Chapter 14
Inclusion Must Be Inferred by the Reader When Digitalizing Elementary Schools:
A Text Analysis

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ABSTRACT

Digital tools shift pedagogical dimensions which have consequences for education with learning opportunities and sense of belonging for all students. Digital teaching tools have possibilities to adapt to students' needs and create inclusive schools. The aim of this text analysis is to characterize how inclusion is considered in four Swedish school developing projects that digitalize teaching. Inclusion did not have a prominent position. Accessibility was discussed regarding having or not having devices, not how they were used to achieve learning for all students. Descriptions of adapting tools to students are sweeping and general. Students' needs are vaguely described and secondary to teachers' needs. Collaborations between student peers and several professions provided support for learning. Although scientific or theoretical models had shortcomings, research provided support for learning and implementing digital tools in education. Suggestions are made to bolster models to provide further help in developing inclusive digital education.

INTRODUCTION

Learning difficulties can have a small or large impact on learning, depending on how well the education is organized (SPSM, 2022). To provide the best learning environment to each student means to work inclusively, which is not an easy task. Inclusion in the school environment entails several dimensions: identifying needs, then steering and designing physical space, social culture, and pedagogical intentions and strategies to include *all* students (Göransson & Nilholm, 2014; Nilholm, 2020; Norwich, 2008). Part

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of working inclusively is to understand how digital tools can support or challenge students' education and learning. Digital tools can be adapted to support various needs in the student group, enhancing possibilities to include more students and make learning more accessible. Using digital tools in an inclusive way, to provide learning opportunities for all students, requires school leaders and teachers having a varied set of digital competencies (Grönlund, 2014; Jacquet, 2016; Jang et al., 2016). Digital competencies are interrelated and described in the TPACK-model, i.e., Technological, Pedagogical, and Content Knowledge (Mishra & Koehler, 2006). During the decentralization of the steering of Swedish schools from national governance to the municipalities, Swedish municipalities were authorized to take responsibility for developing teachers' digital competencies and the digitalization of schools (Bergviken Rensfeldt & Player-Koro, 2019). Attempting to create a national standard, a national digitalization strategy was formed to give aim and direction to how to organize digital education. However, the term *inclusion* has not been explicitly mentioned in the digitalization strategy. Concerns can therefore be raised regarding what happens to inclusion in school-development projects aiming to digitalize schools. These concerns have been formed into the following research question: How do professionals organizing digitalization in schools consider the adaptable features, accessibility, and support of digital tools to conform to student needs and create an inclusive school? To answer this question, the reports of four large-scale school-development projects aiming for a larger degree of digitalization will be reviewed. The review entails analyzing if authors of these four reports state and elaborate on terms related to inclusion, i.e., *inclusion*, *exclusion*, *adaptations*, *accessibility*, *support*, and *needs*.

Digitalizing Schools and Design Thinking

A short history of the digitalization of Swedish schools is needed in order to understand the backdrop of these school-development projects. Five goals were set up by the Swedish government in a national digitalizing strategy: all citizens should have digital competence; all citizens should have digital safety; digital innovation should be supported and used; digital leadership should ensure qualitative development of society; and finally, all of Sweden should enjoy digital infrastructure (Regeringskansliet, 2022). Already prior to 1990, school students were required to learn about computers and how to use them (Bergviken Rensfeldt & Player-Koro, 2019). During the period of 1990–2010, Swedish municipalities were given the responsibility of steering schools and ensuring digital competencies in schools. Later, when the wave of one-device-per-student reached Sweden, the realization of one-device-per-student differed between municipalities and schools. For a long time, computers in schools were placed in computer labs, and the students needed the teachers' permission to use them. Therefore, students' use of computers was dependent on the teachers' attitudes towards ICT. The lack of national guidelines made it easy for municipalities, schools, and teachers to give ICT low priority (Samuelsson, 2014). To deal with inequalities between municipalities, a national digitalization strategy was formed for schools. At the same time, global ideas on digitalization from, for example, the Organisation for Economic Co-operation and Development (OECD), and global (and national) IT companies and publishers also influenced the national strategy and the access to digital tools in schools (Bergviken Rensfeldt & Player-Koro, 2019; 2020). Given the variety of knowledge prerequisites, the conglomeration of national and international ideas on digitalization, and the array of digital tools that schools have to deal with, a translation is needed for students to learn about, from, and with digital tools. Olofsson et al. (2020) show that each school must procure adequate technical infrastructure and devices. In addition, teachers need to be able to wisely handle the devices and software, which includes evaluating the possibilities for educational