

OPINION

in relation with a procedure of awarding the educational and scientific degree „doctor” in the Field of higher education 1. Pedagogical sciences
Professional field 1.2. Pedagogy (Special education)
Doctoral program “Special education in English”
topic „Teaching Mathematics to students with mild intellectual disability in secondary school level“,
author Panagiotis-Christos Konstantinos Trichas,
full-time PhD student in the Faculty of Educational Studies and the Arts, Sofia University “St. Kliment Ohridski”

1. General presentation of the procedure

The present opinion is prepared from the position of a member of the scientific jury included in the Register of Sofia University “St. Kliment Ohridski” under No 48/26.04.2023 and legalized with Order No ПД 38-222/28.04.2023 of the Rector of Sofia University “St. Kliment Ohridski” – Prof. Dr. Habil Anastas Gerdjikov (digitally signed by Eliza Petrova Stefanova), in compliance with Art. 4 and Art. 25 from The Law for the Development of the Academic Staff in the Republic of Bulgaria (ЗПАКРБ), Art. 2 para (8) of the Regulations for applying ЗПАКРБ, Art. 5 para (12) from The Regulations on the Terms and Conditions for Acquiring Scientific Degrees and Occupying Academic Positions in Sofia University “St. Kliment Ohridski” and on the basis of a corresponding Decision from 26.04.2023 (Protocol No 5) of the Faculty Council of the Faculty of Educational Studies and the Arts (FESA) in relation with a procedure of awarding the educational and scientific degree „doctor” in the Field of higher education 1. Pedagogical sciences, Professional field 1.2. Pedagogy (Special education), Doctoral program “Special education in English”, topic „Teaching Mathematics to students with mild intellectual disability in secondary school level“, author Panagiotis-Christos Trichas, full-time PhD student in FESA, scientific advisor Prof, DSc Milen Zamfirov .

No procedure irregularities were identified.

2. General presentation of the candidate

The documents of the candidate in connection with the procedure enable an objective and complete evaluation in accordance with the requirements of the National Acts (ЗПАКРБ and the Regulations for its implementation), as well as the Regulations of SU “St. Kliment Ohridski” and FESA.

Panagiotis-Christos Trichas is a greek citizen. He was born on 6th February 1984. In 2008 he obtained bachelor degree in Mathematics in Aristotle University of Thessaloniki, acquiring mathematical skills and analytical thinking in Algebra, Theory of numbers, Mathematical logics, Mathematical analysis, Geometry, Numerical methods and Computer science, Statistics and Operational research. In 2010 he was certificated with a special education license from the University of Macedonia, Thessaloniki, studying philosophical, sociological and psychological perspectives of disability and special learning needs. The corresponding skills help him in applying current theoretical knowledge in the practice of special educators, collaborating with parents

and professionals to provide services to individuals with special needs. Panagiotis Trichas studied: Intellectual Disability, Theory and Practice of Autism Spectrum, Assessment of Students with Special Needs, Supporting such students. In 2012 he received master degree in the University of Sunderland, Sunderland (United Kingdom), studying various approaches to an effective teaching of students with special educational needs. In 2019 he received a second master degree from the International Hellenic University in Thessaloniki (Greece), while in 2022 he received a third master degree from the Hellenic Open University in Patras (Greece). In the period 2013-2014 Panagiotis Trichas was a teacher in Mathematics in the 1st High School Echedorou, Sindos, Thessaloniki (Greece) and was responsible for students with special educational needs, teaching students with learning disabilities such as dyslexia, attention deficit, hyperactivity disorder and mental retardation. In the period 2014-2015 he was a teacher in Mathematics in the 3rd High School of Rethymno in Rethymno (Greece) and his professional duties were similar. The same concerns his teaching in Giannitsa, Aridaia, Foustani, Alexandria, Thessaloniki and Edessa, sequentially.

3. Topicality of the issue in the dissertation

The students with mental retardation show decreased cognitive skills and in many cases their interest to studying is insignificant. An important task for their educators is to characterize the obstacles and to provide conditions for interest increase. The dissertation studies techniques of teaching Mathematics to students with mild intellectual disability. The focus is on secondary school teachers and students. The considered issue and the corresponding conclusions make the dissertation topical and significant.

4. Structure and content of the dissertation

The dissertation is presented in English and consists of 192 pages. It contains 5 chapters, conclusion and references with 49 titles in English. Also, 56 tables are presented. Including 4 paragraphs, Chapter 1 “Mathematical education“ is dedicated to behaviorism and constructivism, socio-cultural approaches, the nature of Mathematics and the role of teachers. Again in 4 paragraphs Chapter 2 “Students with intellectual disability – definitions and general characteristics” considers typical features of children with mental retardation, characteristics in connection with the educational process, educational interventions and characteristics during secondary education of students with mental retardation. Chapter 3 “Education of students with mental retardation” is divided into 5 paragraphs, which include educational characteristics, content of the educational programs, curricula, interdisciplinary collaboration and cooperation between school and family. Chapter 4 “Mathematics as a school subject for students with intellectual disability” contains 2 paragraphs. The first one is dedicated to the role of Mathematics teachers for optimal organization of the educational process in achieving high level of students’ results, while the second one – to mathematical notions and skills, respectively. What are considered in the 5 paragraphs of Chapter 5 “Methodology” are the goals of the dissertation and the research questions in it, a sample of the research including 100 secondary school teachers teaching Mathematics to students with a mild mental retardation. The corresponding instruments are described and data is analyzed by means of the statistical package SPSS v.25 , using Chi square test and cross-tabulation analysis.

5. Science-theoretical and practice-applicable contributions

Clearly formulated contributions of the dissertation are missing. It could be claimed descriptively that the science-theoretical and practice-applicable contributions are connected

with the study of the techniques of teaching Mathematics to students with a mild mental retardation and the influence on them of the corrective level based on the results of their assessment. It is established that supervision materials are used, also information at the beginning for the goal of the corresponding lesson and generalization at the end using cognitive cards and analysis of the execution process. In case of teaching corrections a possibility is proposed to students for an active participation by assessment and application of previous knowledge. The replies and the comments are integrated in practical teaching. No doubt, the proposed conclusions are of a high level of utility.

6. Author's summary

The author's summary is in compliance with the content of the dissertation and enables establishment of a precise positive evaluation for its quality, topicality and purposefulness.

7. Publications about the topic of the dissertation (content and verification of the science-metrical requirements)

In total, 7 publications are presented in connection with the dissertation. All of them are in English, 6 are independent and 1 is co-authored by the scientific advisor of the candidate. Approbation is assured of the results obtained by the PhD student. There is no reason to believe that they are not his personal work, which excludes a presence of plagiarism. The requirements for acquiring the educational and scientific degree "doctor" are satisfied.

8. Personal impression

I do not know the candidate personally.

9. Notes, recommendations and questions

The recommendations are connected with the necessity of clear formulations of candidate's claim concerning the contributions of the dissertation.

10. Conclusion

From all of the above it is obvious that Panagiotis-Christos Konstantinos Trichas is a valuable specialist in Professional field 1.2. Pedagogy (Special education). He has the necessary preparation and skills for independent research and scientific-practical activities. This makes me conclude that his quality and the quality of his dissertation satisfy the requirements of the ЗРАСРБ, the Regulations for its implementation, as well as the Regulations of Sofia University "St. Kliment Ohridski" for acquiring the educational and scientific degree "doctor". Therefore, I **declare my positive evaluation** for the executed investigation and I would like to propose to the honourable members of the Scientific Jury **to award** the educational and scientific degree "doctor" to Panagiotis-Christos Konstantinos Trichas in the Field of higher education 1. Pedagogical sciences, Professional field 1.2. Pedagogy (Special education), Doctoral program "Special education in English".

Sofia, 10 June 2023

Autor of the opinion:



(Prof. Dr. Habil Sava Grozdev)