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Seeking understanding of the textbook-based character of Finnish education

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ABSTRACT

This article provides a critical exploration of the textbook-based character of Finnish educational culture. The opening section points to the need to recognize and better understand the role of textbooks in Finnish education. The next section outlines how and why textbooks have become a characterizing feature of Finnish educational culture before addressing different ways in which pupils and student-teachers are socialized into textbook-based practices of schooling. The later sections critically consider the importance of textbooks as part of Finnish education, as well as the implications for educational research, the ongoing development of Finnish education and in particular teacher education. This study suggests that a more clearly explicated understanding of text-based educational cultures is needed to better understand the character of Finnish education and to broaden the lens for theorisations of, as well as practices within, education.

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Introduction

Finnish education has enjoyed a significant amount of attention due to its success in the OECD's Programme for International Student Assessment (PISA). In the early 1990s, the Finnish educational authorities replaced national inspections of education with participation in international comparative studies (Jakku-Sihvonen and Niemi 2006). PISA success surpassed the expectations of Finnish educators and, in recent years, Finnish as well as international educationalists have been in search of the Finnish 'secret'. It is now well-known that Finnish teachers are competitively selected and hold a Master's degree. Class teachers major in education and subject teachers hold subject-based Master's degrees with a minimum of 60 ects credits in pedagogical studies to be qualified as teachers. Once qualified, Finnish teachers should know their subject(s), pupils, theories and curricula and are trusted as professionals with a significant amount of pedagogical freedom and responsibility (Linnakylä, Välijärvi, and Arffman 2007; Sääntti and Salminen 2015). Furthermore, this system seems to benefit from pupils' own activities outside of school (Reinikainen 2012) and from having pursued a research-based approach to teacher education (Tirri 2014).

It is somewhat strange then that few reviews mention the extensive role and presence of textbooks as part of Finnish educational culture (e.g. Sahlberg 2011a, 2011b), although

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textbooks have been part of politically-sensitive developments in Finnish education (Sahlgren 2015). In 1996, for example, an international team invited to inspect the implementation of the latest curriculum reform in Finland that granted significant pedagogical freedom to teachers. The team reported that school after school, row after row of children followed textbook-based lessons in teacher-fronted classrooms (Norris et al. 1996) with the team discerning little pedagogical innovation. It was perhaps due to this report that subsequent reforms have explicitly emphasised dialogic interaction (FNBE, 2004, 2014). Nevertheless, national reports and research reviews confirm that textbooks continue to hold sway throughout the comprehensive school (Atjonen et al. 2008; Luukka et al. 2008; Tainio, Karvonen, and Routarinne 2015) and that the textual environments, objectives and means of assessment change very slowly (Kauppinen 2010; Karvonen, Tainio, and Routarinne 2017).

Simola (2005) has suggested that speculations on Finnish education should look to the historical, social and cultural reasons for Finnish success, pointing out that:

... the model pupil depicted in the strongly future-oriented PISA 2000 study seems to lean largely on the past, or at least the passing world, on the agrarian and pre-industrialized society, on the ethos of obedience and subjection ... [and that] the politically and pedagogically progressive comprehensive school reform is apparently being implemented in Finland by politically and pedagogically rather conservative teachers. (Simola 2005, 466)

Indeed, the varying results of Finnish pupils in other international assessments, engagement and motivation in education (FMCE, 2012) indicates the need for further development (Andrews et al. 2014). Moreover, as Salmela-Aro observes, 'PISA revealed that the achievement gap in Finland between native and immigrant children was one of the largest across the OECD [2015] countries' (Salmela-Aro 2017, 340) and the gap between girls and boys continues to increase as indicated in the PISA 2018 results (e.g. Ahonen 2020). These findings point to the need to better understand Finnish education and the persistent prevalence of textbooks in Finnish education suggests that this phenomenon requires attention (Hiidenmaa 2014).

Although it is recognised that textbooks are extensively present within different educational systems as a key teaching resource (Valverde, Bianchi, and Wolfe 2002), surprisingly little research focuses on this topic with regard to Finnish education (Karvonen, et al. 2017). Critical discussions around the presence and use of textbooks, however, have been extensive. In the 1970s, for example, an intervention study that provided teachers with handouts for history lessons rather than textbooks garnered such criticism that it had to be abandoned before the study was complete (Hiidenmaa 2014) and decades later Finnish educators continue to stand by the principle that students should have access to quality material (Ruuska 2014b). Moreover, for many teachers and teacher educators to be recruited as part of a textbook writing team is considered as positive recognition of professional and pedagogical expertise.

Whilst a significant amount of Master's theses examine textbooks, such as the changing portrayals of society, the use of language and/or visuals, few academic researchers pursue more extensive studies (Karvonen, Tainio, and Routarinne 2017). Research that has been conducted often focuses on teachers' relationship with textbooks, such as how textbooks and accompanying materials can increase the pedagogic repertoire of teachers (Heinonen 2005), teacher perception of textbooks in relation to the curriculum

(Korkeakoski 2001), or whether class and subject teachers use textbooks in the same way and how textbooks are selected (Tainio et al., 2015). These studies highlight the centrality of textbooks in Finnish education and the major influence textbooks can exert on the organisation of classroom interaction arguably goes beyond the mother tongue classroom (Tainio 2012).

The relationship of pupils and student teachers with textbooks, however, receives much less attention (Hiidenmaa 2014; Karvonen, Tainio, and Routarinne 2017). This appears to be a strange oversight as it is recognised that textbooks mediate learning either fostering or hampering conceptual change (Mikkilä-Erdmann 2002) and that the use of textbooks increasingly frames and defines learning for pupils (Aro 2009). Moreover, teacher education seems to give little attention to how textbooks are written, used or developed (Ruuska 2014a), although textbooks are often a central feature of student teaching practice. To better understand the nature of Finnish education, it is important to examine more carefully how textbooks characterise the historical development of Finnish education as well as the presence of textbooks within the Finnish educational system today.

The history and geography of Finnish education

ABC-readers and the national project

The first Finnish ABC-reader was written by Mikael Agricola in 1542 (Linnakylä 2007). Initial ABC-readers were for adults and as they successfully increased the literacy levels of local populations allowing them to read religious texts, attention turned to the literacy level of children and ABC-readers were produced for younger students (Lerkkanen 2014). With the advent of Finnish-speaking teacher education, the first teacher educators invested in the development of textbooks as a way to share knowledge and develop the Finnish language as a language of education and science (Haikari and Kotilainen 2016). Until 1992, the Finnish Board of Education stamped approval of textbooks before they could be used in schools, a responsibility inherited from the church (Heinonen 2005). On the one hand, this stamp of approval legitimated the knowledge presented in the textbook, imbuing it with a sense of authority. On the other hand, this system of approval established a high level of quality assurance in turn creating a foundation for trust as a key characteristic of the teaching profession. Although today the textbook industry is a commercial enterprise, the literacy of the nation remains a matter of national interest (Sinko 2007) and textbooks remain a well-established feature of the Finnish educational system.

The geography of Finland has played an important role in the use of textbooks. As a large country with a relatively sparse population even today with about 18.2 inhabitants per square kilometre (UN, 2020), rural schools in Finland often comprise multi-grade classes. A teacher of a multi-grade class combining pupils from grades 3–6 (9–13 years) can regularly be responsible for simultaneously teaching lessons, such as mathematics, religious studies and mother tongue, at the same time. Although grade-level curricula can be combined, in these multi-grade classrooms textbooks provide vital support enabling pupils to independently study either individually or in groups while the teacher works with another group of children. As pupils work independently, the teacher can circulate between groups monitoring and supporting progress whilst the textbook remains with the child.

In the past, if pupils in rural districts wished to continue their studies beyond basic education they either had to move away from home or work independently receiving and sending tasks and instructions through the post. This model is presumably the precursor of the e-high school allowing Finnish high school students to complete their studies even if they are living outside of Finland. In educational settings, however, in which teachers cannot be physically present to teach students, it makes sense that pedagogically responsible textbooks are critical features of the educational system.

Textbooks and national character formation

Traditionally, the need to be able to read in Finland was overlaid with religious requirements. As a Lutheran country in the seventeenth and eighteenth centuries, Finns were required to read before they could be confirmed or marry (Linnakylä 2007). In the eighteenth and nineteenth centuries, the development of Finnish literature was a characterising feature of the 'national project' and school curricula of the twentieth century continue to emphasise the study of literature to support cultural identity development (FNBE, 2004) with Finnish language and literature the only compulsory subject from the beginning of comprehensive education to the end of high school (Tainio 2012).

Textbook authors refer to the rich cultural heritage of textbooks as a feature of Finnish education in history as well as in living memory, 'Each of us [former Finnish first graders] has been touched by our own ABC-readers' (Lerkkanen 2014, 91). The cultural principle that each child starting in the first grade of Finnish education, should receive their ABC-reader as their first textbook, ideally on the first day of school continues today (Ruuska 2014b). The Finnish ABC-reader is carefully produced and written by pedagogical experts, professional authors and illustrators. Although the ABC-reader has been revised many times as society has changed, this culturally-significant textbook continues to guide children through the sights and sounds of Finnish, differentiating tasks for the varying paces of young pupils, pushing those that can go further, reassuring and enticing those that are struggling with their first literacy steps (Lerkkanen 2014).

Subject textbooks are also of high quality (Tainio 2012), written by experienced subject teachers and teacher educators to strengthen the connection between the theoretical expertise of the university and the practical context of the classroom. As pedagogical understanding has developed and curricula reformed, so textbooks are edited and sometimes replaced (Ruuska 2014a). Any pedagogical change has to be weighed against commercial interest, however, as changes that are not appreciated by teachers can affect whether or not a textbook series is purchased (Lerkkanen 2014).

Ideally, textbook series are selected in accordance with the requirements of the Finnish national curriculum (Tainio 2012). Publishers often send copies of textbooks to schools to ensure that teachers are up-to-date with what is available and invite teachers along when new textbook series are launched. Although teachers usually have the responsibility for selecting the books they work with, head teachers and municipal authorities have the final say (Tainio 2012). Textbook series often include the textbooks, a teacher guide including answers and pupil workbooks (Atjonen et al. 2008) with digital materials increasingly featured as part of the package (Lerkkanen 2014). As textbooks and accompanying packages have become increasingly sophisticated, so textbooks have increasingly taken on the role of a guide for teaching (Karvonen 1995)

to the extent that textbooks have been seen as the equivalent to the curriculum (Atjonen et al. 2008). The full ramifications of this tendency have received little attention to date.

Socialisation into a textbook-based educational system

As children enter the Finnish educational system, so socialisation into the use of textbooks begins. Since 2015, preschool has been compulsory in Finland and increasingly textbook publishers have developed books for preschool children (aged 6) in accordance with the preschool curriculum and in anticipation of first grade (Julkunen 2014). The 'oven-fresh smell' of textbooks is a recognisable feature of the start of a new school year (Ruuska 2014b). Particularly in the early grades, textbooks are designed to match the seasons of the year and the number of chapters often aligns with the weeks of the school year. In later grades, textbook chapters are used to define the contents of different subject courses with different kinds of tasks demarcated in different ways. Pages with extra tasks, for example, often have a different coloured frame so teachers with a glance can know where pupils are in the completion of tasks. Homework tasks are commonly placed in a designated box or section of a chapter allowing teachers to assign homework by referring to the page and task number. Tests are often provided with textbook series and some series also provide letters to be sent to parents explaining how pupils should study a particular subject, e.g. in foreign language learning. Little research to date has followed the actual socialisation process, yet it remains clear that further work is needed in this area.

In the early years of school, children are carefully introduced to textbooks. Teachers introduce the books and go step-by-step through the text with the pupils drawing attention to how a double page includes a box with homework tasks. Initially textbooks are only used in mother tongue and mathematics classes, but several more textbooks are added as pupils progress through different grades. Teachers use textbooks on a daily basis with young children purposefully moving towards the independent use of textbooks by grade 3, working towards the goal of developing autonomous learners. In later grades, teachers and students benefit from the foundation laid down in the early grades without perhaps fully recognising the extensiveness of this early apprenticeship or the importance of continuing to develop students' reading strategies throughout their educational careers (Herttovuuo and Routarinne 2020).

The emphasis in successive core curricula on developing fluent readers able to evaluate their reading comprehension and draw on different strategies becomes an even more central consideration if texts are the key mediator of teaching and learning. The 2004 curriculum promoted critical literacy skills with the goal that pupils should go beyond information retrieval to assess the reliability of texts, 'to also reason abstractly in assessing both the content and form of the text ... the purposes of the writer ... [and] their own point of view' (Sulkunen 2007, 87). Through this approach it is hoped that Finnish pupils will become 'competent readers ... [able] to construe their individual and national identity and to access and participate in their culture as active and full members of society' (Linnakylä 2007, 47). The most recent reform of the core curriculum introduces multiliteracies as an aspect of literacy education (FNBE, 2014).

It is worth asking, however, how the introduction to and use of different text-types emphasised in the curriculum corresponds with the use of texts in textbooks which are intended to inform and guide, not to necessarily be critiqued as a contemporary perspective; even if textbook texts do indeed provide insights into the historical development of societies and knowledge itself (Hiidenmaa 2014). Recent research illustrates the different pathways readers take when reading multimodal textbook pages with younger and older, stronger and weaker readers drawing on a range of different strategies that sometimes support and sometimes hamper their engagement with the text (Herttovuo and Routarinne 2020). This finding highlights the need for a more systematic approach to the development of pupils' literacy as a skill for studying and educators' understanding of how textbooks as part of education.

Textbooks and teacher education

Student teachers are arguably unwittingly apprenticed into the use of textbooks in Finnish education. Although teacher education rarely explicitly addresses textbooks in theory, in practice textbooks can be a significant feature with many teacher practice periods taking place in schools attached to universities. It can be, for example, that a practice school of approximately 1000 pupils hosts 900 student teachers a year. This means that each pupil will have multiple teachers a year often with several student teachers working with the same class during the same period. Within this context, the textbook offers continuity and stability balancing teacher rotation. Although the practice school has its own curriculum based on the national curriculum, following the basic pattern of the textbook ensures that all appropriate topics are covered within a given period. Inadvertently student teachers are then socialised into textbook-based teaching.

Learning to teach efficiently with textbooks can be considered a positive feature of Finnish teacher education. Teachers that are able to draw on well-made, appropriately framed teaching materials are not required to spend excessive amounts of time sourcing and developing their own materials (Ruuska 2014b). Moreover, teachers can use the textbook to create space for them to work with pupils that need more focused attention and support, whilst other pupils continue to work independently with the textbook as their guide. This would suggest that as pupils continue through the school system, teachers can increasingly rely on pupils' ability to navigate textbooks and their related materials.

It would misconstrue Finnish education, however, to suggest that all pupils automatically develop the ability to navigate this textbook-based school system well. As the PISA results have consistently indicated, in Finland the difference

between native students and students with an immigrant background ... in reading performance is the equivalent of 1.8 years of formal schooling. This is the second biggest difference between immigrants and non-immigrants among OECD countries after Mexico (128 points); the OECD's average being 35 points respectively. In Israel, Australia, the USA, and Canada students from an immigrant background perform just as well as their non-immigrant peers ... (Reinikainen 2012, 113–114).

The PISA 2018 results highlight that this gap remains (Ahonen 2020). It seems that Finnish educators have not, as yet, succeeded in sharing the secret to success with newcomers to the Finnish educational system and moreover, 'there are now, more than ever in the

twenty-first century, young people whose reading proficiency is too weak for studying and participating in society' (Ahonen 2020, 125).

Perhaps this secret would be easier to share if this central feature of the Finnish educational system was better understood and teachers were better prepared to support the development of literacy skills. Pöyhönen and Saario (2009) provide insights into the struggles immigrant pupils can encounter when trying to make sense of textbook texts and teachers struggle to explain how to use the text. These authors note that participation in textbook-based learning requires understanding the meanings of separate concepts, comprehending the meaning of the whole instruction, applying general knowledge and connecting it with the information presented in the textbook, writing the answer in a notebook and reciting or discussing it when talking through the tasks together in the class. This suggests that pupils require multi-dimensional literacy expertise to work well in Finnish education.

It is not only immigrant students, however, that face challenges with reading in Finnish education. Finland has the most pronounced gender gap in reading of all OECD countries with 'boys are overrepresented among weak readers ... In Finland there are about four times as many boys among the weak readers (13%) as girls (3%) and among the top readers the respective percentages are 9% of boys and 21% of girls' (Reinikainen 2012, 112–113). These differences are slightly more pronounced in the PISA 2018 results (Ahonen 2020) and in a textbook-based system, these differences are even more alarming. With little research to date on textbooks, minimal attention given to textbooks in teacher education and an assumed tacit knowledge diluted through the inevitable diversification of society, it is perhaps time to re-consider the role of textbooks in Finnish education. Indeed, within a research-based teacher education system it would seem to be of paramount importance to ascertain whether textbook-based approaches can be developed for all students.

Discussion

This paper seeks to open an on-going dialogue with the Finnish educational culture in order to refocus discussions around Finnish education. Textbooks have a well-established history in Finland as pedagogical partners for teachers and pedagogical guides for pupils, yet the nature of textbook-based education is little understood. Recognising the significance of textbooks within Finnish education creates a new space for the reconsideration of textbook-based education. Textbooks provide a useful record of the past, present and even future of learning, not only as research artefact for how societal changes inform teaching materials (Hiidenmaa 2014) but also within the temporal frame of the school year and an individual lesson.

In talk-based classrooms, a pupil absent in body or mind can miss the opportunity for learning construed through teacher-pupil talk. In comparison, a textbook is a faithful companion always available and ready to progress at the pupil's pace. A textbook can be re-read multiple times and accompanying illustrations can present the same idea in different ways, if pupils are taught how to read multimodal texts (Herttovuori and Routarinne 2020). Textbooks can 'equalise' the effect of teachers and support the consistency of educational provision across a country, can allow teachers to focus on pupils that need support, reducing the need for teachers to invest significant amounts of time in the (re)production of teaching materials (Ruuska 2014a). Recognising the affordances of

textbooks, however, neither suggests that textbooks are automatically beneficial nor that the presence of textbooks in Finnish education should be exempt from the critical scrutiny of research.

To better understand a textbook-based educational culture a number of questions need to be addressed. One question concerns the nature of reading and the way in which pupils are supposed to study a text in order to learn. Reading a textbook requires different reading speeds and strategies depending on the purpose of reading. On occasion it is appropriate to read quickly as though reading a story, sometimes it is more beneficial to read slowly to really think through and try and digest. How do pupils know how to read, how to study, a textbook text? With the increase in multimodal texts and the greater diversity of students, it is all the more important that the literacy skills required of pupils are not left to chance, especially as 'most of the learning that occurs in the school context . . . happens with the help of texts' (Mikkilä-Erdmann 2002, 338)

In the recent past, pupils were encouraged to make notes in textbooks and to underline important points. This at least reduces the authoritarian nature of textbooks, allowing for concrete engagement in the sense-making process of study. In times of financial difficulty, the situation has changed. Pupils are often now required to keep textbooks as untouched in order to be able to pass them on to the next pupil cohort for as long as possible. This is perhaps one way in which the reading culture of school has changed even if overall the textual environments, objectives and means of assessment have largely remained the same (e.g. Karvonen, Tainio, and Routarinne 2017). Digital textbook materials are similarly unresponsive to student notes and observations, fleeting in their presence and limited in their off-line availability. It would be important to know how this changes the learning experience and affordances for learning within the educational system.

The addition of digital materials as part of textbook materials continues to be an area for further exploration. The levels of Finnish readers have significantly improved since 1965 (Moberg and Savolainen 2008), yet whether this continues to be the case as digital literacies become 'mundane' rather than 'motivational' features of the textual environment of schools, remains to be seen. Despite the enthusiasm for digital materials, the variety of formats, the association with game-based activities and interactions suggests that the possible routes for reading and depth of engagement with the text could range all-the-more than with textbook-based formats and require careful attention. A better understanding of the well-established textbook-based nature of Finnish education, however, might also help in the development of digital materials.

Another area of interest would be to combine research in dialogic or talk-based conceptualisations of learning with the textual mediation of Finnish education. The sociocultural premise that 'language is without doubt the most ubiquitous, flexible and creative of the meaning-making tools available . . . especially spoken dialogue, deserves some special attention' (Mercer and Littleton 2007, 2) is persuasive. Contemporary educational theories seeks to engage with pupils' understanding in order to help them begin to negotiate their understanding around culturally established views (e.g. Mortimer and Scott 2003; Saari and Viiri 2003). This approach is intended to promote pupils as active participants within the process of developing scientific understanding individually and potentially as members of disciplinary communities. This, however, involves teachers taking pupils' views seriously. Moreover, talk-based approaches to education can be

challenged by the right of pupils to remain quiet as well as to speak (Skinnari 2014). A textbook may be the most patient 'teacher' reiterating the same point, yet engaging with and building from learner views is a significant challenge. These challenges suggest that educational researchers should continue to go beyond – or behind – cultural assumptions to engage with the phenomenon in question and to seek a broader understanding of how learners participate in the learning process and the cultural conditions of the environment.

One practical reason why talk can be prioritised over text is that it is much easier to record and analyse. Reading, by-and-large, is a private, silent event, albeit a physically and cognitively active process (Järvillehto, Nurkkala, and Koskela 2009). Think-aloud protocols might provide access to the sense-making processes students engage in when studying a text, however, text-based research is further complicated by the cultural differences in the written form of language rarely addressed in reading skills research. Finnish, an orthographically highly regular with all but one sound corresponding to a single letter, is morphologically complex and requires a high level of reader responsibility (Arffman 2007). Whereas English would use separate words (e.g. preposition, possessive pronoun, object) to express a simple statement such as 'in my home', Finnish compresses this information into one word 'kodissani' with the object 'koti' (home) with the *t* inflected to *d*. Furthermore, Finnish text is often written inductively with the main content coming at the end of the sentence, a reverse of conventional text written in English (Arffman 2007). These complexities suggest that learning to read is not merely a generic skill transferred between languages, but a skill that has to be sensitive to the language in question. Recognising the cultural specificity of reading adds to the challenge of understanding the presence of text in an educational system.

Critical questions

This article outlines the significant presence of textbooks as a critical aspect of Finnish education. Whilst textbooks are deeply rooted in Finnish history, each child that enters the Finnish educational system becomes part of this cultural practice and the system seems premised on the need to socialise pupils into the use of textbook-based, particularly within the early years of basic education. The relationship between the use of textbooks and overall literacy development, however, remains unclear. Herttovuo and Routarinne's (2020) study demonstrates that children do develop literacy strategies for managing textbook texts yet some children develop more effective strategies than others. It is worth asking how pupils should use textbooks as studies advance, how pupils are supposed to know how to use textbooks and what kind of relationship teachers should foster regarding pupils' use of textbooks, as well as their own use of textbooks as a resource or even co-teacher.

How pupils learn to read and interact with textbooks draws attention to the role of teacher education and the critical need for teachers of all subjects working with pupils of different ages to be aware of different ways of textbooks can aid and hinder the development of understanding. To rely on student teachers' own experiences as pupils to inform their understanding of the role and presence of textbooks in the Finnish system seems incongruous with the required Master's qualification. Indeed, if all student teachers had a critical understanding of textbooks as key features in Finnish

education, this would be an important way of implementing language awareness and multiliteracies of the curriculum (FNBE, 2014), strengthening the connection between teacher education and school-based practice (e.g. Blomberg and Knight 2015) and using textbooks as tools for the further development of Finnish education (Lerikkanen 2014).

In the increasingly diverse society of today, tacit understanding cannot be the basis for participating and succeeding in the Finnish educational system. Parents that have not passed through the Finnish system cannot support their children's participation and activities outside of school can no longer be relied on to support pupils' educational achievements. Now would be a good time for researchers and teacher educators to better understand the significant role of textbooks in the Finnish educational system. Textbooks have clearly been a key feature of Finnish education from its inception as a form of quality control, pedagogical management and source of information. This deeply embedded feature is difficult to access from the outside, but this is a story that needs to be told. Understanding the role and presence of textbooks in Finnish education opens up a new vista for exploring educational culture and pedagogical practice, hopefully shedding light on the 'Finnish secret of success' and more importantly contributing to the more equitable provision of education.

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