Review

for the doctoral dissertation

DIGITAL TECHNOLOGIES AND EDUCATIONAL INEQUALITIES IN SECONDARY SCHOOLS IN BULGARIA

Author: Raya Stoyanova Georgieva

Full-time doctoral student at the Department of Sociology, Faculty of Philosophy, Sofia University "St. Kl. Ohridski", for the acquisition of an educational and scientific degree "doctor" in the Professional field 3.1. Sociology, anthropology and cultural sciences 05.11.01. (Sociology). Scientific supervisor: Prof. Dr. Pepka Alexandrova Boyadzhieva.

By Professor Dr. Petya Lyubomirova Kabakchieva, Department of Sociology at Faculty of Philosophy, Sofia University "St. Kl. Ohridski", appointed as a member of the scientific jury by order of the Rector of SU "St. Cl. Ohridski" No. RD 38-397 / 12.07.2024.

1. Presentation of the dissertation

I shall start with the formal characteristics. Based on the current Regulations on the terms and conditions for acquiring scientific degrees and occupying academic positions at SU "St. Kliment Ohridski", art. 4. and the minimum national requirements defined in PPZRASRB for scientific field 3. "Social, economic and legal sciences", it was established that Raya Stoyanova Georgieva meets the minimum national requirements for the defense of a doctoral dissertation. The dissertation consists of Introduction, Three parts /chapters/, Conclusion, Bibliography, 3 Appendices. The total volume (without the 20-page Appendices) is 190 pages, including 5 graphs, 6 figures and 1 table. The bibliography contains 161 titles, of which 59 are in Cyrillic and 102 are in Latin. There are 3 publications in prestigious editions. I have not detected any plagiarism. The author's summary correctly presents the dissertation.

Now to the point. The dissertation is dedicated to a particularly topical and still unexplored problem, at least in Bulgaria the research is now starting (the important research of a team led by Prof. Rumyana Stoilova on a similar topic is just ongoing). Why is the problem not only relevant, but also significant? Because, especially in the field of educational policies, digital technologies are perceived as a panacea capable of solving the problems of the education system, digitization is equivalent to innovation, STEM centers are a hit. Of course, the application of digital technologies is useful and important, but the question is where its limits are, which problems are solved with IT, and which require another approach. Considering that educational inequalities determined by the social environment are a fundamental problem not only for the education system, but also for the development of our society, the search for correlation between digital technologies and educational inequalities is an extremely important undertaking. In this sense, the dissertation is a significant pioneering effort that should be applauded.

It is this dependency that is the main aim of the PhD thesis: "The main aim of the thesis is to analyze how, in the context of different social inequalities between students' families, ICT (through the example of electronic diaries) enters into and influences the educational process and whether it can lead to the inclusion/exclusion of certain social groups or individuals from education" /p. 5/.

This objective is correctly broken down into different tasks and research questions. The PhD student focuses on and conducts empirical research on the inclusion of a specific digital technology in the educational process - the electronic diary and related communication platforms. "E-diaries and distance learning platforms are technologies through which students and parents can benefit from shared information regarding students' grades, absences, and behavioral feedback. The main providers in our country of these technologies are the companies Shkollo, Admin Plus and Ciela, and from the school year 2021/2022 the National Electronic Information System for Pre-School and School Education (NEISPSE), a web-based unified platform, has been introduced."

As the author notes, "The dissertation is based on theoretical orientations built on critical reflection on theories of educational inequalities in sociology of education and on the concept of the social in Bruno Latour's theory of the actor-network /ANT/" /p. 9/. The views of Georg Simmel, Pierre Bourdieu, Raymond Boudon and other authors on educational inequalities are described in detail and correctly, as well as the ANT of Bruno Latour and Michel Callon. An attempt is made to operationalize them and to use them as a theoretical model to be followed in the data analysis.

The dissertation correctly follows the requirements for a well-done sociological study - the problems, the research questions, the hypotheses, the theoretical approach, which is operationalized, are introduced; the research methodology is presented very precisely - I especially want to note the observance of ethical standards; the study of three different cases. The selection of cases is sociologically well-motivated - it also includes consideration/description of the socio-economic environment in the locality and the district, in addition to the socio-economic status, the results of the state-matriculation exams /DZI/ and the degree of use of digital technologies - electronic diary, but also electronic platforms. The methods are qualitative – the case study includes three semi-structured interviews with high school principals and six with teachers; one focus group with teachers; four focus groups with 9th, 10th and 11th grade students; one focus group with parents of students, one parent interview and six parent questionnaires; an interview with a representative of a company that created and maintains an electronic diary in Bulgarian schools; as well as thematic analysis of forum discussions.

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digital technologies - electronic diary, but also electronic platforms. The methods are qualitative - the case study includes three semi-structured interviews with high school principals and six with teachers; one focus group with teachers; four focus groups with students in grades 9, 10 and 11 ; one focus group with parents of students, one interview with a parent and six completed questionnaires by parents; one interview with a representative of a company that has created and maintains an electronic diary in Bulgarian schools; and thematic analysis of forum discussions.

The cases analyzed in detail are as follows:

"Lagging school" - located in a small village, with low scores on the matriculation exams, using electronic diary and some technologies, with low socio-economic status of the village population and parents. "Mid-type school" - located in a large city in the country, with an average level of success compared to other high schools, using an electronic diary and some digital technologies, with a mixed socio-economic status of the population in the region and locality, as well as of the parents; "Outperforming school" - located in a large city in the country with excellent economic indicators, with a high average score on the DZI, using an electronic diary and with a high socio-economic status of the parents. In the first and third cases, the social status of students is homogeneous, while in the second case the social environment is heterogeneous.

The conclusion is that *the three analyzed cases reveal the existence of significant differentiation and inequalities according to the type of school and settlement; and digital technologies change the educational process only in schools where students come from homogenous high-status groups, while in environments with significant social inequalities these inequalities are reinforced and turned into educational ones*. The following conclusion of the doctoral student is also significant: "In some cases, the type of diary - be it electronic, paper or another form - does not attract the attention of certain students and families, since the main problem is not in the medium of communication, but in the value that these families give to the educational process. In such a context, efforts to improve engagement with education must address the deeper reasons for the undervaluation of education by working to raise awareness of the long-term benefits of education and the ways in which it can increase economic, symbolic and social capital of families".

2. Contributions of the presented dissertation

I believe that the contributions of the dissertation are correctly described in the author's summary, and I fully agree with them.

I would like to emphasize the following contribution: the main merit of the dissertation is not just that it is one of the pioneering works in Bulgaria in the field of the interconnection between digital technologies and social inequalities, but in posing the question whether IT can change the educational environment, including overcoming educational inequalities, if the goals, content and organization of education remain the same. Put another way, is the introduction of IT an end or a means to new educational ends? This is the important question facing our education system, but it is also a significant theoretical problem. *The results of the dissertation research show that the effect and usefulness of digital technologies depend on the*

family background; they work where the family has provided not only resources but also cultural capital. This finding is a significant theoretical contribution regarding the digital technology-education-social status nexus: IT is not a panacea, as is assumed by some, but can change education in a positive direction /be a mediator in ANT terminology/ only under certain conditions, linked to the well-being of the social environment. When these conditions are not present, in the presence of large social inequalities, they tend to deepen these inequalities rather than overcome them. In the absence of such conditions, the functions of new digital technologies are reduced to an improved substitute for existing educational tools - the electronic diary is a substitute for the paper diary. In addition to its theoretical contribution, this finding has a scientific-applied contribution: the introduction of new digital technologies in schools, to be effective, must be an element of comprehensive policies to improve well-being and of a vision of comprehensive educational reform also aimed at overcoming the reproduction of social inequalities. Or, as the author concludes her dissertation, "If national and school-specific policies and practices do not assist in raising the limited economic, cultural, and technical capital of low-status families, digital technologies (and electronic diaries) actually become a mechanism for transforming social inequalities into educational ones."(p.174).

The above theoretical contribution to the digital technology-education-social status nexus leads to another, in my opinion significant, theoretical contribution, which however seems to go unnoticed - *questioning the use of the term 'digital generation'*, as the thesis clearly shows the difference in the use of digital technologies by young people of different social status.

I also agree with the contribution mentioned in the abstract - *the argument for the differentiation of technological capital as part of cultural capital*. This argument could be further developed in future research and publications of the author.

I believe that the use of ANT to analyze cases is a fruitful approach precisely from the point of view of the question of when and how change becomes possible, and why there are problems in applying digital technologies in certain cases - precisely because there is no symmetry in connecting human and nonhuman actors in the network.

3. Questions and recommendations

I have no substantive comments or recommendations. I was a reviewer of the internal defense, when I had made several recommendations, and I am pleased to note that Raya Georgieva has complied with them. I would have liked - but this is a recommendation for future publications - to pay more attention to the second case - the so-called "mid-type" school, I don't know if it is better to call it a 'mixed school', because only there the social environment is not homogeneous - there are students of both high and lower social status, so it seems to me that the relationships there would be more interesting. It would be curious to follow in more detail the interaction of two groups with different social background, but in a common educational environment, especially since the author's summary claims that there is potential for reducing inequalities there, and I got the opposite impression from the thesis. Are the two groups sharply differentiated or is there an influence to match the high -status groups from the low - status ones? In this regard, my question is why in the second case it is claimed - in the

author's summary - that "the nonhuman is a mediator", and in the third case of the "outperforming school"(again in the author's summary) - that "the nonhuman is an intermediary"? In my opinion the analysis of qualitative data made by NVivo suggests a more detailed interpretation, especially in the second case where the dominance of different words can be interpreted differently.

While I welcome the use of ANT, I still believe that a simpler language can be used in describing the cases once the basic concepts are introduced.

4. Personal impressions

I know Raya Georgieva from her student years as an excellent and radiant student. And as a second-generation sociologist. I have no joint activities with her and no conflict of interest.

5. Conclusion

I believe that what has been written so far clearly demonstrates the importance of this dissertation both in terms of raising important theoretical issues in a still under-researched scientific field and in terms of future educational policies. I therefore vote with conviction for the award of the degree of Doctor of Sociology to Raya Stoyanova Georgieva and recommend the members of the scientific jury to make the same decision.

26.09.2024   Prof. Petya Kabakchieva