Interactive and action-oriented instruction for a digital era. A methodological reflection paper

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Abstract

This paper explores and reflects what the methodological considerations are for a study of classroom practice as networked learning. The area of interest is instruction in reading children´s literature in the primary school classroom, i.e., emergent literature didactics. Digitalization processes in society and school involve new conditions for literature didactics and challenges in the classroom. In today`s society we not only communicate in the form of speech and writing, but the digitalization has resulted in that communication takes place through both texts, images, and sound, i. e. multimodal communication (Jewitt, 2008; Godhe et al., 2020). Except for these changed conditions, it is possible to observe decreasing reading frequency, changing attitudes towards reading, and declining reading comprehension among children and youth in Sweden today (Statens Medieråd, 2017; Skolverket, 2017).

The overall aim of the PhD thesis is to contribute knowledge about how literature didactics is designed in primary school classrooms, with regards to how this instruction enables encounters with and comprehension of children's literature, through the support of digital technology.

The project consists of three empirical sub-studies with a mixed method approach. In combination with quantitative surveys, qualitative focused observations and interviews with teachers will target instruction in literature didactic, and the role and function of digital technology. Participants are pre- and in-service teachers.

The presentation of sub-study I describes how thirty-seven preservice teachers observed classroom teaching during one school day in different primary schools, with the aim to investigate activities related to fiction reading and the role of digital technology in these settings. The study was analyzed by using a thematic content analysis. The preliminary results show that dialogic reading, where the teacher reads fictions texts aloud and orchestrate a dialogue about it with the pupils, is dominating. The activity is supported by document cameras. In the context of this paper, the dialogic reading is understood as part of many pedagogical practices within networked learning, which includes interplays between teacher and pupils or between pupils. The results raise questions about teachers' motives for literature choices, design, activities, and uses of technology. The analytical tools used in the first study need to be improved, in order to gain a better understanding of the role and function of technology in reading instruction in primary school settings. In addition, complementary empirical data with different foci need to be collected and contrasted with the empirical results from sub-study I.

Keywords

Introduction

This paper is a reflection on methodological considerations of a PhD thesis project in progress.

The thesis area of interest is instruction in reading children`s literature in the primary school classroom. Reading and writing in these grades extend from the initial reading and writing instruction, where pupils must learn the connection between letter and sound, understand what they read, write letters, and gradually continued reading and writing instruction where reading fluency and writing are developed. The overall expectation of emergent literature didactics is that pupils are given the opportunity to participate in various reading and writing practices. More precisely, pupils should be offered possibilities to encounter and experience children`s literature in meaningful ways, with the aim to improve their comprehension of its content.

Digitalization processes in society and school involve new conditions and challenges for literature didactics in the classroom. Media and technology developments entail that reading habits, frequencies, competences, attitudes, and choices are changing. In today`s society we not only communicate in the form of speech and writing, but the digitalization has resulted in that communication takes place through both texts, images, and sound, i. e. multimodal communication (Jewitt, 2008; Godhe et al., 2020). Digital technologies have increased opportunities and means of communication, for example by creating and sharing sound, image, and film (Sofkova Hashemi et al., 2019). These conditions for reading and writing are partly considered in the Swedish school`s steering documents, such as in the syllabus for Swedish, through formulations in both the purpose and the central content. For example, it is stated that pupils should have opportunities to communicate in different digital environments with interactive and changing texts, and that pupils should encounter texts that combine words and images, as well as texts in digital environments (Skolverket, 2022).

The impact of digital developments on text and reading results in implications for literature didactics and teachers` practice. In a changing text world where technological development is constantly changing the conditions, it becomes important to investigate how teachers work practically to give pupils the opportunity to encounter, experience and understand fiction.

Regarding the changed conditions for text production and communication, it is possible to observe decreasing reading frequency, changing attitudes towards reading, and a deteriorating reading comprehension among children and youth in Sweden today. According to a survey from Statens Medieråd (2019) an increasing number of children rarely or never read books in their spare time. The daily reading is most common before school age. Thereafter, it decreases with increasing age. Swedish children and young people are also more negative towards reading than other comparable countries (Skolverket, 2017). The ability to read, which in this paper refers to reading comprehension and the ability to understand text, has decreased among Swedish pupils during the 2000s. This emerges most clearly in recent years' PIRLS results (Progress in International Reading Literacy Study). PIRLS is an international study of reading comprehension among 9–10-year-old children in which Sweden regularly participates (Skolverket, 2017).

This overview raises questions about what fiction is in Swedish primary school classrooms today, and how teachers work with fiction and the role and function of digital technology in these settings. Research in the field of reading instruction and digital resources in primary school is limited and points to the need for investigating how digital technology is introduced into literature instruction, so that basic reading skills and -comprehension are supported for further reading ability and reading development in a digitalized world.

Emergent literature didactics needs to include activities that focus on encounters with the text, which include instruction that enables personal reading experiences, reading engagement and personal interpretations (Rosenblatt, 2002). This dimension focuses on the creative, spontaneous, and emotional aspects of fiction (Culler, 1991). A second dimension of reading, which needs to be considered in how the instruction is designed is comprehension, where pupils are given the opportunity to analyze the text (Rosenblatt, 2002). The combination of engaged encounters and comprehension training provide good opportunities to develop pupils` reading skills.

A present risk with ongoing steering and investment initiatives with regards to teachers' digital competences, is that technology will be the goal, and not the means for staging the above-mentioned aspects of reading instruction. The activities that are designed in the classroom should therefore be based on the syllabus´ learning goals and course content and not primarily focus on whether they are digital or not (Lederman & Neiss, 2000). The uses of technology should be justified in relation to what is going to be learnt and how.

The overall aim of the thesis is therefore to contribute knowledge about how literature didactics is designed in primary school classrooms, with regards to how this instruction enables encounters with and comprehension of children's literature, and how this instruction is and can be supported by digital technology. Which digital technology and resources become relevant in these contexts and how is it incorporated in meaningful ways into classroom activities with a focus on fiction reading? This overall question has been broken down into the following research questions, which are directed at networked learning in classrooms:

- What interactions, with and without digital technology, are identified in different primary school classrooms through instruction related to fiction reading?
- What roles and functions do digital technology have in the interactions related to fiction reading in primary school classrooms?

Practitioner should in the present thesis be understood as the different classroom practices which teachers and pupils regularly engage in. The classroom practice in turn consists of various activities. These activities include participants' sayings and doings and are designed by the teacher. The teacher decides, for example, whether the activities are carried out individually or in groups. Group activities consist of interactions, which include interplay between teacher and pupils or between pupils, which is an aspect of networked learning. Digitalization inevitably means that teachers' practices with fiction will change. Cerratto Pargman and Jahnke (2019) describe how digital technology can intervene, support and change practices in school contexts. These practices can also disappear and then be replaced or reinforced by new practices.

Methodology

The project is a compilation thesis initiated by a pilot study, followed by three sub-studies. The project combines qualitative and quantitative data collection method. The first study is based on qualitative focused observations and the second on qualitative focused observations and interviews, followed by a third study comprising of a quantitative survey.

By combining quantitative and qualitative approaches, the ambition is that to obtain complementary data that can provide a more accurate and adequate understanding (Coe et al., 2017) of how teachers design their literature didactics related to fiction and what role and function digital technologies are assigned in these settings.

The aim of a mixed method approach is to ensure the validity of the project as a whole and to draw conclusions that can be generalized in valid ways. If different methods provide data that are consistent with each other, this can enhance strength and validity to the research (Coe et al., 2017). For the present project, the quantitative survey will hopefully contribute to a more general view of how teachers` design their reading instruction related to fiction and the role and function digital technologies are assigned in these settings. This type of triangulation characterizes the mixed method perspective as a research approach (Coe et al., 2017) and serves the purpose – to investigate interactions with digital technology and the role and function of technology in the classroom from different angles.

The mixed methods in my project are applied within an exploratory design, which means that the qualitative phase comes first, serving the objective to carefully explore the problem (Coe et al., 2017). In the present project this consists of exploring i) which fiction is circulating in primary school classrooms of today, ii) what becomes visible and what is invisible or considered exceptions, iii) how do teachers design their instruction related to fiction with regards to the role and function of digital technology and, iv) what are the practices that emerge? Thereafter the quantitative phase follows, which aim is to verify patterns and observations from the qualitative studies in a broader sense. A quantitative approach also aims to confirm whether the results from the observations and the interviews are supported by the survey (Coe et al., 2017; Denscombe, 2018). The sequential combination is thus QUAL-QUAN.

Table 1: Overview of the studies

Study	Methods of data collection	Methods of analysis	Participants	Content
I	Observations, in 37 primary school classrooms	Thematic analysis	Pre-service teachers	Investigate what kind of activities related to fiction reading appears in teachers` instruction and the role of digital technology in this.
II	Focused observations & semi-structured interviews	Thematic analysis	Teachers	Investigate how teachers through dialogic reading give pupils the opportunity to encounter with the text and how the teachers organize activities after the dialogic reading.

III	Surveys		Teachers	Questions about fiction and instruction related to fiction.

Participants

The participants in the project are pre-service teachers and teachers. The rationale of this choice to focus on teachers and not children`s actual encounters with the text, stems from my interest in the activities in the classroom and how teachers design their practices related to fiction.

In the pilot study, nine teachers were interviewed based on a convenience sampling. In sub-study I, the participants were pre-service teachers from a Swedish course in the teacher education where I was one of the teachers. The pre-service teachers conducted observations of different classroom activities as an assignment within the course. In total, they observed 37 classrooms, which offered access to a wide range of instructional settings and practices in a short period of time, while including pre-service teachers in research activities. The study reveals both how pre-service teachers engage with a predesigned data collection, and what is going on in a variety of classroom settings according to the students.

Prior to sub-study II, contact will be made with schools and teachers with the purpose to select two schools and two teachers at each school, to observe and interview. The selection of the teachers is based on a purposive sample, which, according to Bryman (2018), means that the participants are selected strategically, as they should have a connection to the research questions formulated. A purposive selection can consist of several criteria (Bryman, 2018), which in this case can relate to the school and the teachers' digital competence, which I will consider. As the study includes digital technology, the chosen school should be equipped with a certain amount of that. The principals will be asked about the amount of technology in the classrooms. My previous workplaces are also excluded because of the risk that my interpretations are affected by my experiences from there.

Regarding the sample of the survey, the ambition is as described above that the respondents should consist of a representative sample of the population. In this case, the population consists of teachers in primary school. In order to obtain a sample that is representative of the population, a cluster sampling should be taken, and the selection technique should be based on randomness.

Observations

The qualitative part of the project, sub-study I and II, includes observations. The observations are focused in such a way that specific activities related to fiction are investigated. Focused observations are used when a field under investigation focuses on a specific area of inquiry (Fusch et al., 2017). In observations, the researcher observes people, talk to them about what they do and what they think. The intent is to understand how they perceive different phenomena (Silverman, 2015; Baker, 2006; Seale, 2004; Fusch et al., 2017). According to the present thesis the intent is to understand the motives for specific literature choices, design, and practices within the classroom as well as which technology and digital resources that are integrated in the teaching. The observations will be documented using an observation template and through video recording. The conversations will be documented through note-taking.

Qualitative interviews

After the classroom observations, interviews with teachers will be conducted. The aim of the interviews is to deepen the understanding of the practice and examine teachers' rationales regarding why they do as they do.

When the purpose is to gain as rich and deep information about individuals' perceptions of different phenomena as possible, the interview is appropriate, according to DiCicco-Bloom and Crabtree (2006). Through this method, the researcher not only gains insight into teachers' reflections, beliefs, values, and emotions, but also contributes to raising awareness among teachers about their everyday doings in the classroom. In my project, the observations and the interviews are therefore connected and the interviews with the teachers will be conducted directly after the observations, to be able to ask questions about their recently completed classroom practice and their perceptions of it.

The interviews will be semi-structured with a set of predetermined open-ended questions. The process in a semi-structured interview requires flexibility, where the order of the questions can vary and other questions can emerge from the dialogue between interviewer and interviewees (DiCicco-Bloom & Crabtree, 2006). The interviewee`s perceptions and interpretations of questions and phenomena must therefore be in focus (Bryman,

2018), which in this project consists of the teacher's perceptions of what fiction is, their literature didactics related to fiction and what role and function digital technologies are assigned in these settings.

Surveys

By using surveys in the present project, the aim is to get a broader picture of what emerged in the qualitative stage. The patterns from previous results, such as, similarities and differences, will be subject to further questions regarding design and practices with digital tools in the primary school classroom where fiction is in focus. A survey can therefore confirm and deepen the understanding of specific results from the previous studies.

Surveys can be used for several categories of rationales, specifically where there is a need to establish a general pattern across a large group of people, i.e. a population. To be able to describe the population, a survey can be designed based on a representative sample of that population (Coe et al., 2017).

Surveys usually include a relatively large drop-out rate, i.e., there are no answers from a majority of the respondents. If there is a large drop-out rate, the results risk to be skewed, which means that data from those who answer the survey differ from the answers of those who did not take the survey. This in turn means that there is a risk that the sample will not be representative of the population (Bryman, 2018). A key question should therefore be how to avoid as large dropout as possible.

The survey will include questions about fiction and instruction related to fiction. It has been shown that the drop-out rate increases with surveys by post (Bryman, 2018), therefore the survey will be digital, and the plan is that the respondents are receiving it by e-mail. In order to get in contact with respondents, I will make use of my professional network which include the university context and the schools for internship. The education administration of the municipality can also be helpful. An alternative is to distribute the surveys at competence development days, as many teachers participate.

Preliminary results and analysis

At this initial stage, one study with pre-service teachers has been conducted. There were thirty-seven pre-service teachers who made observations of classroom teaching during one school day in different primary schools, with the aim to investigate activities related to fiction reading that appear in teachers` instruction and the role of digital technology in these settings. The study was analyzed by using a thematic content analysis.

This method of analysis will be used in other observations and interviews in the project too. Thematic content analysis is used to scientifically analyze documents and texts of various categories. The analysis involves searches for underlying themes, or categories, in the data (Silverman, 2015). In sub-study I, six overall categories emerged.

Furthermore, the thematic content analysis will be used to categorize teachers' activities and perceptions of teaching fiction with and without digital technology. These categories should be continuously re-examined and revised during the analysis process (Bryman, 2018). Bryman (2018) describes it as an iterative process with a movement back and forth between categorization and data collection.

The underlying themes that the researcher is looking for are described by Denscombe (2018) as unconscious messages that are communicated in the text. In my project, there may be unconscious messages that appear in the teachers' statements about their view of literature didactics and the role and function of the digital technology in the didactic practices. The thematic content analysis therefore aims how to cluster these sayings into meaningful categories.

The thematic content analysis partly has a quantitative approach because, with the categorization, it investigates the occurrences of a phenomenon (Denscombe, 2018). Another strength of the thematic content analysis is that it can be repeated by others, which contributes to credibility (Silverman, 2015).

The preliminary result of the first study indicates that the reading activities related to fiction are designed individually or in the whole class. Individual reading in this context means when pupils read printed fiction in a book by themselves. The shared reading in the whole class is either read-aloud from a printed fiction book or a textbook supported by a document camera. Audiobooks are used on occasions in the whole class reading. The results also show that teachers organize activities after the reading, such as writing or aesthetic forms of

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expression, which are all analogues. Some of the teachers also organize activities, analogue or digital, that promote reading, such as different forms av reading challenges.

Thus, the results show that shared fiction reading is dominant in the classrooms. The shared reading comprises of the teacher reading the text and having a dialogue with the pupils about it, which is called dialogic reading in research about literature didactics. The focus of dialogue in the reading is related to networked learning. The focus of the dialogues in the sub-study was reading comprehension. The result also implies that printed books dominate, although usually in combination with a document camera. A document camera is a form of digital presenter or visualizer. It can project the image of each page in the book that is being read. The document camera is used in reading and during the dialogue. Therefore, it supports the dialogic reading by visualizing images and texts large enough for all pupils to see, not only the teacher. This enables for teachers to work explicitly with texts and images, for example when they are modeling strategies for comprehension. This entails that the activities with a document camera integrated make the fiction accessible for all pupils.

The network learning setting dialogic reading is thus dominant in the observed classrooms. Research has shown that dialogic reading has a positive impact on pupils' comprehension and reading engagement. First, the dialogic reading gives teachers good opportunities to include instruction in reading comprehension, by introducing and modeling strategies for comprehension which can support pupils' active reading (Palinscar & Brown, 1984).

Second, when pupils are given ample opportunities to socially interact with others, as in dialogic reading, it supports motivation to read. Social interaction includes talking about books with others, reading together with others, borrowing and sharing books with others and sharing writing about books with others (Gambrell, 2011).

In summary, the results shows that dialogic reading supported by a document camera is dominating in the primary classrooms observed. The number of classroom (37) within which it occurs, supports the conclusion that this technology is integrated within established practices for reading instruction and literature didactics in Swedish primary school classrooms.

Reflections of the method

The result from sub-study I has formed an overview of activities, digital technology and established practices in the primary school teacher's classroom. But it is a fragmentary picture, which rather results in more questions. There is a lot we still do not know, for example the motives for the literature choices, design and activities. A deepened understanding of the results from the first study is needed. Hopefully future focused observations, together with interviews can contribute to that. The survey can further deepen the understanding.

Both the observations and the qualitative interviews are depending on the interpretations of the researcher. Our background and experiences affect our interpretations of what we see and in qualitative research this becomes especially important to take into consideration, as this affects the reliability (Silverman, 2015; Denscombe, 2018). I have my background in the teaching profession, where I was active for nearly ten years before I began my doctoral studies. I feel at home in the classroom practice and have extensive experience of it. Hammersley and Atkinson (2007) states that experiences from the context to be studied, can contribute to an understanding of its historical and cultural context. In a school context my experiences therefore can contribute but also be an obstacle, since I might be taking things for granted and therefore not perceive the complexity in the different situations that will occur. Reflexivity is therefore an important issue during the whole project (Bryman, 2018).

One critique that is levelled against qualitative research is that of researcher bias. To address this issue, the data collection and the analysis will be described in detail (Coe et al. 2017). The fact that several data collection methods are used in the project should increase the credibility (Baker, 2006) as well as the templates used for interviews and observations.

During the planning for the survey, a key issue is skewness and how to handle that. The design of the survey affects how large the drop-out rate will be, so therefore considerations about the survey's layout, number of questions, the questions formulation and its order will be relevant issues to consider (Bryman, 2018).

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