

REVIEW

of a Doctoral Dissertation entitled
“ADAPTIVE MODELS OF LEARNING IN TECHNICAL VOCATIONAL EDUCATION
ACCORDING TO STUDENTS’ PROFESSIONAL ABILITIES AND INTERESTS”
submitted for the award of the educational and scientific degree **Doctor** in the field of Higher Education *Educational Sciences*, Professional Field 1.2. *Pedagogy (Professional and Vocational Education)*

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Reviewer: Prof. Yanka Dinkova Merdzhanova, DSc, Sofia University “St. Kliment Ohridski”, Faculty of Education, Department of Didactics

General Overview of the Procedure and the Candidate

To date, the doctoral candidate’s training and academic activities have been intensive, demonstrating a high level of initiative and commitment both in the development of the dissertation and in teaching engagements within and beyond the faculty, public academic appearances, and active participation in the activities of the Faculty of Education. The author completed and submitted the dissertation research ahead of schedule; however, this was not at the expense of quality—on the contrary. The procedure carried out within the Faculty of Education has so far been correct and precise, fully compliant with the requirements of the Academic Staff Development Act. The candidate meets the national scientometric indicators.

Relevance and Significance of the Topic

Among the most ancient, classical, contemporary, strategic, modern, and future-oriented issues in the educational practices of humanity are those related to Vocational Education and Training (**VET**). Regardless of—or precisely because of—the growing global awareness of the key importance of vocational preparation and sustainable professional realization, the problems and challenges in this field continue to multiply, proportionally to new attempts to optimize educational processes.

In the Bulgarian context of vocational education and training, the need to identify viable and realistic solutions at the normative, systemic, institutional, process-related, pedagogical, personal, and human-resource levels is immense. The obstacles accumulated over the years are substantial.

The Introduction presents a strong argumentation and justification of the problem field as a research domain, clearly formulated with an appropriate research goal, objectives, and four research questions:

1. Which of the studied educational models can be applied in vocational education?
2. How can these learning models be adapted to students’ needs and interests?
3. What changes are required to implement adaptive learning models—in the regulatory framework, organization of the educational process, curriculum content, and assessment of professional knowledge and skills?
4. Are the proposed adaptive models applicable and effective in the education of students in technical vocational secondary schools?

Chapters One and Two address the first and second research questions, while Chapters Three and Four respond to the third and fourth questions respectively.

General presentation of the procedure and the candidate: The training and activities of the doctoral student have been intensive so far, with his/her initiative and commitment both in terms of developing the dissertation work and in terms of teaching commitments in the faculty and

outside it, public appearances and participation in the activities of the Faculty of Education. The author completes and presents his/her dissertation research ahead of schedule, but this is not at the expense of its quality, quite the opposite. The procedure in the Faculty of Education has been correct and precise in accordance with the Law on the Education and Training of the Republic of Bulgaria. The candidate meets the national scientometric indicators.

Relevance and significance of the topic

One of the most ancient, classical, current, strategic, modern and future problems of the educational practices of humanity are those of Vocational Education and Training. And regardless (or precisely because of this), that today's global world realizes and feels the key importance of professional training and sustainable professional realization of a person, problems and challenges in this area are constantly swarming and proportional to new attempts for a more optimal occurrence of processes. For the Bulgarian reality of vocational education and training, the need to find working realistic solutions at the normative, systemic, institutional, procedural training, personal, and personnel levels is enormous. The obstacles accumulated over the years are significant.

The introduction presents a strong argumentation and justification of the problem area as a research territory with focused and relevant goals, objectives, and *4 research questions*.

- 1- Which of the studied models of education can be applied in vocational training?
- 2- How can these models of training be adapted to the needs and interests of students?
- 3- What changes need to be made in order to implement adaptive learning models – in the regulatory framework, in the organization of the learning process, in the learning content, in the assessment of professional knowledge and skills?
- 4- Are the proposed adaptive models applicable and effective in the education of students from technical vocational high schools?

Chapters One and Two answer questions 1 and 2, Chapters Three and Four – questions 3 and 4.

Content assessment of the work

The work covers **215** pages, of which **182** are text, 16 pages are appendices. The literature is from **245** sources – 62 in Cyrillic, 183 in Latin, and **10** electronic resources. The first chapter necessarily and quite accurately, competently theorizes the basic concepts and realities, with generalizations and author's positions; compares general and vocational education; specifies technical vocational education. **I also have some considerations regarding technological integration and its institutional models.** Here I expect more up-to-date sources from the leading Bulgarian specialists. The second chapter is conceptual – very well-argued, critically, evaluatively, and practically oriented, 5 models of vocational education are presented, with the fourth being the author's – aimed at talented students, those with low motivation, mixed (in mathematics and English), for utilitarianization of learning time and development (the author's), for accreditation of previous achievements and results. The author very rightly directs the 5 models towards changes in the very essence and character of the PE system as synergistic – communicating and adapting flexibly, talking with the surrounding market context and with itself as participants. The third chapter presents an extremely precise concept and precisely implemented design of an empirical study among 1027 students, 63 teachers and 10 experts. The indicators and criteria for assessing the quality of PE according to the European framework are consistently adapted and reduced, the results of the questionnaires for teachers and students, from the expert card using the Delphi method are analyzed. Comparisons, analyses, and conclusions are made. The fourth chapter is strategic, prognostic, contextual: labor market –

public welfare – vocational education – personal well-being and realization – so that *ALL STAKEHOLDERS MUTUALLY SUPPORT THEIR SATISFACTION*. I would like this last one to stand out as an inevitable trend in the synergistic development and evolution of social systems, such as the VOCATIONAL-EDUCATIONAL one, if they want to self-preserve and regenerate.

Thus, the proposed dissertation is extremely timely and extremely pretentious (in an inevitable unintentional way) – because a young researcher develops the range of questions for the theoretical and practical professional training of the young person at the personal level as training models. But in fact, for the proposed solutions to happen, they should rely on almost revolutionary changes in the Bulgarian Vocational Education Institution in all its aspects and in a comparable global context. The successful development of the topic becomes possible only because the author is already a practitioner with serious long-term international teaching experience in the field of vocational education in another educational culture while maintaining the connection with the Bulgarian reality and practice. The analyzed, evaluated, modified, presented and tested various models of professional training in a procedure of theoretical and empirical testing for Bulgarian vocational high schools, in search and screening of opportunities for realistic improvements, **reach their stated research goal, but also discover the ultimate goal and meaning – the professional and life destiny of the young person, radiating strategically on the prosperity of the national economy and social prosperity**. I explicitly emphasize this direction of the author's value orientation – **from personal potential to the system and society, from sustainable personal professional motivation to the growth of our common potential, quality of life and life wealth**. And the **responsibility of the system** to support and facilitate this personal potential, and not to hinder it.

The author himself is the embodiment of this direction with his inspiration, mobilization, irreconcilability, faith and commitment. They are evident both in the research activities carried out and in the text of the work.

Abstract and Publications

As a doctoral candidate, the author defends his dissertation ahead of schedule and simultaneously demonstrates significant publication activity in both academic journals and conference proceedings. The abstract accurately and comprehensively reflects the content and contributions of the dissertation.

Contributions

I fully accept the candidate's classification of contributions into two main groups: **theoretical** and **practical-applied**.

In summary, I highlight the following key contributions that distinguish the innovative character of Iliyan Vasilev's work:

- A theoretically innovative interpretation and *adaptive critical analysis of leading international models* of vocational education and training.
- The development of an *original conceptual model with theoretical, empirical, applied, strategic, and operational dimensions* for vocational education in Bulgarian vocational secondary schools.
- An *extensive and in-depth empirical study* producing original data and results, accompanied by responsible and engaged interpretation—both regarding the qualities of the STRONG Model and its phased implementation in Bulgarian vocational education.
- Clearly *formulated research conclusions, syntheses, positions, and solution proposals* which, although open to discussion, already constitute reliable reference points for active engagement at all systemic levels.

Critical Remarks, Questions, and Recommendations

(which do not diminish the high merits of the dissertation):

- **The difficulties related to the implementation** of the learning models require further systematization and differentiation horizontally and vertically within the current system. The steps toward transforming it into a synergetic system are yet to be developed at the theoretical, visionary, and practical levels.
- **Therefore, a recommendation and expectation simultaneously:** a clearly argued distinction—possibly in a monograph or separate publication—between the strategic “hypothetical” vision (as termed by Vasilev), which necessitates prolonged normative and institutional restructuring through multilevel coordination, and the operational, feasible, and realistic solutions that can be implemented immediately.

Questions:

- Which elements of the STRONG Model are applicable at present in Bulgarian vocational education?
- Who will train teachers and educational managers? Who will train the trainers? In other words, what is the doctoral candidate’s position on teacher education in VET and on textbooks, and what solutions does he propose?
- The learning models draw upon educational, market, social, and cultural contexts different from the Bulgarian one. Despite globalization, how does the author account for Bulgarian cultural specificity, traditions, and established practices in vocational education? Does he intend to devote further research efforts to this determinant in the future?

Conclusion

The dissertation by Iliyan Vasilev illuminates numerous substantive issues and generates profound questions, which is itself a marker of effective scientific research. The doctoral candidate’s results are both gratifying and, in a sense, surprising—given the complexity of the research problem and the crisis conditions of educational practice—yet also entirely natural, considering the character of the academic supervision provided by one of the leading and internationally recognized scholars in the field of vocational education, Assoc. Prof. Iliana Petkova, PhD. Once again, she has competently and precisely guided transformative research procedures in this domain.

Based on all the presented administrative, normative, scientometric, and qualitative research arguments, I confidently propose that the members of the Academic Jury support the awarding of the educational and scientific degree **Doctor** in Professional Field 1.2. Pedagogy (Vocational Education) to doctoral candidate **Iliyan Vasilev**.

Sofia

01 March 2026

Reviewer:

(Prof. Y. Merdzhanova, DSc)