

## **OPINION**

by **Assoc. Prof. Kaloyan Ivanov Damyanov, PhD**

Sofia University St. Kliment Ohridski and  
Burgas State University Prof. Dr. Asen Zlatarov

regarding a dissertation thesis submitted for the award of the educational and scientific degree  
“Doctor”

in: Higher Education Area 1. Educational Sciences,  
Professional Field 1.2 Pedagogy,  
Doctoral Programme: Special Pedagogy

**Author:** Krasimira Stoilova Ivanova

**Dissertation Title:** *Personalized Learning – A Predictor for the Inclusion of Students with  
Special Educational Needs*

**Scientific Supervisor:** Prof. Zhanna Atanasova, D.Sc., Plovdiv University Paisii Hilendarski

### **1. General Presentation of the Procedure and the Doctoral Candidate**

The presented procedure for the defense of the dissertation thesis by Krasimira Stoilova Ivanova is fully legitimate and compliant with the regulatory requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria. The dissertation was discussed and officially referred for public defense at a meeting of the Department of “Pedagogy and Educational Management” at the Faculty of Education of Plovdiv University “Paisii Hilendarski,” held on 07 April 2026.

The analysis of the doctoral candidate’s professional biography reveals a systematically developed and multidimensional profile. Krasimira Ivanova possesses solid interdisciplinary training acquired through the consecutive completion of four degree programmes at Plovdiv University “Paisii Hilendarski”: Speech and Language Therapy (2021), Counselling Psychology (2007), Corporate Finance (2004), and Marketing and Management (Bachelor’s degree, 2001).

Her professional experience in the field of education is directly related to the topic of the dissertation. Since 2022, she has been working as a resource teacher at Secondary School “Paisii Hilendarski” in Plovdiv, while in the period 2019–2022 she held the same position at the Regional Centre for Support of the Process of Inclusive Education – Plovdiv. The accumulated practical, diagnostic, and consultative experience within the inclusive school environment constitutes a fundamentally solid basis for the implementation of the present in-depth scientific and empirical research.

## **2. Relevance of the Research Topic**

The topic of the dissertation thesis is characterized by high scientific and practical significance. In the context of dynamically evolving international and national educational policies, inclusion has become established as a fundamental principle for ensuring equitable access to quality education for all students.

Particularly relevant are the processes of digital transformation and the personalization of learning, which are of crucial importance for the effective inclusive education of children with special educational needs. This group of learners is characterized by a diversity of individual characteristics and needs, which necessitates the application of adaptive and differentiated pedagogical approaches.

In this context, the dissertation thesis of Krasimira Ivanova represents a substantial contribution, as it addresses the need for scientifically grounded models of personalized learning in a digital environment and proposes innovative solutions based on contemporary educational technologies and digital tools.

## **3. Knowledge of the Research Problem**

The doctoral candidate demonstrates excellent and detailed knowledge of the current state of the researched problem at national, European, and global levels. The theoretical review is based on a solid scientific foundation comprising 263 bibliographic sources (19 in Cyrillic and 234 in Latin script), as well as 44 normative acts retrieved from online sources.

In Chapters One and Two, the author provides a precise critical analysis of the evolution of the concept of inclusive education (considered in both broad and narrow senses) and the spatial dimensions of personalized learning. A clear terminological differentiation is made between the concepts of personalized, individualized, differentiated, and adaptive learning, which is evidence of the researcher's high level of theoretical maturity.

#### **4. Research Methodology**

The architecture of the empirical research has been designed and implemented with scientific rigor and methodological consistency. The object, subject, aim, and tasks of the study are correctly defined. The research has a longitudinal character and covers a three-year period (November 2022 – October 2025).

A complex multi-method diagnostic toolkit was employed, combining:

- An author-developed multidimensional questionnaire (28 items) for examining teacher reflection;
- The “mind mapping” method for identifying academic perceptions among 85 Master's degree students;
- A teaching experiment (October 2024 – October 2025) involving an artificial intelligence-based mobile application (Duolingo Math) with students with special educational needs;
- An author-developed 7-point Likert scale for assessing the effects of the experiment (30 items), administered to 34 respondents (parents, teachers, and specialists).

The statistical processing of the empirical data was conducted using specialized software packages (IBM SPSS 22, STATISTICA 13, and Excel 2016). The validity and reliability of the instruments were mathematically verified through tests for distribution normality (Shapiro–Wilk criterion) and Cronbach's Alpha coefficient.

## **5. Characteristics and Evaluation of the Dissertation Thesis and Its Contributions**

The dissertation thesis comprises 280 pages (244 pages of main text) and is structured into an introduction, four chapters, findings, conclusion, contributions, and appendices. The text demonstrates a high degree of visual representation, including 19 tables and 77 figures.

The contributions of the dissertation thesis possess a clearly expressed theoretical-applied and scientific-practical character.

### **Theoretical Contributions**

- Conceptualization of personalized learning as a leading factor in digital inclusive education;
- Differentiation of five major dimensions of barriers to personalized learning: conceptual, institutional, psychological, technological, and pedagogical.

### **Practical-Applied Contributions**

- Development and validation of an innovative hybrid learning model through smart digital technologies with embedded artificial intelligence (Duolingo Math) for students with special educational needs in the field of mathematical operations;
- Empirical evidence demonstrating the stimulation of spatial orientation, cognitive engagement, and self-efficacy through gamification and sensory support.

## **6. Evaluation of the Publications and the Doctoral Candidate's Personal Contribution**

The doctoral candidate presents five independent scholarly publications reflecting the main theoretical emphases and intermediate results of the dissertation research, which fully satisfies the minimum national requirements.

The personal contribution of Krasimira Ivanova is indisputable. She planned, organized, and conducted the longitudinal study, developed the authorial questionnaires and scales, and personally implemented the teaching experiment in her capacity as a practitioner-specialist.

Her active participation as a member of international project teams under the Erasmus+ Programme (including projects focused on digital competences and the “A-CHATT” toolkit) further confirms her strong research engagement.

## **7. Abstract of the Dissertation**

The submitted abstract fully corresponds to the structure, content, and scientific architecture of the dissertation thesis. It has been prepared in accordance with the established regulatory standards and presents, in synthesized form, all key components of the research, including empirical graphs, statistical analyses, and the formulated contributions.

## **8. Recommendations for Future Use of the Dissertation Contributions and Results**

Considering the indisputable applied value of the dissertation, I would make the following recommendations:

1. The results from the implementation of artificial intelligence applications (Duolingo Math) in the process of personalized learning should be developed into a practical methodological guide for both resource teachers and mainstream teachers.
2. The developed diagnostic toolkit and author-developed scales should find broader application within qualification and training courses for pedagogical specialists aimed at overcoming the identified institutional and pedagogical stereotypes.

## **CONCLUSION**

The dissertation thesis of Krasimira Stoilova Ivanova constitutes a completed, profound scientific and applied study in the field of special pedagogy. It contains scientific-applied results and contributions that represent an original contribution to the field of science.

As a researcher, the doctoral candidate demonstrates high academic culture, theoretical maturity, and the ability to independently conduct large-scale empirical studies.

All of the above provides me with full grounds to express my unequivocally positive evaluation and to recommend that the esteemed Scientific Jury award Krasimira Stoilova Ivanova the educational and scientific degree “Doctor” in Higher Education Area 1. Educational Sciences, Professional Field 1.2 Pedagogy, Doctoral Programme “Special Pedagogy.”

**03 June 2026**

Prepared by: .....

(signature)

**Assoc. Prof. Kaloyan Damyanov, PhD**