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RESEARCH ARTICLE

Teachers' articulations of digital resources in an upper secondary programme for newly arrived migrants

Linda Febring
University West, Sweden (linda.febring@hv.se)

Signild Risenfors
University West, Sweden (signild.risenfors@hv.se)

Abstract

The highly digitalised nature of contemporary society has made digital literacy important for newly arrived migrants. However, for teachers, the use of information and communication technologies can be challenging. The aim of the present study is to gain a deeper understanding of how teachers perceive digital resources as useful for teaching migrants language and subject skills. The research question is, *In what way do teachers at the language introduction programme for newly arrived migrants in Sweden articulate the use of digital resources in relation to language teaching and in relation to subject teaching?* This qualitative study is based on observations of 28 lessons in different subjects in the language introduction programme, as well as interviews with the observed teachers. In analysing the material, we first used the TPACK in situ model (Pareto & Willermark, 2019) to organise the data on the use of digital resources, and thereafter discourse theory (Howarth, 2005) was used to analyse the data. The results show that the teachers limited their students' use of digital resources during the lessons, which is apparent in two discourses: distrust and dichotomy. In the discourse on distrust, digital technology is seen as an obstacle to teaching, and the discourse dichotomy is about the opposition between the digital and the physical. Moreover, articulations were often expressed in terms of identity; the teachers talked about themselves in relation to digital resources, rather than talking about how they use digital resources in their teaching.

Keywords: teachers' articulations; digital technology; language introduction programme; second language learning; subject content learning; discourse analysis

1. Introduction

Over the last 40 years, considerable investments have been made in digital technology within Swedish schools (Willermark, 2018). In 2017, the Swedish government approved a national digitalisation strategy for the whole school system with the aim of achieving a high level of digital competence for children and students (The Swedish Government, 2017). This led to changes being made in curricula and syllabi with the goal of increasing digital competence (The National Agency for Education, 2018). Therefore, digital technology is part of the Swedish as a second language (SSL) curriculum, and teachers can no longer refrain from using digital resources in the classroom. Presently, there is one computer or tablet per student in all secondary schools (The National Agency for Education, 2016).

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To meet the new challenges facing society, education has often been seen as in need of transformation (Player-Koro, 2012), with technology being a powerful and flexible tool for learning (Rabah, 2015). While developments in information and communication technologies (ICT) can provide new kinds of educational activities, using ICT can be challenging for teachers. Furthermore, people living in Sweden generally have rather advanced digital literacy skills, which means that digital literacy is important for newly arrived migrants (Bradley & Al-Sabbagh, 2022).

In Sweden, newly arrived youths attend the language introduction programme. It is one of four upper secondary school introductory programmes, to which students are referred if they do not have the required subject grades to attend a regular upper secondary programme. The language introduction programme is where newly arrived students go to learn the Swedish language and study various other subjects so that they are able to attend a regular secondary school programme. Therefore, several newly arrived youths (aged 16–20) participate in the language introduction programme. As there is no national syllabus, the focus of the programme is the subject SSL, although students also study other subjects. The aim of the programme is for students to be qualified to attend a regular upper secondary programme, to continue alternative education, or to join the workforce (The National Agency for Education, 2013). The subject SSL is quite similar to the subject Swedish, "implying high academic content in SSL regarding literacy, and literary and linguistic content" (Hedman & Magnusson, 2022: 453), and language and literature are the main content in both subjects (Hedman & Magnusson, 2022).

While there is ample research on digital technology in school contexts, empirical studies are lacking regarding teachers' views on using digital technology when teaching the Swedish language to migrants (Hell & Sauro, 2021). Although there is previous research on digital technology in relation to Swedish education, particularly in the subject of English as a foreign language, the Swedish-as-a-second-language perspective is deficient and the research attention has been on meaning-making rather than second language development (Hell & Sauro, 2021). In the present study, the focus is on the language introduction programme and how discourses about digital technology are articulated specifically in relation to teaching migrants. Through the theoretical concept of articulation (Howarth, 2005) (i.e. statements as well as actions), discourses about digital technology in relation to teaching of the language introduction programme are made visible. The aim of this study is to gain a deeper understanding of how teachers working in the language introduction programme in an upper secondary school in Sweden articulate digital technology as a resource for language development, both in general and in reference to their own subject. The research question informing the study is as follows:

> RQ: In what way do teachers at the language introduction programme for newly arrived migrants in Sweden articulate the use of digital resources in relation to language teaching and in relation to subject teaching?

2. Literature review

2.1 Use of digital technology in schools

Educational technology, including smart boards and laptops, is advancing and becoming increasingly integrated into educational environments (Sahlström, Tanner & Olin-Scheller, 2019). Additionally, smartphones have become an essential component of human interaction affecting all areas of society, education being no exception. Although societal concerns about smartphones in classrooms have been noted, there is limited research on the impact of students bringing and using these devices in educational settings. Nevertheless, it is evident that smartphones provide students with an additional resource and facilitate interactions often beyond the teacher's control, while also expanding opportunities for individual student participation. In relation to teachers' differing perspectives, Ott, Magnusson, Weilenmann and af Segerstad (2018) showed that

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students adjust their use of mobile phones to the teacher, noting that students say that different teachers have divergent rules for mobile phone usage in class.

Moreover, Kukulska-Hulme (2019) also recognises that digital resources are often seen by teachers as both distracting and challenging, while students may benefit from their use. In contrast to their teachers' stance, the students in the study by Ott *et al.* (2018) considered the use of mobile phones for learning to be advantageous. For students, having access to a mobile phone facilitates communication and the acquisition of information beyond the confines of the classroom (Eilola & Lilja, 2021). Pettitt (2017) found that learning was extended as migrant students made extensive use of digital resources, despite the teacher not encouraging them. Similarly, Norlund Shaswar (2022) found that the migrant students used laptops and phones for language learning, even though the teacher advised against this. The motivation for doing this was that there is no context in machine translations, and the teacher encouraged the students to use learning strategies for word comprehension instead. Norlund Shaswar (2022: 188) viewed this as "an expression of the monolingual language ideology which [. . .] traditionally has dominated the SFI [Swedish for immigrants] setting". Further, the teacher in the study was reluctant to use digital technology and expressed a negative stance regarding digital practices initiated by the students.

Finally, for newly arrived migrants, who need to integrate into society quickly, language classes may not be sufficient, making it necessary for them to engage in language learning outside of school as well. This has become easier to achieve through a range of cost-free digital resources, although users may benefit from structured instruction, potentially provided by teachers (Kukulska-Hulme, 2019).

2.2 Teachers and digital technology

Inevitably, digital technology increases the complexity of teaching and learning (Fransson, Holmberg, Lindberg & Olofsson, 2019) and there can be great differences in teachers' use of digital resources. However, many teachers have not received training in using digital resources, which may pose a problem (Tour, Creely & Waterhouse, 2021). Therefore, the implementation of digital technologies may differ widely for teachers, and challenges related to the use of digital technology in school must be understood in relation to the individual teacher's skills, attitudes, interests, as well as in relation to different student groups (Fransson *et al.*, 2019).

In a quantitative study, Lucas, Bem-Haja, Siddiq, Moreira and Redecker (2021) investigated 1,074 teachers who self-assessed their digital competence; the results show that many teachers need to improve these skills. Moreover, the study shows that personal factors are more important than contextual ones for predicting the digital competence of teachers, and therefore "teachers are the 'true gatekeepers' [. . .] for digital competence, that is, for the pedagogical integration of digital technology into teaching and learning processes" (Lucas *et al.*, 2021: 14). In addition, in a non-empirical article, Jandrić *et al.* (2019) challenged the discourses about digital technology in schools, arguing that they are poorly anchored to reality. The authors referred to the digital as if it were something disconnected from materiality, in terms of "the cloud" or "online", rather than in terms of circuit boards, hard drives or the human work that is performed on a keyboard. Jandrić *et al.* (2019: 166) wrote, "the postdigital is about dragging digitalisation and the digital—kicking and screaming—down from its discursive celestial, ethereal home and into the mud".

Even for teachers that students regard as outstanding, self-image, self-esteem, and job motivation can be reduced if they sense that they do not live up to digital technology expectations set by the school management, since the importance of using digital technology has become a strong discourse in the work and development of schools (Fransson *et al.*, 2019). It is also present in the construction and reconstruction of teachers' professional self-understanding, which affects the construction of teacher agency in relation to the pedagogical use of digital technologies (Fransson *et al.*, 2019).

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2.3 Migrants' specific needs and multilingualism

Several international studies examining the intersection of digitalisation and language acquisition for newly arrived migrants who speak English as a second language predominantly focus on the development and utilisation of apps. However, the mere presence of digital resources is not enough for newly arrived migrants. A supportive teacher is necessary (Bock, Haque & McMahon, 2020), and tailored adaptations to address the specific challenges refugees and other migrants face in practice is needed (Weibert *et al.*, 2019). Furthermore, there is a need for alignment with student-centred pedagogical approaches (Carhill-Poza & Chen, 2020). A study conducted within a Swedish context that investigates the role of digitalisation in relation to Swedish as a second language (Bradley, Bartram, Al-Sabbagh & Algers, 2023) demonstrates that well-designed apps connected to everyday situations effectively sustain motivation for language learning. Consequently, for migrants arriving in a new country, the mobile phone plays a vital role, for example, in providing access to dictionaries and other language learning features (Kaufmann, 2018). Various translation tools are found to be essential for navigating life in the new society.

However, research on the use of digital tools for language learning by newly arrived migrants indicates that they may need supplementary guidance in utilising these resources (Bradley & Al-Sabbagh, 2022). Therefore, it is important that teachers equip language learners for lifelong learning (Kukulska-Hulme, 2013). Nevertheless, there is not much research on computer-assisted language learning (CALL) studies in second language acquisition (Smith, 2017). In the Swedish context, CALL research has primarily focused on English, not Swedish as a second language, which is why in Sweden, there is a shortage of research on digital technology in education with a second language perspective (Hell & Sauro, 2021). Moreover, the CALL research field needs to be broadened and contextualised (Levy & Moore, 2018). Considering research that emphasises the complexity of learning and digital technology, in the present study we focus on capturing digital technology in relation to language learning and subject content.

3. Methods

3.1 The study context

Our study was conducted in a language introduction programme at a school not specifically focused on digitalisation. We were invited by the school's assistant headmaster, with whom we had contact through our work. The school had a one-to-one computer–student ratio but was, in contrast to the schools chosen by Hell and Sauro (2021), not selected because it was "heavily utilising digital technology in teaching" (Hell & Sauro, 2021: 208). In fact, this school was not utilising digital technology to any great extent, and we believe it is representative of many other schools. Since an observational and interview-based study on digitalisation with teachers in the language introduction programme has not been conducted in this way before, we have chosen to focus on one school.

3.2 Data collection

The study is qualitative, and the data collection consists of observations (28 lessons, each lasting 45 minutes) and interviews (six teachers). Observations were carried out in one class (18 hours, 20 minutes in total) in various subjects (SSL, English, maths, history, natural sciences, technology, music), and the researchers each took their own field notes, written as continuous text. Afterwards, these observations were transferred to an observation protocol, inspired by Pareto and Willermark (2019), which consists of possible methods concerning subject content, teaching migrants and digital resources, and the content of the lesson was marked with X (see Table 1). However, not all the students attended all the lessons observed, since the school used ability grouping. In the class we observed, the students attended Step 3 in SSL, which is equivalent to SSL

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Table 1. Example of an observation protocol (all the observed lessons in the subject Swedish as a second language are represented here; there are similar protocols for the other subjects)

Subject: Swedish as a second language								
Lesson number		1	2	3	4	5	6	7
Subject content (S)	Cultural knowledge						x	x
	Discussion/oral skills	x	x		x[a]	x		
	Listening				x[a]			x
	Reading comprehension			x		x	x	
	Studying literature			x	x[a]			x
	Watching film/TV series		x				x	
	Writing							
	Word knowledge	x	x	x	x	x	x	x
Teaching migrants (T)	Authentic experiences				x			
	Curiosity & motivation		x		x	x	x	x
	Explain/teach each other	x						
	Reflect on subject			x				
	Use of mother tongue/other languages							
Digital resources (D)	Web-based dictionaries	x	x	x	x	x	x	x
	Multimodal production (e.g. PowerPoint)							
	Shared document							
	Smart-board usage							
	Text editing							
	Video call							
	Video production							
	Video projection		x				x	
	Web-based teaching materials							x
	Learning management system hand-out							
	Learnings management system hand-in							
	Online information search							
	Documentation (e.g. photographing)							

[a]The students did different things during this lesson, depending on their level of Swedish; only a few pupils studied literature.

in school Year 6. Still, students were also able to study other subjects at other levels. Some students studied several subjects, while others studied only a few.

Interviews (which lasted for a total of 213 minutes) were also conducted with the six observed teachers, representing 11 subjects (see Table 2). The interviews were semi-structured around a topic guide that centred around questions concerning the language introduction programme in general and the subjects. We asked questions about digital resources used for teaching, alternative ways to reach the same goal as well as how the teachers stay informed about new digital resources (see supplementary material). Since we had observed the lessons, we were able in the interviews to bring up examples of what we had seen and therefore the interviews became contextualised. For

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Table 2. The participants of the study

Teacher	Pseudonym	Sex	Subjects	Length of experience
1	Adam	M	Maths	3 years
2	Bianca	F	History, geography, religion, social sciences	19 years
3	Caroline	F	English, Swedish as a second language	23 years
4	Diana	F	Biology, chemistry, maths, physics	19 years
5	Elias	M	Geography	8 years
6	Finn	M	Maths, physics, technology	38 years

example, in the interview with Elias, we discussed the usage of Lexin (an online dictionary) and Google Translate; in the interview with Finn, we discussed the fact that there was music in the classroom, and in the interview with Diana, we discussed how the subject of sexuality is a sensitive area. The interviews were recorded with a Dictaphone and transcribed verbatim, comprising 281 pages of transcription.

3.3 Data analysis

For analysis of this material, a discourse theoretical approach was used, with the concept of articulation as a starting point for analysing how discourses were constructed. The analysis was carried out in two phases, which are described below. First, when sorting our material, we were inspired by the technological pedagogical content knowledge (TPACK) in situ model (Pareto & Willermark, 2019). Thereafter, we used a discourse theoretical approach (Howarth, 2005) to categorise and analyse the most prominent articulations that had emerged in the first phase of analysis.

3.3.1 Step 1: TPACK in situ

In the first step, we categorised our data using the TPACK in situ model (Pareto & Willermark, 2019), which is a further development of the TPACK model (Koehler & Mishra, 2009). The TPACK model prescribes teacher knowledge needed for effective teaching when using technology. It builds on Shulman (1986), who emphasised the importance of not separating pedagogy, subject content, and technology. Shulman (1986) developed a model called pedagogical content knowledge, in which pedagogy and subject content form a unit where technology is also included. Koehler and Mishra (2009) developed Shulman's model by highlighting technology as a separate component through the TPACK model. They emphasised the intersections – that is, the complex interaction between the three components – but also stated that they can be studied separately. The TPACK model has been used in various ways and has also attracted criticism (see, e.g., Willermark, 2018).

The TPACK model was developed into the TPACK in situ model by Pareto and Willermark (2019). This is an operational model of TPACK, based on design thinking, intended to be used as a practical tool for planning and assessing teaching. In our study, the TPACK in situ model was used as an observation protocol (see Table 1). This allowed us to sort and organise the data on the use of digital resources (D) in relation to teaching migrants (T) and subject content (S), clarifying how T and S respectively relate to D bidirectionally (see Figure 1). The model provided an instrument for thematic categorisations and sentence concentrations, which were then analysed discursively.

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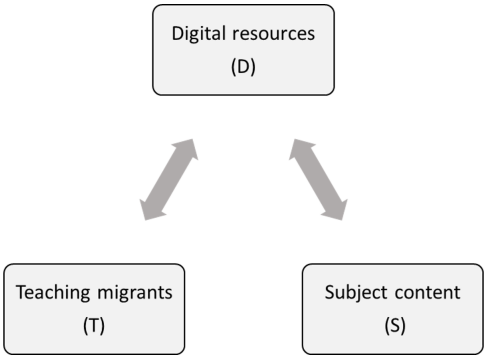

Figure 1. Model of how the observational data were organised.

3.3.2 Step 2: Discourse analysis

In the second step, after organising the observational data in accordance with the model in Figure 1, we made sentence concentrations from the transcribed interviews and from the field notes to see how discourses about digital technology were articulated. Here, the purpose was to underscore the most prominent articulations about (1) digital resources (D), (2) teaching migrants (T), and (3) subject content (S).

The theoretical approach underpinning this article is discourse theory, which can be used both as a method for analysing data and as a theoretical lens for understanding in what way language shapes and is shaped by social activities and social identities (Gee, 1999). Central to discourse theory is the emphasis on articulation; hegemonic discourses can always be challenged. The analytical applications are derived from Torfing (1999) and Howarth (2005). Through the application of discourse theory, it is possible to capture both physical and verbal articulations in the data (Howarth, 2005; Laclau & Mouffe, 1985). Discourse theory is based on the assumption that every action – whether verbal or physical – is seen as meaningful and is analysed from its effects; what is said is not only rooted in language but also a social action and impacts on people's actions and formation of thoughts (Torfing, 1999). As stated above, it is always possible to challenge discourses through articulations; thus, a discourse prevails if it is repeatedly articulated (Howarth, 2005). Regarding language as a system of similarity and difference, our point of departure within discourse theory was to find out how articulations could generate consensus, respective disagreement when the teachers talked about digital technology in interviews and how they used digital resources at lessons. Each articulation – both verbal and physical – causes other articulations to be rejected automatically, which means that discourses can, through articulations, be rearticulated or challenged (Howarth, 2005). Since we are equally interested in listening to the teachers' reflections when they talk about digital resources, such as how they act in classroom situations, discourse theory was found suitable for analysis of the data.

We focused on statements from interviews as well as actions in the classroom, where digital technology, language teaching and the teaching of other subjects were perceived as responses to discourses in school and society about how teaching should be conducted. Thus, the statements "Put your mobiles away" (Adam, Bianca, Caroline, Diana), "Here we speak Swedish" (Bianca) and "Let's focus on the subject and put your laptop away" (Adam, Diana) could be seen as rearticulations of a traditionalist and monolingual discourse, whereas the statement "I myself am rather computerised" (Caroline) challenged a traditional discourse.

Articulations made by the teachers were seen as invitations to an active discursive positioning in the frame of a specific context – that is, the language introduction programme. The fact that all but one of the teachers accepted the invitation to take part in the study and to be interviewed showed an active positioning at work within the frame of the questions investigated in this study.

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The analyses usually show that the same discourse is articulated both verbally and physically; for example, teachers expressed (both in words and in actions) that they made use of digital technology, or, vice versa, that they did not embrace the use of digital technology, neither in speech nor action. However, the physical and verbal articulations were sometimes disparate, as observed during the following interview in which during a lesson the interviewer had noted that the teacher, Finn, allowed the students to use the computer to listen to music despite his stated opposition to digital technology:

> Finn: It's an agreement we have: when I lecture and explain what is going to happen during the lesson, then everyone must listen. And then when we get started you can have some background music. It doesn't bother me. And I don't think it bothers the kids either.

This example suggests that digital technology was intertwined with other factors like disruptive moments, creating good relationships, and making decisions, depending on the current situation. Thus, social factors, gender, age, and other intersections were regarded as articulations within discourses (cf. Linell, 2005).

3.4 Ethics

We presented our project and the ethical guidelines (The Swedish Research Council, 2017) at a teachers' meeting. The teachers also received written information with email addresses so they could pose questions or notify us at this early stage if they did not want to receive further information about the study. All teachers were asked to confirm their intention to participate again the week before we came to the school as well as prior to each lesson and interview. One of the teachers chose not to be included.

The students were given information by their teachers a week before we visited the class. When we came to the school and introduced ourselves to the class, the students showed curiosity by asking questions, and some of them showed us around, eagerly trying to get in contact with us.

In addition to informing the participants about the ethical guidelines, such as information consent use and confidentiality, there were more specific ethical dilemmas that concerned both fieldwork and writing. The teachers in the language introduction programme are, to varying degrees, grappling with severe dilemmas concerning matters such as grading that can be crucial for students' residence permits, or worries about how to provide comfort and give answers about the Swedish refugee policy. Thus, in the present study, the ethical issues were not only about de-identification but also about methodological issues. Specifically, digital technology needed to be seen in light of teachers sometimes having to deal with difficult issues and the need to prioritise among them. Despite this, we were warmly welcomed when entering the school.

From a broader perspective, research within this field intends to open up a more multifaceted debate on important societal issues – in this case, about the conditions under which teachers work in the language introduction programmes. Thus, when it comes to writing, the ethical challenges are about contextualisation and accuracy in choosing quotes.

4. Results

Based on observations and interviews, we have discerned two discourses in relation to digital technology: a discourse of distrust and a discourse of dichotomisation. These discourses relate to our research question about teachers' articulations of digital resources in relation to language and subject teaching. Below, we present our results in relation to the concepts in Figure 1, which shows how the use of digital resources (D) is related to teaching migrants (T) and subject content (S).

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4.1 Digital technology, teaching migrants, and subject content

Regarding digital technology, the most prominent result is the lack of articulations that make this technology visible. Although the students had computers, they were rarely used (see Table 1). This became apparent in the first phase of the data analysis, when the TPACK in situ model (Pareto & Willermark, 2019) was used for thematic categorisations of the observations. All the teachers, regardless of the subject they taught, articulated the importance of learning the Swedish language. However, their articulations showed, both in observations and interviews, a monolingual approach that emphasised the importance of being able to speak Swedish but without the support of the mother tongue. Dictionaries were used to look up single words and phrases, but the classroom was not multilingual. Concerning subject content, a traditional view was articulated, where the physical is prioritised over the digital.

4.2 A discourse of distrust

The first discourse that we present is one of distrust in relation to digital resources, which is first analysed together with a monolingual discourse concerning teaching migrants, and then analysed together with a traditional discourse concerning subject content. The distrust discourse is about the teachers supposing that the students were engaging in something other than what they were required to do when using digital resources. Although this was sometimes true, it was not always the case. In relation to the monolingual discourse concerning the teaching of migrants, Bianca did not want the students to use dictionaries; she wanted them to think about the words instead of looking them up, and she talked about cheating when it was possible to copy and paste:

> Bianca: I choose not to because I don't want them to use Lexin without thinking first. Also, I'd rather they not cheat. Or like cheat, they don't think that they do that, always, language introduction students, they copy something and don't understand that in Sweden we call that cheating.

So, in this case, digital resources, in the form of web-based dictionaries, were not part of the teaching of migrants. Through statements about being conservative, students who "cheat", and actions such as requesting the students put their mobile phones or laptops away, a distrust discourse was articulated.

The second example shows Bianca being astonished that a student was actually immersed in the assignment since the computer was open in front of him:

> Bianca: What are you reading about?
>
> Student S1: World War I.
>
> Bianca: In what language?
>
> S1: Turkish.

Bianca's question shows that both subject content and language can be challenged. It was not obvious that the student should deal with history in a given language, and the student was finding a way to use the computer for language and subject content learning, although it was not part of the lesson; here, Bianca saw that the students did not always engage in mischief when using the computer. The monolingual distrust discourse was challenged here since the student used Turkish to study.

In English classes, translations were usually done through Swedish rather than the students' mother tongues, and the materials they worked with were not designed with multilingual students in mind. The consequence of this was that the students used English–Swedish dictionaries when

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they did not know an English word, resulting in student S2 commenting, "I don't know these words in Swedish!" The teachers were not using the computer to teach the migrants, but instead used learning materials made for Swedish students. This material was using Swedish words (to help Swedish-speaking students), which meant that the students had to look up the Swedish words in the material using Swedish–English dictionaries, unable to utilise all their linguistic resources. This is a teacher's articulation of a monolingual distrust discourse.

The last example of a student trying to include the computer in his studies was in a maths lesson, when one student found a geometry explanation in Persian. When Adam saw the laptop, he said, "Now, let's focus on maths, put your laptop away, please". However, Adam did not look at what the student was doing on the computer, which was watching a video featuring a teacher explaining geometry in Persian. Again, the student was finding a way to use the computer for language and subject content learning, even though that was not part of the lesson. In this case, the teacher articulated both a monolingual and a traditional distrust discourse.

Additionally, the students were sometimes described as unaccustomed to dealing with the freedom offered to students in Sweden, and the teachers said that it was difficult to manage the internet for these students; they did "the wrong things": watched movies, accessed different information about cars or football, for example. Elias said, "I have heard, but I am not sure, in Albania they have removed, for example, YouTube from their computers. I think we can do something similar".

In many ways, the subject content was taught in a traditional manner, without the use of digital resources. We saw students carrying their laptops from one lesson to another but rarely using them. Consequently, some students did not bother to bring their computers to the lessons. Similarly, although there were smart boards at the school, they were not used. Moreover, the teachers talked a lot about conflicts around digital resources: "You have to fight mobile phones, you have to fight computers, they watch the wrong things. But yes, they know that I get mad at them, so that, they are conscious of that" (Caroline). The phrase "Put your mobile phones away!" (Adam, Bianca, Caroline, Diana) was heard quite often. Digital resources were seen not as part of the subject content but as something that could lead the students to mischief. The above examples show that the distrust discourse is manifested in a monolingual view of languages and a traditional view of the subject content.

4.3 A discourse of dichotomisation

The second discourse is the dichotomy discourse. In the teachers' articulations about digital resources, contradictions between digital resources and alternatives to digital resources emerged, and that constitutes the dichotomic discourse. Regardless of the teachers' own positions, digital resources were articulated on the basis that there was an opposition between using and not using digital resources, which could also be articulated in the way they defined the opposite position. Thus, digital resources did not appear to be anything neutral, but as something polemical. In relation to the monolingual discourse concerning the teaching of migrants, Bianca referred to the SSL subject, saying that these teachers were more digitalised and interested in digital technology: "If I am to be completely honest, their SSL teachers will probably fix it for them and then I just follow". In this case, the use of digital resources was only articulated as a way of learning the Swedish language; therefore, the SSL teacher could be asked to arrange what the students needed and the subject content teacher did not have to think about what might be needed, which was a monolingual discourse within the dichotomy. Moreover, Diana highlighted the classroom dialogue between teachers and students as follows:

Interviewer: Does something get lost by using Google Classroom, that you can have too much digital resources or . . . ?

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> Diana: You can surely have that … but I don't know. Hard … of course you can have too much of everything. It's always good with a mixture of everything and I really enjoy talking with the students. That is the very best thing, I think.

In this case, Diana made a distinction between using digital resources and communication, which could be carried out via digital resources, and also in a variety of ways and languages when teaching migrants. Moreover, we heard utterances such as, "Shh, shh – Swedish [sharp tone] thank you very much!" (Bianca) as well as "What did your teacher say about speaking Arabic?" (Caroline) and "I want you to speak Swedish to each other, this beautiful, Nordic language" (Caroline). The dichotomy here was both between "authentic" oral and "less authentic" traditional communication carried out in the classroom as part of the subject content, and digital resources, and the presupposition that communication was only to be carried out in the target language (Swedish) when teaching migrants.

The teachers were placing digital resources and alternatives to digital resources in opposition to each other. Finn compared digital technology to film, which he believed was not authentic, and advocated instead teaching as theatre, which was "for real":

> Finn: If one thinks that digital teaching material could replace a teacher, it would be a financial win. But it is not possible to put on a movie and think that the kids learn as much as when a living person shows the same thing. I simply don't buy that [. . .] there is a difference between going to the theatre and sitting watching a movie at a cinema. It's a completely different experience.

The above quotation advocates teaching without digital resources; thereby, a dichotomy was created between the digital and the non-digital, and a more traditional teaching of the subject content was favoured. The dichotomy also appeared when Bianca talked about textbooks in terms of being either digital or physical:

> Bianca: In my old school, then the discussion was whether we should have digital textbooks or not. But it is very much more expensive to have digital textbooks. [. . .] Also, my colleague, XXX, has been using digital books for a year here, but they were so very negative, the students, when she evaluated it [. . .] They wanted a proper book.

Here, there was a dichotomy between digital textbooks and "proper books".

Subject content was also taught in a traditional way without digital resources because of technical mishaps, as Finn emphasised: "I have been burned so many times by computers not working the way they should. So I'd rather go with paper. Unfortunately, that's how it is". This was also dichotomic, just like the next quote from Finn where different kinds of students were put in opposition to each other: "I have noticed that, for many of the language-weak students, it is easier to take in pictures in a different way in the computer as to what you can do in a book". This quote shows that Finn thought that the migrants might benefit from using digital resources, but they were in some way "exceptions" and not "regular" students.

Caroline articulated the dichotomy when talking about herself as a "tech fanatic" and introduced new digital resources in classroom situations, even when this was not justified; for example, proposing Instagram to make a to-do list for bringing "fika" (coffee and cake) to class. Being a "tech fanatic" does not articulate digital resources as part of the subject content but as something with a value of their own. Other teachers expressed a complete lack of interest in digital resources, as exemplified by Bianca saying, "I'm not very good at it [digital technology]. I'm conservative [laughter]". This suggests that the teachers focused on their views and opinions, falling into an identity, when discussing digital resources in relation to teaching migrants the

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language and subject content. The students tried to challenge this by using the laptops as a resource for language learning, but the teachers often assumed that the students were misbehaving and asked the students to put their laptops away. These were all examples showing that the dichotomic discourse was also manifested in a monolingual view of languages and a traditional view of the subject content.

5. Discussion

The aim of the study was to gain a deeper understanding about how teachers, working in an upper secondary school language introduction programme in Sweden, articulate digital technology as a resource for language development in general as well as in their own subject. The analysis was done in two steps. In the first step, by using the TPACK in situ model for initial thematic categorisation of the observation protocols, we were able to obtain an understanding that was important for our further analyses. In the next step, a discourse theoretical approach was used to capture the teachers' articulations of digital resources within the material. The way teachers articulated the use of digital resources (D) as a way of learning subject content (S) and teaching migrants (T) was related to strong discourses about digital technology in society. As Jandrić *et al.* (2019: 165) concluded, "[a]cross all sectors, there is currently a strong focus and push for 'digitalisation'".

Among the teachers, there was a passion for the teaching assignment; however, this was not linked to digitalisation but rather the opposite. The discourses on distrust and dichotomy indicate that the debate is far from resolved; indeed, it remains very active, as the teachers challenged the prevailing discourse on digital technology in various ways (cf. Fransson *et al.*, 2019). In our study, distrust was articulated as the perception that digital technology was challenging rather than assisting students in learning a new language and subject content. Dichotomy was articulated as an opposition between the digital and the physical. Thus, articulating the physical part of the assignment – being the one that represents the importance of laboratory exercises, using dictionaries and social interaction in the classroom – became a non-articulation of the digital. Teachers also expressed the notion that something is "lost" when schools become more digitalised: students do not learn the alphabet as effectively without using dictionaries, and they miss out on the tactile experience of working with fluids, test tubes, and mechanics if they are not allowed to use their hands or sense of smell and taste. Thus, physical knowledge was set in contrast to the digital.

However, the discourses on distrust and dichotomy could also reinforce each other through articulations that rendered both discourses perceptible. The dichotomy did have to be not only about the digital versus the physical but also about different digital artefacts being set up against each other – for example, computers versus mobile phones – and in this case, computers were prioritised because the teachers distrusted the students using their mobile phones in a productive and focused manner (cf. Ott *et al.*, 2018; Sahlström *et al.*, 2019). These arguments show that the discourses stand out strongly.

The present study aimed to examine the use of digital technology in a context, as Levy and Moore (2018) have called for. In our interviews, we had nuanced conversations with the teachers about different ways to teach on the language introduction programme. Since our study focused on digital resources, we were curious about the fact that they were rather scarce (see Table 1). There is a strong discourse on digitalisation prevailing in relation to school development (Fransson *et al.*, 2019), and we noticed teachers expressing resistance by, for instance, placing printed books and digital learning material in a dichotomy. Studying the use of digital technology in a context (the language introduction programme) where the focus is both on teaching migrants the language while also developing their subject knowledge revealed the complexity of the teaching assignment. Being a teacher at the language introduction programme is challenging, since the

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students are very heterogeneous in terms of language abilities and the amount of previous schooling they had (cf. Nilsson & Bunar, 2016). Therefore, the scarce usage of digital resources may have been due to the fact that it was the language introduction programme that was studied. In addition to this, and to the issues brought up earlier in this text, such as grading that may affect residence permits, these teachers said that they worked in the worst premises of the school. The teachers and the students had to move between different buildings a few blocks apart; internet connection problems occurred while we were there, and teachers were being laid off during the time we were doing our fieldwork. It was clear that digital technology could make the teaching assignment even more complex, which could lead to great differences in teachers' use of digital resources (cf. Fransson *et al.*, 2019; Lucas *et al.*, 2021), but it could also stimulate digital creativity (Spante, 2019; see also Eilola & Lilja, 2021; Norlund Shaswar, 2022; Pettitt, 2017). Moreover, as teacher support is necessary (Bock *et al.*, 2020), more teacher training on digital resources might have been needed (cf. Tour *et al.*, 2021).

We were intrigued by the fact that articulations were, to a high degree, expressed in terms of identity; the teachers talked about themselves in relation to digital resources, rather than talking about how they use digital resources in their teaching. Statements like "I love Google" (Caroline) or "I'm conservative" (Bianca) showed that, for these teachers, the use of digital technology was a question of identity. This is in line with the results of Lucas *et al.* (2021), who found that teachers were gatekeepers who may be hindering integration of digital technology. Therefore, the teachers' articulations of being technology enthusiasts or technology traditionalists may affect the students' learning. Moreover, the articulations of identity are especially visible in the dichotomisation discourse, which shows that the discussion is polarised. This can be understood as teachers' construction and reconstruction of their professional self-understanding (cf. Fransson *et al.*, 2019) and as a response to having their identity as a teacher of a particular subject threatened. Through this observation, we want to emphasise the importance of the usage of digital technology being linked to a specific context and not disconnected from teachers' subject knowledge – that is, subject identity. Furthermore, since the usage of digital resources is mandatory (The National Agency for Education, 2016), it is important for teachers to see the potential that lies in digital resources in relation to subject content teaching and the present situation for teaching migrants a second language (cf. Weibert *et al.*, 2019). However, the teachers in our study, sensing their identity as the teacher of a subject was threatened, refrained from using digital resources. This raises questions about how the implementation of digital resources in school systems is being accomplished. Furthermore, the use of digital resources in schools is currently a politically contentious issue in Sweden.

This study contributes to the field of CALL, where there is a scarcity of research in relation to second language learning (Smith, 2017). In addition to this, our study was carried out in an ordinary school, not in a school that has a profile based on its use of digital resources in teaching (cf. Hell & Sauro, 2021). It has relevance for teachers, especially second language teachers and teachers of migrants, who need to make informed choices about when to use digital resources and when to limit their use. Finally, we also explored the usage of the TPACK in situ model (Pareto & Willermark, 2019), which was used for the initial part of the analysis.

6. Conclusion

This study has investigated how teachers in a language introduction programme apprehend the usefulness of digital resources for teaching migrants language and subject skills. As shown in the Results section, the teachers restricted the students' use of digital resources. This is apparent in two discourses: distrust and dichotomy. The distrust discourse was evident in the sense that while the students used digital resources for language learning support, the teachers were suspicious of what they were doing, even if in most cases digital resources were used by the students to support

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language learning and to understand subject content. The dichotomy was evident in the way digital resources were being positioned as "all or nothing" (either you use them or you do not) – there was no middle ground, considering whether using them might sometimes be beneficial or not. Most times, the digital resources were rejected in favour of a more traditional teaching of the subject content. The digital resources were also not used to open up the classroom to languages other than Swedish, but the teaching was carried out in a monolingual manner. In fact, articulations about languages were traditional and lagged behind research (cf. Bialystok, 2001). The students were reminded that they were supposed to learn Swedish and not speak other languages.

This study has certain limitations. In our study, the teachers were in focus. However, when observing the lessons, we noticed that the students, on their own initiative, used digital resources in various ways, both for language learning and subject content learning. In future research projects, students' school-related actions in relation to digital resources would constitute an interesting area for exploration, giving us insights into what students actually do and want to accomplish when using digital resources for language and subject content learning (cf. Eilola & Lilja, 2021; Norlund Shaswar, 2022; Pettitt, 2017). Through research that points to the importance of qualitative and contextualised studies (Levy & Moore, 2018), a student-oriented focus can highlight discourses of resistance and to a greater extent include issues of power and social justice than we have been able to do in this study.

Supplementary material. To view supplementary material referred to in this article, please visit https://doi.org/10.1017/S0958344024000326

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About the authors

Linda Febring is a research student and a teacher in Swedish as a second language at University West, Trollhättan, Sweden. She is interested in work-integrated second language learning as well as in second language learning and digitalisation.

Signild Risenfors is an associate professor in education at University West, Trollhättan, Sweden, and a teacher in Swedish as a second language and Swedish. Her recent research project concerns issues of migration and integration with a focus on multilingualism in educational contexts.

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