Exploring basic literacy education in Arabic for students with intellectual disabilities: The case of Mother Tongue Instruction in Swedish Adapted Upper Secondary School

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Abstract

Students with intellectual disabilities who use languages other than Swedish at home have the right to study both their home language and Swedish as a second language in school. This study explores teaching of emergent literacy in Mother Tongue Instruction in Arabic at the Adapted Upper Secondary School in Sweden. The material analysed in the article comes from observations in one classroom with one teacher and New Literacy Studies has been used as a theoretical framework and literacy practices as the analytical tool. Whereas earlier research has shown positive effects of bilingualism on cognition, the results of this analysis show that both the teacher and the students struggle. The literacy teaching was not related to students' everyday lives and as their proficiency was low, they are not likely to have much use of their literacy outside of school and the one-sided focus on literacy in the teaching means that the development of the students' oral skills is not well supported. The conclusion is that for instruction in Arabic to be valuable for the language and cognitive development of students with intellectual disabilities, teachers need to collaborate, so that special needs teachers, L2-teachers and Mother Tongue teachers can combine their respective knowledge.

Keywords: *students with intellectual disabilities; the Adapted Upper Secondary School; basic literacy education, Arabic, Mother Tongue Instruction*

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1 Introduction

Students at primary and secondary school in Sweden who have other languages spoken in the homes than Swedish have the right to what is known as Mother Tongue Instruction (MTI). This is also the case for students with intellectual disabilities. The school form for students with intellectual disabilities at upper secondary level in Sweden is called *den anpassade gymnasieskolan* (Adapted Upper Secondary School, formerly *gymnasiesärskolan* (Special Needs Upper Secondary School)). This means that students at Adapted Upper Secondary School who grow up with other languages than Swedish in the homes are entitled to teaching both in Swedish as a second language and in a language that is used in the home.

Students with intellectual disabilities need various types of support, depending on the nature of their disability. In the government investigation SOU 2021:11 (The Swedish Department of Education, 2021), which was followed by the Referral to the Council on Legislation Prop. 2021/22:162 (The Swedish Government, 2021), the importance of staff with the appropriate competence is highlighted. Research on students with intellectual disabilities focuses primarily on their cognitive, linguistic and social development, and there is a lack of research focusing on those students for whom the medium of instruction is a second language. This article therefore focuses on MTI among this student group, through the case of Arabic.

Literacy education for students with intellectual disabilities commonly means that they are taught to read and write in the language of the school, which means that in adapted education in Sweden, students are taught Swedish literacy skills. However, studies in Mother Tongue Arabic mean that they will also be taught literacy in Arabic, including Arabic script. Mother Tongue Instruction in Sweden commonly comprises only 40-60 minutes per week, which means that for students at Adapted Upper Secondary School who study Arabic, the teaching of literacy skills in Swedish is likely to dominate, while the teaching of Arabic plays a minor role in their schooling. There is as yet little research on the teaching of emergent literacy in MTI in adapted education, when the language in question uses writing other than Latin. Thus, the aim of this study is to investigate the teaching of emergent literacy in MTI Arabic at Adapted Upper Secondary School in Sweden.

New Literacy Studies (NLS) (Barton, 2007; Barton & Hamilton, 1998; Street, 1995) will be used as the theoretical framework to analyse the teaching. To understand the teaching practices the following research questions will be used:

1) What literacy events are identified in the classroom?
2) How are letters used?
3) What literacy practices appear?

Identifying and analysing literacy practices according to Heath (1982, see below) and in particular how letters are presented, enables a broad understanding of these socially, culturally and historically situated literacy practices in the classroom.

2 Research overview

There is strong consensus on the importance of supporting the languages that students use in the home; the most prominent researchers in this field include Baker and Wright (2021), Cummins (2000, 2021) and García (2009). Researchers such as Cummins (2017), Bialystok (1999, 2015) and Kroll and Bialystok (2013) stress the positive effects of bilingualism and, based on a research overview, Adesope et al. (2010) show that bilingualism brings cognitive benefits for metalinguistic awareness, attention control and working memory, as well as abstract and symbolic representation skills. Bialystok (1999, 2015) and Kroll and

Bialystok (2013) claim that the reason why bilingualism strengthens the capacity to pay attention to external stimuli is that bilinguals need to control which of their languages is used in every context. One risk when students only receive their education in their second language is that it may result in what is known as *subtractive bilingualism*, where the second language is developed at the expense of the first language. Researchers such as Pesco et al. (2016) and Cummins (2017) stress that subtractive language development does not bring the cognitive and metalinguistic benefits that have been shown in the case of additive bilingualism, when the home language(s) and the language of schooling are developed in parallel.

Research on education for students with intellectual disabilities in Sweden has mainly focused on general levels, such as student socialization and teacher proficiency (Berthén, 2007; Klang et al., 2020; Klefberg, 2022). Systems for communication that complement speech and literacy have been developed, such as Augmentative and Alternative Communication (Chung et al., 2012). For students with intellectual disabilities, it is particularly important to receive qualified instruction in both their first language(s) and their second (Rodriguez, 2009; Scherba de Valenzuela et al., 2016; Ware et al., 2015;). Peña (2016) argues that this means that teachers need awareness of the importance of such language development, to enable the use of teaching methods that are research-based.

Research on multilingual development among students with intellectual disabilities and on teaching for this student group remains limited and fragmented (Kay-Raining, Genesee & Verhoeven, 2016; Kay-Raining, Trudeau & Sutton, 2016; Nair et al., 2022; Ware et al., 2015). Salameh et al. (2002) studied the risk factors for language impairment among bilingual children and found that gender and hereditary factors seemed to interact with environmental factors. In a study by Marinova-Todd et al. (2016) from the USA, Canada, Great Britain and the Netherlands, it appears that staff in adapted education show increased support for multilingualism, while their students still received less second language support than students without intellectual disabilities. In a study on screening of language development among these students, Nayeb et al. (2014) show that nurses who carry out these screenings assessed language development as being slower among bilinguals than among monolinguals. Ware et al. (2015) found that educational staff, contrary to research findings, did not recommend that parents use the first language at home, and this highlights the need for research on how bilingual support could be provided.

When it comes to the teaching of Arabic and Arabic literacy, which is the focus of this study, the phenomenon commonly known as *diglossia* (Brustad, 2017; Daniels, 2018; Ferguson, 1959) needs to be considered, which in the case of Arabic means that reading and writing take place in Modern Standard Arabic (MSA), while oral interaction takes place in diverse varieties called *Dialect Arabic* (DA). This means that a teacher of Arabic needs to consider the differences between dialects in the oral language, DA, and norms in the written language, MSA. Some researchers, such as Abu-Rabia (2000) and Oweini et al. (2020), argue for the use of MSA only in classrooms, while others, such as Khamis-Dakwar et al. (2012) and Asadi and Kawar (2023), claim that the use of both DA and MSA facilitates the development of comprehension and literacy in students. The importance of teachers' awareness of the issue of MSA and DA in all education is stressed by Khamis-Dakwar and Makhoul (2022). In an earlier study on Mother Tongue Tuition (Wedin & Berg, 2024), we argued that teaching in Arabic may be compared to translanguaging practices (García, 2009; Paulsrud et al., 2017) due to the parallel use of different varieties.

3   Emergent literacy in Arabic

The teaching of literacy in Arabic at Adapted Upper Secondary School in Sweden takes place in an educational setting where Swedish dominates. The minor position of literacy education in Arabic through MTI in relation to education in Swedish is a given starting point for teaching. When teaching basic literacy in Swedish, both holistic and phonic methodologies may be used, i.e., both starting at a beginner's level with the reading of whole words and expressions (see Liberg, 1990; Wedin, 2017) and with specific skills, such as phoneme-letter relationship, sounding out words and the reading of sight words.

Even though both Arabic and Swedish scripts are phonetic, which means that the underlying principle is that one phoneme is represented by one grapheme, the strategies for writing and reading differ. In Swedish, both consonants and vowels carry meaning, prosody such as length is represented to a limited extent in consonants, but only indirectly in vowels, while pitch and assimilation are generally not represented. In Swedish, letter form does not vary due to placement in words, and both script and block letters are used in handwriting. In Arabic, generally only radicals, which are consonants and long vowels, are represented, and not short vowels. Only religious texts, texts in basic literacy education and for use by readers who are beginners are vocalized, i.e., also include short vowels. In Arabic, letters are connected to each other following specific rules, with some letters being joined, some not and some only either to the right or to the left, which means that most letters have varied forms, depending on their place in relation to other letters in each word.

This variation in graphemes may makes the initial steps of learning to read and write it more difficult in Arabic, i.e., to grasp the underlying principle for the script in emergent literacy, than in Swedish. In Swedish, an individual who is about to develop emergent literacy skills may more easily make a synthesis of isolated letters into a word, by simply putting them together and sounding out each letter or analysing a short word by disassembling it into separate letters. In Arabic, the process is similar but includes making changes necessary to each letter due to assembling or disassembling. For example, the word "mama" (mother) is used in Figure 1 to show the difference between the writing of the word and the single letters.

ما ما the word "mama"

ا م ا م the letters <m a m a>

FIGURE 1. The word "mama" written in Arabic script, as compared to the single letters.

Thus, for students to decode the word ما ما ("mama"), they need not only to be able to recognise the single letters, but also how they are joined. As the phonologies of Swedish and Arabic differ, there is a one-to-one correspondence between some letters in each language, but not between others. As Swedish has nine vowels, while Arabic has three, one vowel in Arabic may represent several in Swedish. Consonants also differ: while Arabic has /t/ and /t/, Swedish only has /t/, something that is also similar in the case of Swedish /s/, /d/, /h/ and /k/. Furthermore, Arabic has two semivowels, where the Arabic letter و ("waw") may represent the Swedish vowels /u/ and /o/, as well as /w/ in the English "well" and the Arabic letter ي ("ya") has a similar function, representing both the Swedish vowels /u/ and /o, and the Swedish consonant /j/.

Another difference is the direction of reading and writing, from right to left in Arabic and from left to right in Swedish. In both languages the letters are constructed to be

written in their respective direction, and basic literacy education normally includes instruction on how to draw the strokes in each letter in a way that supports handwriting in the respective direction (Figure 2).
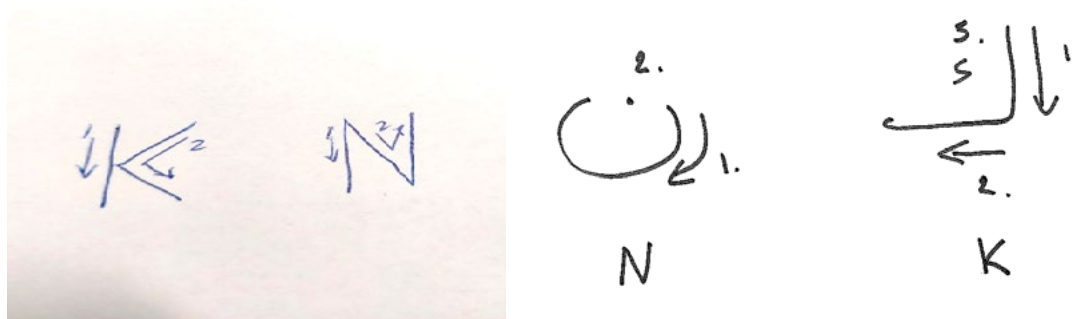

FIGURE 2. The pen strokes for the Swedish <K> and <N> on the left, and for the Arabic <ك> and < ن > on the right

As Figure 2 shows, in Swedish, with Latin letters, the pen strokes start from the left and continue to the right, thus supporting the writing direction from left to right, while in Arabic the writing of each letter starts from the right, thus supporting the writing direction from right to left.

4   Theoretical framework

In this study, New Literacy Studies (NLS) is used to explore literacy education through the literacy practices that appear during the lessons. NLS offers a broad understanding of literacy practices in the classroom through the study of the use of written language that take place. Through NLS, literacy and literacy education may be investigated as socially, culturally and historically situated practices in people's lives (Barton, 2007; Barton & Hamilton, 1998; Street, 1995, 2003). This means that NLS has its base in Vygotsky's (2001) view of learning as something that takes place in the negotiation of meaning and in interaction with more knowledgeable persons, such as teachers.

Representatives of NLS claim an *ideological* model of literacy (Street, 1984), which means that the focus is on how literacy is used in various ways in situated practice. This model is in opposition to an *autonomous* model, where literacy is understood as consisting of separate skills. The ideological model is in accordance with a holistic teaching approach, while the autonomous model is related to teaching commonly called phonics, in which students are first taught single letters and syllables, which then are used to construct words and sentences.

Central concepts in NLS are *literacy practices* and *literacy events*. While literacy events, according to Heath (1982, p. 93), refer to "any occasion in which a piece of writing is integral to the nature of the participant's interactions and their interpretative processes" and "any action sequence, involving one or more persons, in which the production and/or comprehension of print plays a role", literacy practices refer to attitudes, habits and usage of literacy. Street defines literacy practices as "both behaviour and the social and cultural conceptualisations that give meaning to the uses of reading and/or writing" (Street, 1995, p. 2), which he later elaborated to refer to "the broader, cultural conception of particular ways of thinking about and doing reading and writing in cultural contexts" (2003, p. 1524).

This means that while literacy events are directly observable activities that involve written text, literacy practices, as an abstract concept, represent how people understand

and make sense of literacy. Following Street's view of literacy practices (2003, p. 1524), we will conceptualise literacy practices here by identifying literacy events in the classroom. By examining literacy practices in this classroom, a broad understanding of the usage of literacy is created, and thus of how these situated practices are socially, culturally and historically linked to the participants' lives. As the study focusses on emergent literacy in Arabic in a Swedish dominant setting, the presenting of letters (RQ 2) is a specific interest.

5   Methodology and material

To investigate literacy practices in Mother Tongue Arabic at Adapted Upper Secondary School in Sweden an ethnographic methodological approach is used (Street, 1984, 1995). Materials from classroom observations are used together with notes from informal talk with the teacher. A group of four students and one teacher was observed over eight lessons, 6.5 hours of observation in total. Materials consist of field notes and audio recordings (three hours and 20 minutes). The teacher had studied Arabic at university level both in the home country and in Sweden and had a Mother Tongue Teacher License. The informal talk is mainly used for information about students' earlier studies. The students were aged 17-18 and came to Sweden from the Middle East at the ages of 8-10. According to the teacher, all had participated in some form of education in Arabic in their home country, either private home instruction or in another form. Arabic was the dominant language in all students' homes. All four had thus spent 6-8 years at Swedish Special Needs School before entering Upper Secondary School. They had all received Mother Tongue Instruction in Arabic through these years and the teacher in case had been the same. Each session consisted of two lessons, so the students had 100-110 minutes of Mother Tongue Instruction in Arabic each week. Both authors observed the teaching but observations that are used for this study were made by the first author, and the transcription of audio recordings by the second author. Both authors participated in the analysis. The second author is an experienced Arabist while the first author has some knowledge in Arabic.

   In a first step, all material and transcripts were read through to identify any literacy events. These were then grouped to find important activities. In a second step, letter presentation was analysed in each event. The various types of events and the patterns of language use were then used to conceptualise the literacy practices that appeared.

   Ethical aspects were considered throughout the research process, and the research has been approved by the Swedish Ethical Review Authority (Dnr 2023-00039-01). Participants were fully informed about the nature of the study and gave their written consent. The teacher and both students and their care givers were informed, and the teacher and the care givers gave their consent. We abstained from videorecording and taking photographs for ethical reasons, as we judged this to be too much of a breach of students' integrity. We refrained from interviewing students following the caregivers' expressed wish. Illustrations of the writing produced in the classroom therefore comprise our own reconstruction of what was done in class. The interview material collected has been stored in ways that prevent unauthorised access, following the Dalarna University Data Security Plan, and material is presented in ways that prevent recognition. Thus, individuals are not given names and are presented without mentioning gender. For the same reason few details about the teacher and the students are given. As the number of teachers and students in Mother Tongue Arabic is restricted, the protection of their identity has been a priority.

6   Findings

The findings will start with a short presentation of the context of the MTI teaching. Then the presentation will follow the research questions.

Mother Tongue Instruction in Arabic in this case consisted of two lessons with a break in between, one day each week. The students came from other lessons, and during the first part of the lesson the teacher made sure all were present. Sometimes the teacher or one of the students had to go and find someone who was missing. In the lessons observed, the first 5-10 minutes were spent assembling the group. Literacy teaching dominated during the lessons observed. There was a focus on one or two letters in each lesson, and the teacher started by asking about the letter from the last session and handing out an exercise, which the teacher sometimes called an "imtiḥān" (test). The exercise consisted of a handout with a few words, including the specific letter represented in writing and in pictures. Students were required to write these words on the lines next to the pictures. When the students had finished that exercise, another letter was introduced through a YouTube video and then on the whiteboard. Finally, the students did some exercises in their textbook on the letter that had been introduced. Three of the students had a textbook for grade one, book 2 in a series, and one had a textbook for grade two.

6.1 Identified literacy events

After analysing the material from the observations, literacy events were identified and grouped in order to identify important patterns. Six types of literacy events were identified: 1) presentation of one letter, 2) reading and writing on the whiteboard, 3) explanation of a word, 4) disassembling words into letters, and vice versa, 5) student writing on the whiteboard and 6) work in the textbook or a handout. The types of events are not exclusive, but interwoven into each other, and the grouping makes the types of activities that were central during the lessons more visible. We start by presenting the first type of event, letter presentation, and continue with the others one after the other.

One letter was presented in each session. This was done through a movie clip from YouTube[1] projected onto the smartboard. The film was a cartoon, with a simple story presenting the letter and a few words using that letter. Each episode was between six and eight minutes long. The framework story is that 28 letters live together in happiness, and one day an evil witch comes to take the letters, to stop children from learning. She throws away the letters and then Banadora (a small tomato) has to find them all again and send them back to their own world.

The clips are in alphabetical order. In each episode the letter in question has to find five words that starts with itself, so "alif" finds "asad" (lion), "arnab" (rabbit), "anānās" (pineapple), "arḍ" (the earth) and "Aḥmad" (a boy's name). This means that the other letters are implicitly assumed to be known to the students. In the film, the words are spelled out and only the free-standing version of the letter is presented in the clip, even in the cases where the shape changes when they are assembled to form a word. In the words, however, the letter is written in its assembled forms. Each clip thus includes not only the single letter, including the pen strokes to write the free-standing version of the letter, but also assembled forms and the reading of words including other letters.

After they had watched the film, the teacher asked a few questions about the content; the specific letter and the words included. After the film about و ("waw"), the teacher asked: "Kīf binktb ḥarf l-waw? Kīf binktb? Shlūn? (…) ʿAml bl-hawwa dāʾira wa bnzil la-taḥt" (How is waw written? How is it written? How? (…) Make a circle in the air and then move downwards). Then the teacher continued to ask about the words as in Example 1 (T stands for teacher and S for student):

Example 1

T: S1 aṭīnī kilmtayn kānū bil-fīlm wa fīha ḥarf l-waw	T: S1 give me two words from the film which include the letter waw
S1: Wādī	S1: Valley
T: Ṣaḥḥ, kilme tāniye	T: Correct, another word
S1: Ward	S1: Rose
T: Ward, fīha ḥarf l-waw	T: Rose, it has the letter waw

In this way, the teacher talked about the words from the film, and when students did not remember some of the words, the teacher repeated them and explained their meaning.

After that, the teacher wrote the letter on the whiteboard and showed how it was connected to other letters, before quoting a few words with the letter, some from the film and a few others. The words were always nouns, such as "ward" (flower), "bālūn" (balloon), "arnab" (rabbit), "walad" (boy), "ummī" (my mother), "bābā" (father), "zaytūn" (olive) and "enab" (grape). This was all done on the whiteboard, and the teacher tried to make the students read some of the words from the board, but usually the teacher had to read first before the students could repeat them, as in Example 2, where the teacher wants the students to choose a word from the exercise and read it (**bold** marks words said in Swedish).

Example 2

1	T: S1 hala ra t'ra lī kilme, ikhtar	T: S1 now you will read a word for me, choose a
2	kilme wa i'ra lī iyyaha S1 (…) fī 'andkun hdūl	word and read it to me S1 (…) you have these
3	l-kalimāt biddi kull wāḥid ykhtār kilme waḥde wa	words and I want each one to choose one word and
4	yqra'ha. Yalla S1 ikhtar kilme	read it. Come on S1 choose a word.
5	S1: Kilme waḥde	S1: One word
6	T: Kilme waḥde	T: One word
7	S: **Det här** [points to bāb]	S1: **This** [points to bāb]
8	T: Yalla	T: Ok
9	S1: …	S1: …
10	T: Inta ikhtart hayy, i'ra lī-yaha, yalla	T: You chose this, read it for me, ok
11	S1: ...	S1: ...
12	T: Shūfha 'andak	T: Look at it
13	S1: ...	S1: ...
14	S1: D	S1: D
15	T: Mā fī dāl (…) t'arifha ya S1	T: There is no daal (…) S1 you know this word
16	S4: Bil-bīt	S4: At home
17	T: S1 t'arifha lil-kilme, yalla i'ra'ha	T: S1 you know this word, read it S1! What is the
18	S1! Awwal ḥarf shū?	first letter?
19	S1: Dāl	S1: Dal
20	: Awwal ḥarf mū dāl, awwal ḥarf shū? Aktub-	T: The first letter is not daal. which is it? Should I
21	lak eyyah 'a lūḥh?	write it for you on the board?
22	S1: Mm	S1: Mm
23	S4: Sahl	S4: Easy
24	T: Shūfū S1, hadhā l-ḥarf shū? Huwwa hīk bkūn	T: Look S1, what letter is it? It looks like this

25 S1: Bā	S1: Ba
26 T: Wa iza wasalt fī l-alif?	T: And if you add an alif?
27 S1: Bāb	S1: Bab (door)
28 T: Ṣaḥḥ, mā fī dāl shuft,	T: Right, there is no dal you see

As Example 2 shows, students often had difficulties in reading the words and the teacher guided them by identifying each letter, showing it and repeating it. The teacher also asked the students about the meaning of some of the words and, when they did not remember, used a Swedish translation, as in Example 3.

Example 3

| T: Iza biddak t'ūl **'spela fotboll'** bil- 'arabī, shū bt'ūl? | T: If you want to say **'play football'** in Arabic, what do you say? |
| S2: L'abt, l'abt bil-ṭābe | S2: I played, I played football |

When a word was unknown to the students in both Arabic and Swedish, the teacher referred to the pictures. Neither the teacher's writing, the film, the textbook nor the handouts were vocalised, as they usually are in the teaching of emergent literacy. When the teacher wrote a word on the whiteboard and asked students to read it, usually none of them could recognise it, and then the teacher disassembled the word into separate letters, still without marking short vowels, and sometimes wrote their Swedish equivalents in block letters below. Sometimes the teacher worked the other way around, starting with the letter in question, adding two or three letters, connecting them, and asking the students to read. When they could not, the teacher repeated the letters and wrote their Swedish equivalents below, always in block letters.

In the explanation about which letters connect, the teacher sometimes said that a letter " 'andha īd " (has hands) as in Example 4.

Example 4

| T: Hāda illu khaṭṭ, min hūn, mitl īd, la hatta nūṣlū bil-aḥruf, mitl mathalan 'andna N, | T: This one has a line, from here, like a hand, so that we can connect it with letters, for example we have N, then we have a line here. Why is there a line? |
| b 'adayn fī 'andna hūn khaṭṭ. Līsh l-khaṭṭ mawjūd? La hatta ūṣil hayy, mitl ka'annu īdayn, wa tashābaku m'a b'aḍ, y 'anī, hayy l-N 'andha īd. | So that we can connect this, it's as if they were hands, intertwining with each other, I mean, this N has a hand. |

Another metaphor was that the teacher called one form of the letter ـﻪ (H) "**mamma med bebis i magen**" (mother with a baby in her tummy), an expression she said in Swedish. Example 5 shows an occasion when the teacher first had written a whole word "alwān" (colours), asked students to read it and then disassembled it (the sign (…) stands for a longer pause).

Example 5

1	T: Raḥ aktublak iyyah wa ba 'dayn	T: I will write it for you and then we will
2	mnfaṣṣlha writes the word alwān and writes	disassemble it [writes the word alwān and writes
3	the Swedish equivalents below] hād	the Swedish equivalents below] this one we said
4	ilna alif	was alif
5	S2: **Ja**	S2: **Yes**
6	T: Wa hadāa l-tānī?	T: And this, the second?
7	SX: Lām	S: Lām
8	T: Wa hadhā l-tālit ?	T: And this, the third?
9	SX: Ra	S: Ra [letter name]
10	T: La, hadhā mū ra, S1, t'arif shū	T: No, this is not ra, S1, do you know what it's
11	ismu? S4?	called? S4?
12	S4: N?	S4: N?
13	L: La, hadhā mū N hadhā O (…) wa hadhā,	T: No, it's not N it's O (…) and this, it's alif in
14	hadhā alif b-nuṣṣ l -kilme (…) wa hadhā, shū	the middle of a word (…) and this, what is this
15	ismu l-ḥarf?	letter called?
16	S2: Nūn	S: Nūn (letter name)
17	T: Nūn shū ṣār l-kilme, S2? Yalla S2	T: Nun what word did it become S2? Ok S2?
18	S2: Eeeh	S2: Eeeh
19	T: Shū ilna ismo hād?	T: What did we say that this is called?
20	S2: Al	S2: Al
21	T: S1 ta'rif t'ra? Katabthun bil-swīdī	T: S1 can you read? I wrote them in Swedish
22	S1: Alwān	S1: Colours
23	T: Alwān	T: Colours

Here the teacher disassembles the word "alwān" into single letters, connects each letter in the word with its single form, and then writes the Swedish equivalents below (Figure 3). She takes one letter at a time and finally one of the students, S1, manages to read out the word.
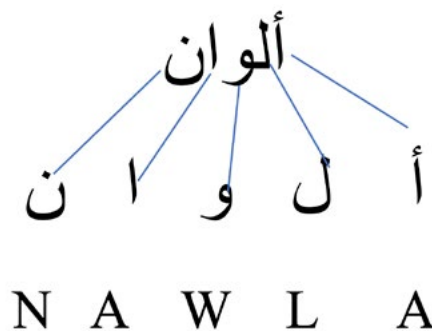

FIGURE 3. How the word ألوان was divided into the different letters and compared to Latin letters by the teacher.

In this way, the teacher guided students between letters and words, and had students read or repeat then. It was apparent that students had difficulties in recognising individual letters when they were assembled to create words and changed form due to the assembling process, and the teacher kept supporting the students by disassembling and assembling the letters and transliterating with Latin letters.

Reading was evidently difficult for the students. Only one student recognised most letters and could sometimes read short words and sentences, while the other three kept forgetting the letters and were usually lost when letters were joined together. Sometimes the direction of writing also caused some confusion. When the teacher broke words down in letters and transliterated them, the Swedish letters also had to be read from right to left, to follow the word, as can be seen in Figure 3 above. The complexity of this process can be exemplified by a few occasions when the teacher wrote a Swedish block letter in mirrored form. Also, two of the students sometimes started writing from the left. This shows that the direction of writing was an issue for both students and teacher.

Now and then, in the work on the whiteboard, the teacher asked one of the students to come up to the whiteboard and write a letter or a word. Students were not very keen on doing that, and frequently the student in question hesitated and then wrote something that the teacher corrected or showed how to do by writing the letter or word for the student to copy (Example 6).

Example 6

T: Shuft S1? Shū t'dr tktub kilme fīha ḥarf l-alif? S1: Bābā T: 'ūm uktubha (…) min l-yamīn, la, min l- yamīn	L: Do you see S1? What word including the letter alif can you write? S1: Daddy T: Get up and write it (…) from the right, no, from the right

In Example 6, student S1 goes up to the whiteboard to write the word but tries to start from the left-hand side of the board and is corrected by the teacher, both orally and by showing the student where to start by pointing.

Work on the whiteboard was followed by work in a handout or the textbook. Only one of the students could do most of the exercises, and this student was the one who had a textbook for grade two. This was the student who could also read some short sentences when asked by the teacher to read from her exercise book. The others needed support continuously, such as in Example 7, when the students are doing exercises on the letter "alif."

Example 7

T: Shāi'fīn hayy l-ṣafḥa l-tāniye? Kullha ashkāl ḥarf l-alif, alif fī hamze, alif mawṣūle, alif l-hamze taḥt, wa l-madde wa l-alif illi b-nuṣṣ l-kilme, fī 'andkun kalimāt, S4, biddik thuṭṭī dā'ira ḥawl l-kilme illi fīha alif, hayy aw hayy aw hayy aw hayy, ok S4? S4: **Ja** T: Yalla	T: Are you seeing this other page? It is all forms of the letter alif, alif with a hamza, a connected alif, alif with a hamza below, with a madda and alif in the middle of a word, and you have words, S4, you want to put circles around all words that have an alif, this or this or this or this, ok S4? S4: **Ja** T: Ok, start

Here the teacher starts to guide all students in their work on "alif" in the exercise book and then turns to S4 specifically. While the students were working on their exercises, the teacher thus alternated between helping individual students at their desks and going up to the board to explain to the whole group.

To summarise, the students worked in a concentrated way and paid attention during the teacher's presentations. As long as the work was only about one letter, the students managed to solve their tasks, but only one of them sometimes managed to read and write combinations of letters. Through this work, all the students managed to do their

exercises, but as they easily forgot, the teacher needed to give them support throughout the course of the work. This was also something that the teacher commented on to the researcher, informally, in connection with the teaching: "They keep forgetting all the time. I always need to repeat over and over again."

The literacy events were focused on the reading and writing of individual letters and short words. The work was generally decontextualised, i.e., letters and words were treated separately from context, except perhaps for the short video clip, which, however, was not related to the students' own lives.

6.2 The use of letters

During the lessons observed, single letters were introduced through the video clip, followed by the teacher's presentations on the whiteboard. The letter was shown in its free-standing form and then as connected to other letters in short words, where it appeared in its various forms: as an initial in words, inside a word, and as the final letter. In the forms inside a word, its form depends on the preceding letter and the following letter. During the letter teaching process, the teacher mainly used the letters' names, such as "lām" (ل/L) and "mim" (م/m), but in the initial presentations and when students seemed to have forgotten the letters, the teacher also spelled out their respective sound /l/ and /m/.

As mentioned above, the teacher frequently disassembled the words into single letters to support the students' reading. On one occasion, the teacher had written رأس ("ra's," head) on the whiteboard and asked a student to read. The student read the individual letters "ra alif seen," but did not manage to connect them to read the word, so the teacher gave the letter sounds and then the whole word: "ilna R o A o S ra's" (we said R and A and S head). In this case the teacher read out the word, as the students did not manage to do that.

Two letters that have specific functions were presented during the observations, are و ("waw"), and ا ("alif"). Whereas "waw" is a semivowel, "alif" both represents the phoneme /a:/ and is used to carry short vowels and hence take their sound. The form أ represents /ʔa:/ with a glottal stop, إ expresses /ʔi:/ with a glottal stop, أ represents /u:/ with a glottal stop and آ represents an elongated /a:/ sound. Also, ا can carry the short vowel sound /i/.

The letter و ("waw"), as a semivowel, represents sounds similar to the Swedish /u/ and /o/ as well as the consonant phoneme /w/. In order to know if "waw" is pronounced as a vowel or a consonant, one needs to know the preceding short vowel. If it happens to represent short /u/("damma"), the "waw" is used as a vowel sound. If it is one of the other two short vowels, /i/ or /a/, then the letter is pronounced as a consonant, such as in لَوْز "LaWZ" (almond), whereas if its preceded by the corresponding short vowel, it is pronounced as a vowel as in بَلُّون "balūn" (balloon).

One problem when و, "waw", was presented in these observations was that short vowels were not used in the teaching. In the presentation of و, it was presented as a consonant, but then used also as a vowel without explanation.

In the presentation of ا, "alif," the teacher presented four forms, three that she said were pronounced /a:/ أ, which she claimed was always used at the beginning of a word, ا inside and آand the fourthإ , which she claimed is used for /i:/. Then students read the words فأر (mouse) and فأس (axe), where أ, which the teacher earlier had claimed was only used in the beginning of words, is used inside words, and أم (mother), which is a use of "alif" that had not been explained.

This shows that the complex relationship in particular between some of the letters in Arabic script and the pronunciation seems to pose obstacles for both teacher and students, as does the direction of writing on occasions.

6.3 What literacy practices appear?

The literacy practices that appear in this classroom were not related to students' lives outside the classroom and only sparsely connected to meaning. The main literacy practice was to code and decode letters and words. Letters and words were written separated from context, without being connected to meaning beyond the meaning of the individual words themselves, and these were almost exclusively portable nouns. Accordingly, an autonomous model of literacy teaching emerged, and no connections to students' lives outside the mother tongue classroom were observed. This means that literacy was not related to reading meaningful texts or to usage in life, outside the classroom. The only relation to students' lives observed was the exercise papers that students took home as homework.

Students were scaffolded to code and decode individual letters and words by being given examples and repeating. Varied linguistic resources were used through seamless shuttling between reading and writing and Arabic and Swedish. As both students and the teacher used the Levantine dialect, and as talk in the classroom was restricted, no occasions of switches between standard and dialect was observed.

As only one of the students had basic knowledge of most letters, that is, could remember them from one lesson to another and read and write a few short words, it may be suspected that at least three of the four students had little use of their Arabic literacy skills outside of the mother tongue classroom.

7   Discussion

The teaching of emergent literacy in this case represents what Street (1995, 2003) called an autonomous perspective with the exercising of reading and writing letters and single words as separate skills. However, it is apparent that students were focused on their work and that they acquired some basic literacy skills. The teaching built both on students' knowledge of Arabic and Swedish, and both on oral and written language. This was, however, not easy, due to differences both in the phonological and written systems and it is apparent that both the teacher and the students struggle. We conclude that there are several obstacles in the teaching of literacy in MTI when different written systems are used in Swedish and the language in question.

In this case, the one-sided focus on literacy skills means that students do not get the support they need to develop their speaking skills in Arabic. As these students only had very limited literacy skills at the age of 17-18, they are not likely to be able to make much use of Arabic literacy in their lives outside of school. In society, they will most likely encounter Swedish literacy, and in their homes oral skills may be more relevant. They are all close to finishing school, and one may assume that spoken Arabic may be more relevant than written for their continuing lives.

Teaching that represents an ideological approach (Street, 1995, 2003) could have linked the content more to students' own experiences. If connections had been made between the literacy education and the students' lives, both in the rest of their school time and in their everyday lives, this could have made the literacy teaching more useful and easier for students to relate to meaning. Students may come into contact with Arabic literacy in their homes, perhaps through music, film, religious texts, journals or books, which may be used as resources in the teaching. As the students' literacy level was at a very basic level, the writing of their own names, for example, could have been relevant, perhaps in combination with the names of their family members and classmates. Also, the use of devices such as keyboards and mobile phones, which students meet outside the classroom, could have been resources in the teaching.

However, to enable more consistent and clear explanations that would simplify learning among students, the teacher would have needed more specific knowledge

of principles for Arabic script and relations between single letters and pronunciation. Such education is something that may be included in teacher education for primary school teachers but is not a requirement for MTI teachers of Arabic in Sweden. As these teachers are required to teach all levels, including preschool and upper secondary school, an individual teacher may not be expected to have the particular knowledge that is important for each age group. In this case, in the teaching of students with intellectual disabilities, it is further stressed that an individual MTI teacher may not possibly have all the knowledge that would be required for literacy teaching that is adapted to the students' specific needs.

Furthermore, to focus on oral proficiency instead of literacy would also have required another type of education than may be expected for an MTI teacher. There is a specific course syllabus for MTI at adapted secondary school, and literacy skills are specifically one of the objectives (The Swedish National Agency for Education, 2023). At Adapted Secondary School, there are professionals such as special needs teachers and educators, as well as specialists in speech therapy and neuropsychology. In this case, collaboration between the MTI teacher and other professionals could make the teaching more relevant. As shown by Pesco et al. (2016) and Cummins (2017), to enable additive language development, where students not only develop their second language (Swedish), but also their mother tongue (Arabic), students with intellectual disabilities need education that is suited for their capabilities and future needs. In this case, students should also have access to teachers in Swedish in a second language, and together with such a teacher, the mother tongue teacher could have developed teaching that would be more relevant.

We conclude that for MTI in the adapted secondary school, as in other education, collaboration between mother tongue teachers and other school staff may strengthen the outcome. In this case, collaboration between the mother tongue teacher and teachers in Swedish as a second language, special needs teachers, and other specialists who are involved in the teaching of these students could have developed forms of teaching that would create better opportunities for literacy development in both Swedish and Arabic.

Disclosure statement

The research used in this project is stored safely and may for ethical reasons not be disclosed.

Endnote

1. https://www.youtube.com/watch?v=6_rQtmworcw

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