

Doctoral Thesis Review

Title: DIGITAL LITERACY AMONG TEACHERS OF LEARNERS WITH DISABILITIES IN KENYA AND THE CZECH REPUBLIC
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The thesis has its background in the field of education, with focus on digital skills of teachers in Kenya and the Czech Republic. The introductory chapter of this research is a well-structured and comprehensive foundation for the study. It effectively communicates the global importance of digital literacy and its impact on education of all children. The research problem is clearly defined, addressing a critical gap in the current educational systems of Kenya and the Czech Republic, and it connects this issue to broader international trends. The objectives and research questions are well-aligned, offering a clear roadmap for the study. Additionally, the use of Albert Bandura's self-efficacy theory as the theoretical framework is apt, providing a solid foundation for exploring how teachers' beliefs influence their digital literacy skills.

Some minor issues in the chapter include: First, I am not sure whether it is possible to answer the second research question fully “How do teachers of learners with disabilities in special primary schools *demonstrate* self-efficacy in digital literacy? “Having in mind the proposed type of research and methods used. Is the author going to objectively observe the *demonstration* of teachers’ IT skills or is the self-reported digital self-efficacy the main research objective? Second, the theoretical framework could have been more thoroughly elaborated. I fully understand the necessity of simplify the social reality for the purposes of quantitative research. However, the potential intervening variables effecting application of digital literacy certainly include more than software, hardware and connectivity.

Overall, this introductory chapter sets a strong tone for the research, instilling confidence in its quality and potential impact.

The second chapter entitled *Review of related literature* is very extensive (70 pg. chapter!). While most of the provided information may be relevant, it is very difficult for a reader to navigate and keep focus. It may have been a better idea to divide the chapter into approximately three chapters with independent topics, which the Reader did for the purposes of evaluation, i.e.: Chapter 2a: Overview of educational approaches to digital literacy and the use of technology in Kenya and the Czech Republic.

One of the strengths of this sub-chapter is the introduction of relevant policies and initiatives, such as the Competency Based Curriculum (CBC) in Kenya and the National Digital Education Strategy in the Czech Republic. This provides a solid foundation for understanding the evolution of education with focus on digital literacy in these countries. The sub-chapter also highlights the importance of digital literacy in the 21st century and how it aligns with broader educational goals. It is evident that on the policy level both Kenya and the Czech Republic recognize the significance of digital skills in preparing all learners. Additionally, the sub-chapter addresses the specific challenges and gaps in digital literacy among teachers and the efforts being made to bridge these gaps. The discussion on inclusive education and the rights of students with disabilities adds an important dimension to the text. Some issues in the sub-chapter include: While the general policies on digital competencies are presented, it would add to the quality of the work if the author also discusses how are these general policies translated to policy documents specific to primary or secondary education in the Czech Republic and Kenya. For example the Digital competency and its position in the Framework Educational Program for Primary Education in the Czech Republic should have been introduced in detail (see: <https://revize.edu.cz/digitalni-gramotnost-v-rvp-zv>) as well as potentially similar document related to primary education in Kenya.

Chapter 2b: Information technology used in school education. The second sub-chapter is a comprehensive exploration of the use and impact of laptops and several other technologies (i.e., digital cameras, speech devices, tablets, etc.) in the classroom, and it offers valuable insights into both the opportunities and challenges they present. It acknowledges the transformative potential of technology in education while also addressing the valid concerns raised by educators. Furthermore, the chapter emphasizes the need for professional development for teachers in using technology effectively, a crucial aspect often overlooked in the rush to adopt new tools. The focus on teacher training and support is a vital aspect of ensuring that technology truly enhances the learning experience.

Some minor issues in the sub-chapter include the fact that the author sometimes goes into extreme detail, i.e., providing commands for speech recognition devices, such as: "Select," "select next/previous", "Delete," "Delete Next/Previous", "Capitalize," "Capitalize Next/Previous", etc.

Chapter 2c: Self-efficacy in digital literacy among teachers. The third sub-chapter is the most relevant for literature review, as it focuses on the main area the author studies. The text introduces the concept of self-efficacy and its relevance in education, using authoritative

sources to provide a solid foundation for the discussion. It highlights the importance of teachers' belief in their abilities, emphasizing the critical role of self-efficacy in shaping instructional practices. The inclusion of the reviewed studies and research findings strengthens the text and offers readers a broader perspective on the topic. It addresses not only the internal factors affecting self-efficacy but also external factors like school culture, resources, and leadership, providing a holistic view of the challenges and opportunities. The review could have introduced not only the research findings of the reviewed studies, but also compare and contrast the methodologies of the relevant studies. This would allow the Reviewer and readers to see how these findings were further used in the author's research.

Chapter three is a comprehensive and well-structured methodology section. It outlines the research design, study location, target population, sampling procedures, data collection instruments, pilot study, and the reliability and validity of these instruments. The choice of a descriptive survey design and the adoption of a comparative research paradigm are sound decisions. This approach allows for a broad and comprehensive assessment of the research questions. The inclusion of both quantitative and qualitative data collection methods demonstrates a balanced approach and the final part of the chapter shows a commitment to responsible and ethical research practices. Overall, Chapter three stands out for its clarity, attention to detail, and methodological rigor.

Chapter four once again could have been split into two chapters for clarity. It includes both the Result section and the Analysis/Discussion section, which could have been presented separately. However, the presentation data is well-organized and provides a solid foundation for understanding the teacher population involved in the study. The comparisons between Kenya and the Czech Republic in these demographics are particularly interesting and provide insights into the teaching profession in these two countries. The chapter then presents data on self-efficacy of digital literacy. The use of Likert scale questions and statistical analysis to compare the responses of teachers from both countries is a robust approach. It allows readers to grasp the nuances and differences in how digital literacy is self-evaluated and comprehended by teachers. The presentation of findings in tables and graphs aids in visualizing the data effectively.

Chapter five: Summary, Conclusions, Recommendations. The conclusions presented in this chapter sheds light on the differences between these two countries when it comes to teachers' perceptions of digital literacy. Additionally, the chapter offers valuable insights into the types of ICT resources commonly used, such as smartphones and laptops, as well as the software and

social media platforms frequently employed. This information is essential for understanding the technological landscape in schools in Kenya and the Czech Republic. Further, the identification of personal and institutional challenges provides a clear picture of the hurdles to be addressed to improve digital literacy. The chapter is concluded by valuable recommendations to researchers and practitioners.

I have some difficulties understanding the analysis of self-reported ratings from teachers on how they apply digital literacy to facilitate learning. The author states that: „*it was found that how teachers in the Czech Republic apply digital literacy to facilitate learning is on average 27% above the common average of the two countries while how Kenyan teachers apply digital literacy to facilitate learning was 15% below the common average.*“ Are these results based on an overall average created by combining the Czech and Kenyan data sets? If so, wouldn't the fact that the Kenyan dataset was substantially larger, skew the „common average“ and therefore make the interpretation questionable? I would like to discuss this issue at the thesis defense.

The thesis shows that the author has adequate level of theoretical as well as empirical knowledge and skills expected from Ph.D. candidate. The author managed to transfer the theory into research and provided thorough description, analysis, and action towards identification of self-efficacy in digital literacy among teachers in the Czech Republic and Kenya. The appendices of the thesis also provide the reader with the needed information about the research tools used.

Result:

I recommend this thesis for final defense.

Questions:

- 1) The author provides information about policy documents focusing on digital skills/literacy. Could you provide examples of concrete school policies in Kenya and the Czech Republic (i.e., the Framework Educational Programme) and its content emphasizing digital competences?
- 2) How was the analysis of Digital literacy to facilitate learning done? Could the fact that the “common mean” was created from two datasets of different sizes have impact on the results?

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