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Title of your paper: Analysing technological agency in digital text production: The use of spellcheck function

Abstract (300 words)

This paper explores technological agency in the activity of digital text production, through analysing two instances where students encounter the inbuilt spell check function of a word processor, in the context of a Finnish and a Swedish L1 classroom grade 7. Theoretically, the research draws on a relational and material view on teaching and classroom activity, understanding digital text production as a situated practice through the lens of a posthumanist theoretical framing of agency that goes beyond human intentionality. We are using the concept of *technological agency* in order to understand how digital technologies embody performative qualities actively co-constituting relational agency in the teaching. The research question is: *how is technological agency enacted during spell checking in digital text production*. Methodologically, a nonlinear process-methodological approach is applied. The research draws on 2 video-recorded lessons, a Finnish and a Swedish L1 classroom grade 7, which have been generated in fall 2019 within the longitudinal study Connected Classrooms Nordic. During the recordings, 1-2 focus students were followed more closely. In the analysis, we draw on two instances, following one focus student in each, where the students encounter a generic spell checker. Preliminary findings point that the spell checker powerfully co-constitutes relational agency in the classroom. The spell checker constitutes an enacting force, through becoming a trouble source being questionable and raising confusion and uncertainty, in the encounter between the human and the nonhuman. Students are engaged in a dialectic play of resistance and accommodation, and their reactions and solutions to correct spelling are phenomena that emerge temporally, *in situ*, through the entanglement of the different participants. Additionally, the empirical data displays that the focus student and the teacher hold the device accountable for not meeting their intentions, framing the spell checker as an authority to be taken seriously.

Extended summary (1000 words, excluding reference list) introduction, theoretical background, methods, preliminary findings/findings, results, reference list.

One of the probably most common text manipulation and editing tools of word processors today is the inbuilt spellcheck function. It is used to a high degree in everyday life, across different contexts, and has become an increasingly automated practice in digital text production. The spell check function has transformed and increased the efficiency of spelling error detection and correction considerably, constituting a 'proofing tool' that users highly rely on (Rimrott & Heift, 2005, 2008). Generic spell checkers, i.e. those designed for native (L1) writers such as the spell checker in Microsoft Word® or Google Docs®, are widely distributed and used in schools across different school subjects. Spell checkers are equipped with a variety of features, possessing the ability to detect diverse error types, automatically flagging them and accordingly providing users with corrections and alternative spelling suggestions. However, generic spell checkers do also possess some notable limitations; often is the case that spell checkers do not recognize, e.g., accurate names, abbreviations or foreign lexical items, due to a variety of possible reasons, which might result in difficulties for both humans and spell checkers to detect and correct spelling errors properly (Bestgen & Granger, 2011; Musk, 2016).

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In itself, conducting spell checking is generally seen an action possibility of 'edit-ability' provided by technology enabling learner agency in digital text production (Dahlström, 2019). In existing classroom research into spelling correction, less attention has been given to the agency of technological artifacts. Generally, however, a relational view on agency supports the idea that much of what material artifacts *do* is in fact enacting the social and material reality humans engage in (Barad, 2007; Introna, 2014; Latour, 2005; Pickering, 1993). It is argued that agency is distributed between, and co-constituted by, human and nonhuman entities. Technology's distinctive properties, such as the inbuilt spellcheck function and different phenomena emerging through the use of it, are features that humans cannot directly or completely control (Leonardi, 2012) – evoking the question of what digital technologies themselves really are *doing* and *becoming* in the classroom space. To deepen the understanding of how and/or why digital technologies are used as they are in lower secondary classrooms, there is an evident need to examine closer the relationality and materiality (Sørensen, 2009) of contemporary classroom spaces.

Align with the above, drawing on a relational and material view on teaching and classroom activity, the present research troubles the notion of agency as being only inherently human through shifting the focus into looking at the internal human-technology relation in spelling correction. The aim is to explore technological agency when students encounter the inbuilt spell check function of a word processor when writing digitally, in the context of a Finnish and a Swedish L1 classroom grade 7. We understand digital text production as a situated practice through the lens of a posthumanist theoretical framing of agency that goes beyond human intentionality. The concept of *technological agency* (Slack & Wise, 2015) is used with the purpose of understanding how digital technologies embody performative qualities actively co-constituting relational agency in the teaching. Human and nonhuman entities are further considered to be *constitutively entangled* (Barad, 2007; Pickering, 1993). Thus, the study composes a micro-level analysis of how technology constitutes an active participant enacting reality in the course of classroom events, with the following research question posed: *how is technological agency enacted during spell checking in digital text production*.

Methodologically, the research draws on two video-recorded lessons, a Finnish and a Swedish L1 classroom grade 7, which have been generated in fall 2019 within the longitudinal study Connected Classrooms Nordic. During the video-recordings, there were two focus students, picked based on voluntary participation, followed more closely. The recordings were carried out with three active cameras and both the focus students and the teachers were equipped with own microphones for audio recording. Afterwards, the video files were synchronized into a mixed three-camera configuration. Align with a nonlinear process-methodological approach (Jackson & Mazzei, 2011); we did not have a predetermined understanding, in the sense of a fixed meaning, of how agency could be 'operationalized' or 'coded' into some distinctive categories. Hence, data and theory are put to *work in the threshold* (Jackson & Mazzei, 2013), i.e. we are *thinking with* agency theory when approaching our data, and respectively using the data to think with theories of agency. Our analytic unit is approached as a material-discursive practice, and the empirical data is used as means for illustrating how technological agency is enacted in spelling correction. In the analysis, we draw on two instances, following one focus student in each, where the students encounter a generic spell checker in the activity of digital text production.

Preliminary findings in the study point that technology, i.e. the spell checker, powerfully co-constitutes relational agency in the classroom. The spell checker constitutes an enacting force, through becoming a trouble source being questionable and raising confusion and uncertainty, in the encounter between the human and the nonhuman. Students are engaged in a dialectic play of resistance and accommodation (Pickering, 1993), and their reactions and solutions to correct spelling are phenomena that emerge temporally, *in situ*, through the entanglement (Barad, 2007) of the different participants. Additionally, the empirical data displays that the focus student and the teacher hold the device accountable for not meeting their intentions, framing the spell checker as an authority to be taken seriously.

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