

R E V I E W

**according to the procedure for the defense of a dissertation on the topic:
Evaluation of the effectiveness of remote online learning based on the perceptions of
learners and trainers.**

**to acquire
educational and scientific degree "PhD"
from**

candidate: Panagiotis Anagnostou,

Field of higher education: 1. Pedagogical sciences

Professional direction: 1.3. Pedagogy of training in,

Doctoral program: Teaching methodology in mathematics and informatics, department:

Teaching in mathematics and informatics,

Faculty of Mathematics and Informatics (FMI),

Sofia University "St. Kliment Ohridski" (SU),

The review was prepared by Prof. Eugenia Petrova Kovatcheva, PhD. University of Library Science and Information Technologies, Department of Computer Sciences in my capacity as a member of the scientific jury, according to Order No. 38-155/27.03.2024 of the Rector of Sofia University.

1. 1. General characteristics of the PhD thesis work and the presented materials

The PhD Thesis on the topic: Evaluation of the effectiveness of the remote online learning based on the perceptions of learners and trainers. is written in English, spread over 235 pages, consists of an introduction and 5 chapters, has one appendix - a questionnaire. The dissertation is illustrated with 195 figures and 15 tables are presented. 84 sources were studied, ¼ of them are older than 10 years.

The doctoral student clearly defined the problem, presented the object and subject of the research, clearly asked four research questions and defined 5 hypotheses.

The first chapter provides an overview of distance learning and the role of information and communication technologies.

In the second chapter, it defines non-formal and vocational training.

The third chapter is devoted to its empirical research, and the fourth chapter presents its results.

The last chapter concluded and discussion questions.

Each chapter ends with a conclusion.

It is good style of the PhD student that he initially defines each of the terms.

The topic of the dissertation is relevant in our modern society, distance learning is a form that has been accredited for years, and during the Covid-19 pandemic it was a major way of learning. The "closure" period was subject to mass testing of this type of training. The research done gives in depth the attitude and settings in Greece towards distance learning and especially for vocational training.

In distance learning, it is important how it will be designed and developed to support the learners and help the trainers.

2. Data and personal impressions about the candidate

I met Panagiotis Anagnostou of Internal Defense when he presented his development to colleagues from the Department of Mathematics and Informatics Education at FMI of SU. The research paper presented was complete and it was clear that he worked with great enthusiasm. Many questions were asked and many comments were made, which are reflected in the final version of the dissertation.

From the biography it is clear that the PhD student has been working in the field for over 20 years and has a very broad view of different categories of learners. His relationships with colleagues have influenced the in-depth research he presents in his work.

3. Content analysis of the candidate's scientific and applied scientific achievements, contained in the presented dissertation work and the publications to it, included in the procedure

The PhD Student has done an in-depth survey of sentiments about using distance learning for vocational education.

In the research process, 6 scientific contributions and 6 scientific-applied ones were separated. I accept them with minor clarifications regarding the language in the Bulgarian translation of the scientific contributions:

1. The effectiveness of distance learning in Greek VET is investigated for the first time because, while there are numerous studies in the world literature that examine the quality and usefulness of distance learning during the pandemic, there is no corresponding study of distance vocational education in Greece during of the pandemic.
2. A questionnaire was developed to study the attitudes and opinions of both the students from the DIPO and their teachers.
3. A statistical analysis was made and results were presented regarding the attitude of students and teachers towards the distance learning process and also to register the possible problems they encountered during the distance learning process
4. A qualitative analysis was made, noting the opinions of teachers and professors participating in distance learning, as well as their suggestions for improving the educational services provided
5. The effect of the electronic process on the quality of the provided educational services is reported.
6. The psychological effect that distance learning has on both students and teachers has been studied. These psychological effects can also manifest themselves in other industries that had to work remotely during the pandemic.

The research and data analysis is richly illustrated, which enables a clearer perception of the obtained results.

Some of the results are impressive as:

- *mandatory detention and distance learning are the main causes of student stress and*
- *the pandemic and the universal application of distance learning have affected the development of interpersonal social relations between students and teachers.*

Those conclusions would have even greater significance if one went beyond 1.3. Pedagogy of training in and it was done jointly with specialists - psychologists, but this is not part of the research. The PhD student may consider such interdisciplinary research in the future.

8 articles related to dissertation work are presented, all co-authored with his scientific supervisor Assoc. Nikolina Nikolova. A declaration of equality of co-authorship is attached.

The publications represent a substantial part of the dissertation work and carry 30 points above the required

4. Approbation of the results

In chapters 3 and 4, the doctoral student describes in detail the methodology of his research and presents his results.

The research methodology combines quantitative and qualitative research design approaches.

A data collection device was created - a questionnaire with 28 questions, containing a demographic description and questions about professional training, use of platforms for synchronous and asynchronous learning, as well as the experience of the interviewees with distance learning.

774 people were surveyed. Dependencies between different indicators from the questionnaire were studied.

As I mentioned in the previous section, the scientific works exceed the minimum national requirements (according to Art. 2b, paras. 2 and 3 of ZRASRB) and, accordingly, the additional requirements of SU "St. Kliment Ohridski" for the acquisition of an educational and scientific degree "doctor" in the scientific field and professional direction of the procedure;

The results presented by the candidate in the dissertation work and related scientific works do not repeat those from previous procedures for acquiring a scientific title and academic position;

There is no proven plagiarism in the submitted dissertation and scientific works under this procedure.

5. 5. Qualities of the auto-reference

The abstract is 36 pages long and fully reflects the dissertation work.

I would recommend that the translation into Bulgarian of the subject of research is not the opinions of students and teachers, but the attitude or moods of students and teachers, which would more accurately represent the whole work. I accept that this is due to the lack of knowledge of the Bulgarian language and does not reflect the final grade.

6. Critical notes and recommendations

The doctoral student has very thoroughly presented the settings in Greece for the distance form of professional training. It would be very useful to do a comparative analysis between the mood and attitude towards remote forms in different countries. Perhaps as a cluster analysis, the division of northern and southern or eastern and western Europe or a comparison with countries outside our continent, for example Australia - a leader in this form of education.

As an additional remark, I can note the small number of studied literature - only 84 sources. This number would grow significantly if the analysis mentioned above is done.

Despite these remarks, the dissertation makes a significant contribution to the in-depth study of the situation in Greece and can serve as a good basis for subsequent multinational research.

I recommend Panagiotis Anagnostou to do such a study at least at the European level and to build on it with good practices in the implementation of distance learning at different educational levels.

7. Conclusion

Having familiarized myself with the dissertation work presented in the procedure and the scientific works accompanying it and based on the analysis of their significance and the scientific and applied scientific contributions contained in them, I confirm that the presented dissertation work and the scientific publications to it, as and the quality and originality of the results and achievements presented in them, meet the requirements of the RASRB, the Rules for its application and the relevant Rules of the SU "St. Kliment Ohridski" for the candidate's acquisition of the educational and scientific degree "doctor" in the scientific field 1. Pedagogical sciences and professional direction 1.3. Pedagogy of training in In particular,

the candidate satisfies the minimum national requirements in the professional direction and no plagiarism has been found in the scientific works submitted for the competition.

Based on the above, I recommend to the scientific jury to award Panagiotis Anagnosto an educational and scientific degree "PhD" field of higher education: 1. Pedagogical sciences, Professional direction: 1.3. Pedagogy of training in, Doctoral program: Methodology of training in mathematics and informatics, department: Teaching in mathematics and informatics, Faculty of Mathematics and Informatics (FMI), Sofia University "St. Kliment Ohridski" (SU).

21.05.2024

Reviewer.....

/Prof. Eugenia Kovatcheva, PhD/