyceum of Agios Dimitrios, Athens, Greece, Special education teacher in IT courses to children with special needs or/and with learning difficulties.

2019 – 2022: 1^o Integrated Special Vocational Gymnasium – Lyceum of Piraeus, Greece, Special education teacher in IT courses to children with special needs or/and with learning difficulties.

2022 – 2023: Special Vocational Training Workshops of Piraeus, Greece, Special education teacher in IT courses to children with special needs or/and with learning difficulties.

2023 – 2024: 1^o Integrated Special Vocational Gymnasium – Lyceum of Piraeus, Greece, Special education teacher in IT courses to children with special needs or/and with learning difficulties.

Doctoral student Georgios Ioannis Tegos is an ambitious young man dedicated to the cause and fundamental competencies of *Special Education*, as well as activities with a wide range of thematic. The continuous desire, aspiration and realization towards training, self-improvement and provoking towards new academic achievements of the doctoral student is impressive, such as the last one so far, namely the educational and scientific degree Doctor (PhD).

3. Actuality of the issues of the dissertation work.

The relevance of the topic "Integration of information and communication technologies (ICT) in education and the role of school leadership in primary and secondary special educational institutions" is great. The integration of ICT in education is a constantly developing topic, with particular relevance for primary and secondary special education institutions (SES). **Arguments:**

- **Digital transformation:** The modern world is highly digitized, and ICT is key to successful integration into it. SES are no exception - they must prepare students for a digital society.
- **More accessible education:** ICT can make education more accessible for students with special educational needs, providing them with personalized learning and alternative teaching methods.
- **Higher quality education:** ICT can improve the quality of education by making lessons more interactive, motivating and effective.

- **Development of key skills:** ICT helps to develop key skills important for the 21st century, such as digital literacy, problem solving, teamwork and communication.

- **Strategic priority:** The integration of ICT is among the strategic priorities of the Ministries of Education of the countries of the European Union and around the world.

Role of school management: School management plays a key role in the successful integration of ICT in SES. Some of his responsibilities are:

- **Creating a vision and strategy for ICT:** Management should define clear goals and objectives for integrating ICT into the learning process.

- **Provision of resources:** Necessary resources such as hardware, software, internet connection and training for teachers need to be provided.

- **Teacher support:** Management should support teachers in the ICT integration process, providing them with the necessary training and mentoring.

- **Encouraging innovation:** Management should stimulate innovative approaches to using ICT in education.

- **Evaluation of effectiveness:** It is important to evaluate the effectiveness of ICT integration and make the necessary adjustments, reforms and innovations.

Summary: The integration of ICT in SES is a key factor in ensuring quality and accessible education for all students. School leadership has an important role in this process, creating a vision, providing resources, supporting teachers, encouraging innovation and integrating high technology into the learning process.

As always, the scientific supervisor of the doctoral student, Prof. Neda Balkanska, PhD a nationally and internationally recognized scientist, finds the most relevant, the most valuable, the most modern, and in this case mentoring, bringing this difficult subject to completion, both as an object and subject matter

as well as research methodology and finalizing this scientific work to a pinnacle that is a model for all budding scientists! Furthermore, any research, theoretical, practical or practical-applied, related to the integration of ICT in education is a key factor in modernizing education and preparing students for success in the digital society. School leadership plays an important role in this process, providing strategic planning, resources and support. It is important to consider aspects such as cyber security, ethical use of technology and professional development of teachers. In modern times, this information is of extreme necessity, therefore it should be popularized and multiplied, and not remain in the paper pages of the scientific work. Congratulations!

4. Structure and content of the dissertation work. Dissertation data -

The dissertation has a volume of 232 pages, of which 195 pages are the active text. Contributions. Appendices of 11 pages and general Conclusion. The bibliography is exposed on a full 24 pages and includes titles, sources and Internet resources in Latin. There are 4 (Four) posts on the topic. The structure is an Introduction and Four Chapters.

Chapter One - "School Leadership and Management in Special Education". *Theoretical foundations include:* Human resource management in education. Structure and roles in school leadership. Manager functions and effectiveness. Role of teachers and management in the integration of students with special educational needs. Advantages and barriers to special and inclusive education. Current state of special education in Greece. *Relevance to Topic:* Emphasize the role of school leadership in the successful integration of ICT in special education.

Second chapter - "Relationship of teachers, students and school management with the integration of ICT in special education". *ICT in special education:* Definition and types of ICT. Benefits of integrating ICT. Role of

teachers to integrate ICT. *Factors influencing ICT integration:* Barriers to ICT integration. Perceptions and attitudes towards ICT. Role of school management. *Support strategies:* Role of school leadership in supporting ICT. ICT teacher training. Effective management strategies to support ICT.

Chapter Three – “Research Design”. *Purpose, Questions, Hypotheses, and Objectives:* Formulate a clear purpose and research questions. Derivation of testable hypotheses. Determination of specific tasks to be performed. *Constituent:* Determining the target group for research. Describing the characteristics of the participants. *Methodology:* Choosing an appropriate research approach (quantitative, qualitative, mixed). Description of the data collection methods used (surveys, interviews, observations). *Toolkit:* Develop or adapt research tools. Ensuring instrument validity and reliability.

Chapter Four - "Analysis of Results". *Demographics:* Presentation of demographic information about participants. *Integration of ICT:* An analysis of the levels of integration of ICT in practice. *Barriers:* Identification of the encountered barriers to the integration of ICT. Perceptions and attitudes towards ICT application. The role of school management. Mainstreaming ICT in relation to gender and school level. Comparative analysis of participants' competence for ICT application, depending on their prior training. Comparative analysis of participants' competence according to the type of their ICT certification. Analyzing student outcomes: ICT versus traditional forms of learning. Discussion.

5. Scientific-theoretical and practical-applied contributions.

Content and assessment of scientific contributions - Doctoral student Geogios Tegos brings out 7 (seven main) as well as conclusion and conclusions that correspond and color the dissertation research. I adopt his wording, supplementing them as follows:

1) *Literature review and tools*: A valuable resource for future researchers in the field. Two tools: a questionnaire and an experimental activity that can be used for quantitative and qualitative research.

2) *Degree and quality of ICT integration*: Reveals variations in the use of ICT in different aspects of teaching. Identifies strengths and weaknesses of ICT integration.

3) *Influence of gender, school level and training*: Training is a key factor for integrating ICT. Trained teachers use a wider range of ICT tools.

4) *Obstacles to ICT implementation*: Insufficient training, lack of ICT skills and insufficient logistics infrastructure.

5) *Attitudes and perceptions towards the use of ICT*: Generally positive attitudes, but also concerns and hesitations. Understanding perceptions is critical to addressing issues.

6) *Impact of ICT on school performance*: Positive impact noticeable among students with special educational needs. Reducing errors and improving academic achievement.

7) *Role of school administration*: A crucial role to support and promote ICT integration initiatives. Need for better logistics infrastructure.

In summary, the dissertation contributes to a better understanding of ICT integration in special education by: Describing the extent and quality of ICT integration. Identifies factors affecting ICT integration. Reveals the benefits of ICT for students. Emphasizes the role of school leadership. It offers guidelines for overcoming obstacles and improving ICT integration.

Summarizing the mandatory part of the opinion on the contribution points of the scientific work, I will note that developments of this kind should find a place in the scientific literature, so that pedagogical, non-pedagogical specialists, experts, interested in the issue can find their answers.

6. Data on the auto-reference. The abstract, with a total volume of 52 pages, of which one page "Scientific contributions" (7 in number) and one-page publications on the topic (4 in number), meet all the standard requirements for a synthesized and adequate, analytical-systematic development of the primary document, the scientific text, as well as the objective reflection of the content of the dissertation research. The scientific and technical requirements for the design and presentation of it in the paper version and in the digital form as an online publication have been met. The correctness is visible, the scientific value of the scientific work has been analyzed, as well as the quantitative data according to the normative requirements in the national and internal-institutional laws and regulations.

I state with satisfaction that no violations have been committed regarding the compliance of the dissertation and the originality of the work with the requirements of LDASRB, the Regulations for it, the Regulations for the acquisition of scientific degrees at SU "St. Kliment Ohridski" and the institution's internal rules.

7. Publications on the topic of the dissertation (content and fulfillment of scientometric requirements).

7.1. Publication data.

7.1. The dissertation student presents 4 (four) publications on the topic of scientific research, published in the period 2022-2023. All are independent. Their content is adequate and corresponds to the dissertation, both as a stage and as a continuum.

7.2. Assessment of conformity of the scientific production according to the requirements of LDAS: The doctoral student participates with the following scientific production, related to the Scientometric criteria for the minimum national requirements for the scientific and teaching activity of the

candidates for acquiring scientific degrees and occupying academic positions, Field 1. Pedagogical Sciences, as follows:

- *Dissertation work for awarding the educational and scientific degree "doctor", Group A, Indicator 1 → 50 points.*

- *Group G 7. Articles and reports published in non-refereed journals with scientific review or published in edited collective volumes: 4 number of independent x 10 points = 40 points;*

Publications - a total of **4 issues**, independent, published in the period from 2022 to 2023. **Total number** of points according to the indicator Publications = **40 points**.

Total number of points for indicators from groups A and G = **90 points**.

From here, it can be categorically summarized that the sum of the indicators of the respective groups **fully meets**, exceeding many times, the minimum national requirements under Art. 2b, para. 2 and 3 of LDASRB and Art. 1a, paragraph 1 of the RALDASRB and, accordingly, according to Art. 24, para. 1 of the Regulations for the implementation of the RDASRB (for the educational and scientific degree "doctor") for area 1. Pedagogical sciences, Professional direction 1.2. Pedagogy (Special pedagogy).

8. Personal impressions.

I do not know Georgios Ioannis Tegos personally, but judging by the scientific production - dissertation, abstract and publications submitted for participation in the competition, I can state that together, under the extremely professional and competent guidance of my scientific supervisor Prof. Neda Balkanska, PhD, is a finalized scientific work, the subject of which is particularly significant, current and I would say a step ahead of its time, containing no significant weaknesses that would detract from its merits. Congratulations!

9. Notes, recommendations and questions.

Notes, positive:

Current topic: The integration of ICT in education, especially in special education, is an extremely current and important topic.

Comprehensive Approach: The dissertation examines the topic from a variety of perspectives, including theoretical foundations, empirical research, and practical application.

Practical relevance: The results of the study can be used to improve the integration of ICT in special education and to support teachers and school management.

Methodological correctness: The research methods used are appropriate and the results are reliable.

Clarity and Logic: The text is well structured, clear and logical.

Recommendations:

Research extension: Different types of ICT and their application in special education can be explored in more depth.

Benchmarking: Benchmarking can be done with other countries to see best practices for integrating ICT in special education.

Practical guidelines: Practical guidelines for teachers and school management can be developed for more effective integration of ICT in the learning process.

Dissemination of results: Research results can be presented at scientific conferences and published in scientific journals to reach a wider audience. That is, it is good for the doctoral student to expand her participation in international educational projects. That is, there should be an effort to popularize the results of the research activity in publications, conferences, scientific meetings, etc., so that the results that are really significant are heard, visible and recognizable.

Questions:

- What are the most effective methods of training teachers in ICT?
- How can the necessary infrastructure be provided to integrate ICT in special education?
- How can barriers to ICT integration be overcome?
- How can the impact of ICT on the academic achievements of students with special educational needs be assessed?
- How can it be ensured that ICT is used ethically and responsibly in special education?

In addition, I would like to emphasize that the topic is very significant and it is important to continue the work in this direction.

10. Conclusion - Doctoral student *Georgios Ioannis Tegos* has fulfilled his obligations arising from the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for the Implementation of LDASRB, the Regulations of SU "St. Kliment Ohridski", as well as the obligations under the corresponding individual study plan of the doctoral student, that is, it meets the minimum national requirements under Art. 2b, para. 2 and 3 of LDASRB and art. 1a, paragraph 1 of RALDASR. The form and content of the dissertation meet the requirements of Art. 27 of RALDASR. All administrative procedures have been followed.

Bearing in mind the above, I confidently give my positive assessment of the conducted research, presented in the dissertation work, the abstract, the achieved results and contributions.



I declare *my positive vote for awarding the educational and scientific degree "Doctor" (PhD) to Georgios Ioannis Tegos* from professional field 1.2. Pedagogy (Special pedagogy), field of higher education 1. Pedagogical sciences.

Prepared the review, in the capacity
of a member of the scientific jury:.....

(Prof. DSc, Yuliya Doncheva, PhD)

25.06.2024

