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Title: The meanings of differentiated instruction in the narratives of Eritrean teachers

Year: 2021

Version: Published version

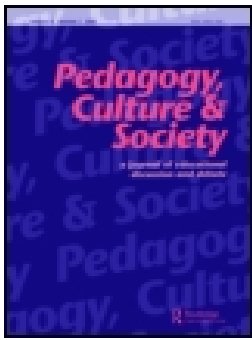
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Please cite the original version:

Zerai, D., Eskelä-Haapanen, S., Posti-Ahokas, H., & Vehkakoski, T. (2021). The meanings of differentiated instruction in the narratives of Eritrean teachers. *Pedagogy, Culture and Society*, Early online, 1-19. <https://doi.org/10.1080/14681366.2021.1914712>



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To cite this article: Desalegn Zerai, Sirpa Eskelä-Haapanen, Hanna Posti-Ahokas & Tanja Vehkakoski (2021): The meanings of differentiated instruction in the narratives of Eritrean teachers, *Pedagogy, Culture & Society*, DOI: [10.1080/14681366.2021.1914712](https://doi.org/10.1080/14681366.2021.1914712)

To link to this article: <https://doi.org/10.1080/14681366.2021.1914712>



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Published online: 14 Apr 2021.



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The meanings of differentiated instruction in the narratives of Eritrean teachers

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ABSTRACT

The principles of inclusive education largely accepted by governments of different countries require differentiated classroom instruction to meet the diverse needs of individual students. Despite this, teachers have differing experiences and understandings about implementing differentiated instruction (DI) and heterogeneous classrooms. This narrative study aimed at exploring the meanings of DI in the Eritrean context, where teachers are not explicitly familiar with the concept, although their teaching practices reflect some level of differentiation. The research data consisted of 17 narrative interviews with Eritrean mathematics and science teachers. The results of the narrative analysis showed that the teachers constructed five meanings of DI in their narratives: as a caring orientation, as a flexible pedagogic approach, as a self-reflective process, as a failed attempt and as a demanding approach. The majority of the narratives were found to produce positive meanings of DI, and the teachers constructed strong agency towards carrying out DI. These examples of sophisticated DI practices in the teachers' positive narratives could be utilised to implement DI, even in situations where teachers have limited resources and training and in contexts with large class sizes.

KEYWORDS

Differentiated instruction; individualisation; inclusive education; teacher; narrative analysis; Eritrea

Introduction

Differentiated instruction (DI) is pivotal in advancing inclusive education (Tomlinson 2014; Westwood 2018). It has been found to improve students' learning results (Nurmi et al. 2012) and strengthen their engagement in schooling (Little, McCoach, and Reis 2014). Although inclusive education is understood as a process of transforming schools to serve all children (Cambridge-Johnson, Hunter-Johnson, and Newton 2014; Hanafin, Shevlin, and Flynn 2002), many teachers have poor attitudes towards including students with special needs in mainstream classrooms (Geldenhuys and Wevers 2013; Šuc et al. 2016). One reason for this is teachers' confusion about how to manage inclusive classrooms in practice (Newton, Carbridg, and Hunter-Johnson 2014). Conversely, teachers' strong self-

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efficacy in differentiating their instruction is related to their positive attitudes towards inclusive education (Dixon et al. 2014; Malinen et al. 2013; Saloviita 2018).

This study focuses on the meanings of DI constructed by Eritrean elementary and middle school mathematics and science teachers. Eritrea exemplifies countries where poverty is widespread and human and material resources for education are limited (Rena 2009). Despite this, as a signatory of international conventions advocating inclusive education (UNESCO 1994, 2000), the Government of Eritrea is committed to addressing the diverse needs of all learners regardless of their backgrounds. In this challenging context, common to many countries in the Third World, it is important to listen to Eritrean teachers' accounts of inclusive education and the ways in which they position themselves in relation to the principles of DI. By presenting teachers' insights, the study responds to the need for additional research concerning realisable and efficacious DI practices (see Göransson and Nilholm 2014) to help teachers make educational environments more inclusive. Two research questions were formulated based on the research data: 1) What kinds of narratives do Eritrean mathematics and science teachers tell about DI? 2) How do teachers position themselves and students within these narratives?

Defining DI

The concept of DI is linked to a range of other terms, such as adaptive instruction (e.g. Wang and Lindvall 1984), student-centred approach (e.g. Fox and Hoffman 2011; Tzanni 2018) and personalised learning (e.g. Waxman, Alford, and Brown 2013). Some researchers separate the concepts of DI and individualised instruction, and emphasise that the latter term means adapting learning goals and content to the abilities of individual children with special needs by creating separate individualised education programmes (IEP) for them (Landrum and McDuffie 2010), whereas DI is considered an academically responsive approach that creates opportunities for all children to learn (see Raveaud 2005; Stollman et al. 2019; Tomlinson 2014). Others view these concepts as identical, and some consider differentiation as a narrower concept within individualisation (Kratochvílová and Havel 2013; Landrum and McDuffie 2010). In this study, DI is understood as a general concept, covering teachers' positive understanding of diversity and belief in all students' potential as well as their commitment to certain pedagogical principles, such as community building, flexible curricula, teaching up, varying group practices and ongoing assessment. Instead, differentiation as a sub-concept of DI refers to teachers' concrete proactive responses and the use of a variety of instructional strategies that can also be applied in mainstream classrooms (e.g. Tomlinson 2014).

The theoretical roots of DI are linked to research on individual learning differences and the need for developing innovative teaching methodologies to make schools responsive to students with disabilities (Wang and Lindvall 1984). Subsequently, it has been inspired by a wide range of educational theories, including social constructivist theories, such as Vygotsky's Zone of Proximal Development (ZPD) (Subban 2006), the theory of multiple intelligences (Gardner 1983) and learning style theories (Pritchard 2009). Tomlinson (2014) defined DI as a pedagogical approach in which teachers modify curriculum objectives, content, methods, classroom activities and assessment to respond to the diverse needs of all learners and maximise their learning opportunities (see also Raveaud 2005; Stollman et al. 2019; Tomlinson et al. 2003). Differentiation can be carried

out on three levels: what a student is to learn (content), how the student will learn (process) and how the student is to display what has been learned (product) (Tomlinson et al. 2003).

In sum, successful DI provides a wide range of experiences different from the norm (Fox and Hoffman 2011), deviating from traditional instruction, which leans on the assumption that 'one size fits all' (Fox and Hoffman 2011, 7; Suprayogi, Valcke, and Godwin 2017). DI is not only an instructional technique but also a way of thinking, where teachers view learning from the students' perspectives without categorising them based on their learning readiness (Tomlinson 2014) or giving fewer activities to struggling learners than advanced ones (Tomlinson and McTighe 2006). Therefore, DI is closely related to the ideology of inclusive education, and it can also be considered an expression of educational philosophy and a political statement concerning how classrooms should be organised (Göransson and Nilholm 2014).

Teachers' experiences and understandings of DI

Teachers' understandings of DI vary greatly (Cambridge-Johnson, Hunter-Johnson, and Newton 2014). These different beliefs stem from teachers' values, working conditions, education and/or encounters with different students. Many teachers do not like the idea of including students with disabilities in mainstream classrooms, mainly because they have insufficient knowledge about how to manage inclusive classrooms in practice (Dixon et al. 2014; Geldenhuys and Wevers 2013). Teachers may also be reluctant to carry out DI because they feel uncomfortable with its principles (Rodriguez 2012) and lack familiarity with the best implementation strategies (Cambridge-Johnson, Hunter-Johnson, and Newton 2014; Dixon et al. 2014). Other reasons for negative attitudes include insufficient time for preparation (Rodriguez 2012, 77; Tzanni 2018) or fear of having no assistance from colleagues (Smit and Humpert 2012). Some teachers complain about teaching a large number of students who experience barriers to learning due to learning difficulties or poor home circumstances (Pieterse 2010). Others also believe that differentiation damages the cohesion of the group and leads to 'social inequalities' among students (Raveaud 2005).

Teachers' attitudes towards differentiation also seem to be associated with teacher category (Saloviita 2018; Schwab, Sharma, and Hoffmann 2019), the length and nature of their work experience (Nurmi et al. 2012) and the types of schools in which they work (Siam and Al-Natour 2016). Special education and classroom teachers seem to use differentiation more frequently than subject teachers (Saloviita 2018; see also Schwab, Sharma, and Hoffmann 2019). In addition, teachers in private schools appear more likely to implement DI than teachers in public schools (Siam and Al-Natour 2016). This might be because private school teachers receive more school-based training and resources than public school teachers do (see e.g. Admas 2019; MOE (Ministry of Education, Eritrea) 2016). Regarding work experience, it has been reported that, although novice teachers seem to be reluctant to include students with special needs in their classrooms (Peebles and Mendaglio 2014; Šuc et al. 2016), they are more likely than their experienced colleagues to differentiate their instruction according to their students' performance levels (Nurmi et al. 2012). Peebles and Mendaglio (2014) showed that spending more time on direct instruction with students with special needs and less time on observation and whole-class

instruction is likely to increase teachers' self-efficacy for inclusive teaching. In addition, high-quality teacher education programmes are associated with teachers' implementation of DI (Nazzal 2011; Peebles and Mendaglio 2014) by providing teachers with the practical skills and theoretical knowledge necessary to flexibly modify their instruction.

There is also a concern regarding teachers' varied understandings about differentiation (Thakur 2014). While some understand it as considering each student's individuality in general, others regard differentiation as a special approach that does not have to involve all students (Raveaud 2005; Rytivaara and Vehkakoski 2015). Furthermore, regarding the bases for differentiating instruction, some teachers focus more on their students' readiness and less on their learning profiles (Stollman et al. 2019), whereas others focus more on students' interests and learning profiles (Tzanni 2018). Additionally, previous studies have highlighted the gap between teachers' understanding of differentiation and its actual implementation (Suprayogi, Valcke, and Godwin 2017; Whipple 2012) as well as the gap between individualisation in theory and in practice (Rytivaara and Vehkakoski 2015, 13).

Materials and methods

Study context

The research context of this study is Eritrea, which is situated in the Horn of Africa. The Eritrean education system consists of three tiers: compulsory basic education (elementary school, grades 1–5, and middle school, grades 6–8), secondary education (grades 9–12) and further and higher education (MOE (Ministry of Education, Eritrea) 2011). From age 4 onwards, children can attend preschool for two years before enrolling in elementary school at age 6 or 7. Eritrean teachers with high school plus one year of college education are assigned to elementary schools, those with two years of college education to middle schools and those with four years of college education to high schools. Some elementary school teachers are upgraded to the middle school level through in-service training.

Eritrea can be defined as a unitary one-party state. For decades, Eritrean children have missed out on schooling due to war and conflict, although Eritrea was liberated in 1991. A recent study conducted in the capital city, Asmara, by Yikealo et al. (2017) verified the correlation between pupils' learning outcomes and their families' socioeconomic statuses. Parental lack of awareness of education in rural and geographically remote areas coupled with prevailing social norms place children with disabilities and working children at risk of exclusion. The general level of learning achievement is declining, and paramount literacy and numeracy problems have been observed in elementary schools (Asfaha et al. 2017), with only 25.4% of grade 5 students achieving the minimum mastery level (MOE (Ministry of Education, Eritrea) 2015). Dropout rates in elementary and middle schools reached 6.1% and 7.5%, respectively (MOE (Ministry of Education, Eritrea) 2016).

Eritrean classrooms are typically heterogeneous, and the class sizes are large (average 50 to 70). Inclusive education has been understood in Eritrea as the integration of children with physical and sensory disabilities into regular school programmes. Children with intellectual disabilities were denied access to education until 2004, when Eritrea started offering special classes inside some regular elementary schools (Asefaw 2016). Two- to three-time repeaters in school are considered children with learning difficulties and are

encouraged to attend special classes within regular schools, from which they can progress to regular classrooms, depending on their performance (Asefaw 2016). However, special education teachers in mainstream schools are not involved in regular classroom teaching. In addition, Eritrea has a relatively large number of unqualified teachers in regular schools, and many teachers lack the pedagogical competence to meet students' diverse needs (see Idris, Asfaha, and Ibrahim 2017). Therefore, the policy emphasis on implementing learner-centred pedagogy at all levels of the education system remains distant in relation to classroom practices (Idris, Asfaha, and Ibrahim 2017; MOE (Ministry of Education, Eritrea) 2011; Posti-Ahokas, Meriläinen, and Westman 2018). Although Eritrean teachers have been found to have positive attitudes towards inclusive education (Habtom, Franciscah, and Mazrui 2019), a conceptual focus on inclusion in school practices and challenges in implementing differentiation in practice is still lacking (Asefaw 2016; Habtom, Franciscah, and Mazrui 2019).

Data and participants

In this qualitative study, a total of 18 Eritrean elementary and middle school mathematics and science teachers were interviewed. For these two subjects in the Eritrean context, teachers typically apply diverse teaching methods and provide various activities to engage students; meanwhile, in some other subjects, such as social studies and citizenship, instruction is generally more teacher-led. The teachers came from six schools in two cities. Schools were selected purposively, after discussions with officials from the Ministry of Education, with the aim of obtaining rich data from diverse backgrounds and school types. Criteria for selection was their ethnic, cultural, religious and socioeconomic diversity, and the school sizes in the two cities. Four schools were public while two were private. The participants taught grades 4 to 7, and their teaching experience varied from 3 to 39 years ($M = 17.6$ years). Nine of the participants were males and nine were females. All participants had one to four years of college education. Nine teachers reported that they had attended several in-service training courses on teaching students with diverse needs, while the remaining nine had not participated in any such training (see Table 1).

The first author contacted the directors of the respective schools with official letters from the college and the Ministry of Education. He discussed with the school principals to identify teachers who were effective in their teaching and seemed to care for their students. However, some teachers were also selected because they were the only qualified teachers in those schools due to staff shortages. The interviewer (first author) discussed the purpose of the study with each candidate and how they would be interviewed. Participants were given information about the study and their rights in both the Eritrean national language, Tigrigna, and in English prior to providing their written informed consent.

Sixteen teachers' interviews were carried out from January to March 2019. Before this, a pilot was conducted, which involved joint interviews with two teachers. The pilot was included in the data analysed for the present study. The interview durations ranged from 8 to 45 minutes, and they were carried out at the schools. The interviewing language was Tigrigna. One of the teachers was interviewed twice, first in Amharic (it was thought she would feel comfortable being interviewed in her first language) and then in Tigrigna (to maintain consistency between all the interviews).

Table 1. Backgrounds of the participating teachers.

Pseudonym	Gender	School type	Teaching experience in years	Educational background*	In-service training	Subject specialisation
Abraham	M	Public	27	Diploma	None	Math
Alem	F	Public	39	Certificate	None	Science
Amare	M	Public	24	Diploma	Limited	Math
Barnabas	M	Public	5	Certificate	None	Science
Berhe	M	Private	12	Diploma (12+3)	Frequent	Math
Biniam	M	Private	25	Degree	Limited	Science
Hana	F	Public	7	Diploma	None	Math
Helen	F	Public	24	Certificate	Intensive	Math
Kebron	M	Public	22	Certificate	None	Math
Mehari	M	Public	27	Diploma	None	Math
Melat	F	Public	4	Certificate	Limited	Math
Mohammed	M	Private	3	Certificate	Frequent	Science
Natnael	M	Private	23	Certificate	Limited	Math
Saba	F	Public	27	Diploma	None	Science
Selam	F	Private	12	Certificate	Frequent	Science
Tigisti	F	Private	13	Certificate	Frequent	Science
Tsega	F	Public	17	Certificate	None	Math
Zebib	F	Private	6	Degree	None	Math

*Certificate = 1 year of college education; Diploma = 2–3 years of college education; Degree = 4 years of college education.

The interviews were narrative with the aim of inviting participants to give meanings to their experiences through narration (see Hollway and Jefferson 2008). In accordance with the principles of narrative interviewing, the interviews consisted of only a few general questions to encourage the participants to produce high-quality stories as spontaneously as possible without the researcher leading their narration. The definition of DI (Tomlinson 2014) and its two main dimensions – teachers' understanding of student diversity and pedagogy in heterogeneous classrooms – determined the choice of interview questions. In addition, since an equivalent term for DI does not exist in Tigrigna, the first author tried to use understandable and ordinary words in the interviews to convey the concept, and described it to the teachers using several related and synonymous terms referring to diversity, adaptation and addressing individual needs. Therefore, the interviews consisted of the following four broad questions: 1. How would you describe students' diversity in your classroom? 2. How do you teach individually? 3. What does responding to diverse learners mean to you? Or How do you feel about it? 4. Would you please describe successful and unsuccessful stories about trying to modify or adapt your instruction? The first question was an easy warm-up question, whereas the purpose of the third question was to prompt the teachers to discuss their values and beliefs. The second and fourth questions directed the teachers to freely elaborate how they implement DI in practice. The specific aim of the fourth question was to locate the teachers' narration in their memory of their real-life teaching experiences.

The interviews were transcribed and translated into English by two senior experts from the fields of special education and applied linguistics. The translated data were verified against the transcribed Tigrigna version by the first author and the expert from applied linguistics. The total English interview data comprised 142 pages (Times New Roman, point size 12, line spacing 1.5).

Analysis

Narrative analysis was employed in the analysis of the interview data. As is common to the qualitative research approaches developed after the linguistic turn, the main idea of narrative theory is that through storytelling, people not only retrospectively describe their life events, but they categorise, reconstruct and give meaning to them. Therefore, the narrative analysis seeks to understand what participants do with the narratives and how they organise their experiences and make sense of them through storytelling (Esin 2011; Herman 2009). Our own way of doing narrative analysis has been mainly influenced by the functional analysis of narrative, which focuses on the representational functions that the narratives could serve (Gimenez 2009).

The analysis began with a careful reading of the transcribed interview data. During this phase, we noticed that teachers provided several concrete examples of how they carry out DI in practice, and describing these real-life teaching experiences seemed to be a relevant way for the participants to offer their own meanings to DI without being forced to provide socially desirable textbook definitions. Therefore, we decided to focus on these small stories about ongoing or past events and everyday occurrences, which are typical and not necessarily particularly special (Bamberg and Georgakopoulou 2008). The criteria for identifying the stories for analysis were as follows: 1) teachers gave authentic examples of the events where they encountered one or more students (characters) and tried to support them through differentiation (actions), and 2) the stories were situated in a specific time expressed through such temporal words as 'last year' or 'one day' (temporal). The authenticity of the stories meant that teachers' general descriptions of how 'I usually act' were omitted from the analysis, which only focused on the concrete descriptions of the individual events described through the use of specific qualifiers, such as students' names, places or other details or through paraphrasing their interaction with a particular student. After deciding collaboratively on these criteria, the first author identified 52 small stories from the data. All but one of the teachers produced small stories in the interviews.

After identifying the small stories, the authors began to group them into different narrative types based on the similarities and differences between their contents, form and the positions of the teachers and their students in the stories (see Table 2). The contents of the small stories referred to the events and experiences described by the teachers, whereas the form of the stories denoted the ways in which the teachers organised them as a certain storyline, e.g. narrative reversals and plotting experiences as positive or negative (see e.g. Sandelowski 1991). In addition, the discursive positions were key to understanding how teachers locate themselves and their students in the stories and create certain images by assigning different roles, characteristics, rights or duties to them (Davies and Harré 2001; Esin 2011). Based on these three dimensions, we identified five different narrative types as presented in the next section. Although some narrative types were more marginal in the data than others, we wanted to describe all variations present in the small stories; thus, no narrative type was omitted from the results.

Results

The findings are presented through five different narrative types, representing teachers' different ways of constructing meanings of DI: 1) as a caring orientation, 2) as a flexible

Table 2. Teachers’ different ways of constructing meanings of DI.

Narrative type	Positive narratives			Negative narratives		
	DI as a caring orientation	DI as a flexible pedagogical approach	DI as a self-reflective process	DI as a failed attempt	DI as a demanding approach	
Main content	Stressing one’s commitment to creating warm relationships with students and providing them with emotional and extra instructional support	Reporting differentiating content, language, method and assessment	Emphasising the need to change one’s teaching style	Describing pedagogically infeasible cases	Blaming lack of knowledge and skills for failures	
Form of the story	Change story	Story about opportunity	Growth story	Tragedy story	Stagnation story	
Positioning themselves as teachers	Attentive and understanding caregivers	Flexible and innovative experts	Reflective learners	Responsible teachers with limited possibilities to influence	Unsuccessful teachers with scarce resources	
Positioning students	Respected human beings	Diverse learners	Facilitators of teachers’ learning to teach	Students with severe challenges	Victims of weak instruction	
Number of stories	23	14	3	9	2	
Percentage of small stories	45%	27%	6%	18%	4%	

pedagogical approach, 3) as a self-reflective process, 4) as a failed attempt and 5) as a demanding approach (see Table 1). The first three narrative types represent stories where implementing DI led to positive consequences, while the latter two create a negative image of the possibilities of DI. Pseudonyms are used for both the teachers and students in the extracts.

DI as a caring orientation

The first narrative type is composed of stories where DI is constructed as a caring orientation. In this narrative, the teachers position themselves as attentive and understanding caregivers, like parents, who build a strong reciprocal relationship with their students. The context of these emotionally laden stories is the children's challenging home circumstances: 'the child is not clean and is very fearful'; 'he could not fit in with our students because he was a street child' and 'his father was martyred'. The plot progression of these stories resembles change stories, starting with a teacher who recognises a child's poor circumstances as reflected in schooling. Finally, the teachers describe how they perceive positive changes in students' lives and schooling as a result of creating a trusting relationship with children through verbal encouragement, expressions of affection and physical intimacy: 'after studying his "background" and the like, I decided that I had to make him my friend'. Abraham gives a detailed small story of one student:

At one time, a student (Meron) in grade 7 failed, failed twice. But his parents begged me. [...] They asked even during summertime for one hour a week or something like that. Finally, I agreed and started helping the child. [...] Now, Meron unexpectedly developed personal interest, developed 'interest' towards me. When I approached to help him, he would be prepared and waiting for me. He received me with affection, whether he understood the lesson or not. [...] then he told me the secret story I told you before. He told me: 'I observed you one day doing such and such. I saw you pick up that girl who had fallen [down, tripped]. I understood then that you do care very much about us. Now, you know there will be no one except you who can understand me.' That way he understood; things were made clearer. At that moment, what was the student passing through? You ask the student three times three and he says 'six', but then he begins to ask, 'teacher, how are these stars able to stand (not fall) in the sky?' Now, you can imagine, this student has a 'capacity' even though that was not opened up or developed, and this will be revealed to him with time. He was able to study the stars, but not 'three times three' nor did he know. (Abraham, Diploma, 27 years of experience)

As shown in this extract, the caring orientation appears in both the intensity and quality of the caring. The teacher transcends distant professionalism by providing extra instructional support to one of his students, Meron, during his leisure time, e.g. 'even during summertime for one hour a week', and helping the girl who had tripped and fallen over. In addition, he emphasises the quality of the caring by discussing the emotional attachment of his student: 'he developed personal interest towards me'.

What is striking about this narrative type is that it does not emphasise the academic benefits of DI; instead, the students are primarily positioned as human beings who deserve recognition despite their learning outcomes. For instance, Meron is said to be attached to his teacher whether 'he understood the lesson or not'. At the end of the story, Meron's weak mathematics knowledge is counterpointed by his ability to ask creative questions about the stars. This impacts the teacher: 'Now, you can imagine, this student has a capacity' (although it does not show in the formal lessons). Thus, in this narrative

type, students' individual needs are not only academic but also extensive and complex, demanding the teachers' wide-ranging personal investment in the students. The relationships also arouse deep fulfilment in the teachers regarding their work: 'when I observed the big changes in them and the experience I shared with them, I can never forget for the rest of my life'.

DI as a flexible pedagogical approach

In the second narrative type, teachers describe how they have tailored their instruction to students' individual needs. Compared to the previous narrative type, these stories are short and focus mainly on students' academic challenges. Hopeful future prospects for students are created by the teachers' descriptions of the timely and high-quality support they provided. The repertoire of various instructional methods mentioned by the teachers is large, including organising the physical learning environment, e.g. 'giving children with eye problems the front seats', modifying direct teaching, e.g. 'I give them the questions at their level', utilising peer learning, e.g. 'I start with a smart student, who does the question and explains the process to the other students, so that it becomes an example', and code switching, e.g. 'I had to at least mix in some Tigrigna, then only after this, did the children start to understand the words'. Recognising students' opportunities is said to be positively reflected in students' current learning outcomes or in their later academic success.

Last year, a child in section 4-D (Daniel) was not able to recognise the alphabet. Therefore, I always asked the child letter recognition questions. [...] He was not able to score good marks in the two tests, amounting to 10 marks each in the quarter tests. But honestly, he scored 32 out of 40 in the final exams. When I observed such a difference, I was very happy. [...] I was improvising; thus, how I could help the child by myself. As I told you before, I just prepared a workbook for him by myself. I made him work in class on the blackboard always; I gave him the priority to answer classroom questions. [...] There were others as well in other classrooms. There were students exhibiting indolence in writing. You ask them why they are exhibiting such laziness; sometimes they spill the ink of the pen and give this as a reason. They lose the pen, or they spill the ink. I always keep two pens, one for me and the other in the box. I always carry two tools. Sometimes, the students claim that they lost a writing material, such as an eraser or pencil. I tell them not to worry and give them a replacement pencil or eraser. They can borrow from me. (Selam, Certificate, 12 years of experience)

In this extract, the teacher narrates two different small stories. The first is about Daniel, who has difficulties recognising the alphabet. The teacher highlights her sole, strong and continuous responsibility for the student and his learning: 'I always asked the child', 'I was improvising; thus, how I could help the child by myself' and 'I just prepared a workbook for him by myself'. She also expresses her emotional rewards from helping Daniel when he shows progress. The teacher positions Daniel as someone with special needs who needed to be addressed accordingly, but whose performance could improve with such adaptive support.

In the second small story, the same teacher describes a group of students who not only experience reading and writing difficulties but also have poor school attendance. Instead of criticising the students, the teacher anticipates their needs by bringing extra materials to class. She describes how she regularly 'carr(ies) two pens', and whenever she notices a student who has lost one, she 'give(s) them a replacement pencil or eraser'. In this story,

the teacher shows situational flexibility when students have not behaved according to the classroom norms. In both small stories, the teacher positions herself as an innovative and sensitive expert, treating her students competently to involve them in meaningful learning.

DI as a self-reflective process

The third narrative type focuses on a turning point in a teacher's professional growth, which has arisen either through encounters with students with special needs or through attending training. These growth stories consist of teachers' self-criticisms as well as descriptions of increasing professional understanding and responsibility. Then, the teachers disengage themselves from what they previously believed and begin to obtain a new outsider's perspective on their work: e.g. 'sometimes, the problems that we state as problems are not only created by the students, but also by us – the teachers. The problem that is mainly created by the teachers is neglecting the weak students.' Consequently, the teachers understand some dimensions of teaching more deeply than before and are motivated to change their teaching style to better address their students' individual needs.

Sometimes, when I attend new workshops, I sense that 'I am lost, and hence, I have to change my teaching methods'. Therefore, you start pondering 'what if I change this, what if I do that'. [...] Whenever they provide a workshop, you learn new approaches and then reflect: 'What? Aren't we doing harm to our students?' I mean, you start to change. [...] Additionally, for instance, at a workshop one time, he asked us who could remember the previous day's session of the workshop, but we could not remember most of it. Now, in relation to memorising, I learned from the workshop that 'criticising a student for not memorising, decrying the students for failing to remember what is taught yesterday', it has its own problems. That our ability – I mean, there is what is called 'short-term memory' and 'long-term memory'. Therefore, I learned from the workshop that repetitive actions enable the child to remember. Therefore, sometimes we should not get angry whenever students fail to remember. I was able to remember that we teachers are in such courses as well. If I could not remember when I was asked to recall back what I learned before, on the same token, how could the child remember? (Natnael, Certificate, 23 years of experience)

In this extract, the teacher positions himself as a reflective learner who attended a workshop where he realised the difficulty of memorising. This incident gives him insight into the students' situation. He takes strong responsibility for his own instruction and its weaknesses by emphasising his need for development as a teacher, referring to 'change' and saying 'I sense that I am lost, and hence, I have to change my teaching methods', 'what if I change this, what if I do that' and 'you start to change'. These word choices reveal that, although the teacher recognises his own shortcomings as a teacher, the story is still forward-looking and future-oriented. While in this story, the students' position is not explicit and the teacher talks about them only indirectly, the students are the focus, positioned as the motivating force behind the teachers' desire to learn to teach better.

DI as a failed attempt

In the fourth narrative type, teachers construct DI as a failed attempt and position themselves as having limited opportunities to influence the students. The common

feature in these tragic stories is that the failures are attributed to outside factors and children's internal problems, such as impairments, e.g. 'These slow-learning students, whatever you do or prod, even with the efforts of all teachers, you cannot improve or change their condition', poor home conditions, e.g. 'due to problems in his upbringing, he can't understand us', or unchangeable cultural habits, e.g. 'there are some females, though they are excellent students at school, they are married off at young age. [...] we tried: "Please, don't destroy her future. Let her study," we told these people, but we didn't succeed'. Thus, although teachers report giving their best efforts to support the children's learning, the learning aims have not been achieved due to factors beyond their control or because the goals would require impossible sacrifices from the teachers.

There are times you cannot succeed. There were students—there is no need to mention their names—but these students, I would sit with them and make them work. When they asked me things, I'd answer; when I was doing all these things, they were interested, but they could not make it. [...] However, to the best of my ability, I have tried. There were five of them; you'd ask them to just get into class and you'd make them work, but when they returned the next day, they'd forgotten everything. They had memory problems. Again, I think something had happened in their life. Oh, if you don't have a father and a mother, it is a bit difficult. Therefore, I have tried in all ways. They could not accept me. This is in teaching. In other things, it is different, but in lessons, they couldn't do it. They just couldn't. This angers you. However, feeling uncomfortable, you have to let it go. (Hana, Diploma, 7 years of experience)

In this extract, the teacher repeatedly mentions that she has made strong efforts to help some of the students, but those efforts have been unsuccessful: 'I was doing all these things', 'to the best of my ability I have tried' and 'I have tried in all ways'. However, she does not blame herself for the students' failure; rather, she attributes it to the students' internal characteristics, e.g. 'they had memory problems', or their home environments, e.g. 'if you don't have a father and a mother, it is a bit difficult'. Thus, the students are portrayed as having their own challenges, which hinder them from benefitting from DI. The hopelessness of the situation is also expressed through emotional words that illustrate the teacher's sense of powerlessness: 'this angers you' and 'feeling uncomfortable'. Finally, the teacher explains that she has had to accept the situation and give up. The story shows the contradiction between the teacher's reported attempts to help students in different ways and the repeated trials that ended in failure.

DI as a demanding approach

The fifth narrative type represents another group of unsuccessful stories. These stagnation stories create pessimistic prospects for developing one's teaching: since differentiation is constructed as an impossible goal, it is not worth trying to individualise one's teaching. However, contrary to the previous narrative type, here teachers do not blame children but rather their own lack of skills or challenging school circumstances for their inability to address students' different needs: 'But there is a challenge, the "class" is large'. The teachers also emphasise the need for more organised training to teach children with special needs and learner-friendly methodologies to become competent teachers. Although in-service training exposed the teachers to different learning modalities, they still express misgivings about utilising them in practice:

One day, a white man (Rogers) came to my class. He came to supervise my class. He gave me support at that time. [...] He came, picked out teaching aids and divided the class into groups very fast. The message he delivered within that session, his teaching approach ... was just very wonderful. Wow, he brought the equipment, the teaching aids, cards and other materials. He made them form words and write words in group. I had tried to do similar things previously, but I never succeeded. Before I finish grouping, doing this and that, the bell rings; however, he divided them in NO TIME. Now, what is it? He was experienced in it. He was trained, just that way. [...] Afterwards, I had tried to do what he did. I couldn't. I was not successful. Now, what is it? Honestly, if you come to that and came through that, you will succeed. We have not come that way. Some workshops are needed for teachers, all teachers, something that can make us change the past, set us forward a bit. There are some who are gifted, who can get into the required student-centred approach very fast; they are skilled, gifted [...] however, the majority are not. (Biniam, Degree, 25 years of experience)

Extract 5 shows how Biniam positions himself as a teacher in great need of training to successfully differentiate his instruction. He compares the Eritrean teaching context with the Western one and claims that teachers from the Western world differentiate easily in their classrooms, whereas he and his Eritrean colleagues struggle because of their lack of proper training. His expressions 'I couldn't do it', 'I was not successful' and 'teachers are not skilled enough' are indications of his negative self-efficacy beliefs and, simultaneously, he constructs DI as an approach with principles that are difficult to absorb. The teacher concludes his story in a generalised way, saying that 'the majority' of teachers are not skilled enough and need training to differentiate their teaching successfully. The students are indirectly positioned as victims of poor instruction who would benefit if the teachers changed their old ways of teaching.

Discussion

This study examined small stories provided by Eritrean mathematics and science teachers about DI. The need for research was evident since the teachers' narrated experiences provide valuable information about poorly resourced education systems where the concept of DI is not explicitly familiar to teachers and nor have teachers necessarily received any specific training on it, although the countries would have committed to the principles of inclusive education (Asefaw 2016; Habtom, Franciscah, and Mazrui 2019). Although the roots of the concept of DI are in Western education policy, inclusive education has become a global agenda (Geldenhuis and Wevers 2013), and along with it, knowledge about DI is needed in all education systems. Therefore, it is of great importance to examine teachers' narratives of DI—narratives which also have the power to shape teachers' understandings of implementing DI in practice.

The stories narrated by the teachers were grouped into five narrative types, which constructed different meanings of DI. The majority of the narrative types (78%) showed positive aspects, while only 22% of the narrative types represented negative evaluations of DI. The most dominant narrative types were those about caring orientation and flexible pedagogical approaches. Both narrative types strengthened needs-based principles of supporting students through DI (see Raveaud 2005; Tzanni 2018) and were committed to the differentialist ideal, according to which learning is primarily considered an individual activity, as opposed to universalist orientations that prioritise the cohesion of the group over DI (Raveaud 2005). The caring narratives represented a holistic approach to teaching,

constructing DI as an emotionally responsive and child-centred instruction without taking a strong stand on how to teach actual academic contents individually. The dominance of the caring narratives in the data might be partly due to the poor circumstances in which some of the students were reported to live. In addition, the teachers' lack of professional knowledge about how to adopt specific methods for DI might be one of the reasons that most of the narratives reflected a focus on emotional rather than academic support. Since the caring approach has not been explicitly identified in earlier international research on DI, the finding calls for further research in both other poorly resourced education systems and Western education systems where holistic caring might have been differentiated from teachers to student welfare professionals.

The flexible pedagogy narratives were in line with the general definition of differentiation as academically responsive instruction, where teachers modify curriculum objectives, teaching methods and learning activities to address individual students' diverse needs (Stollman et al. 2019; Tomlinson 2014). Thus, the findings indicate that even in the situations where DI as a concept is not well known (Asefaw 2016), teachers can still provide many examples of sophisticated differentiation practices. In this way, teachers seemed to position themselves as strong narrative agents (see Herman 2009) and indicated strong self-efficacy towards managing heterogeneous and large classrooms on their own (Dixon et al. 2014; Malinen et al. 2013; Saloviita 2018; Schwab, Sharma, and Hoffmann 2019). Even in the narratives about failed attempts at implementing differentiation, the teachers expressed that they had tried their best, although the negative outcomes weakened their trust in themselves and led to reluctance to serve all children in the future.

While the narratives about caring orientation, flexible pedagogy or failed attempts described pragmatic successful or unsuccessful solutions to everyday pedagogical challenges, the narratives about self-reflection and demanding approaches were more idealistic regarding future hypothetical circumstances. Both narrative types emphasised the need for change, but the outcomes of these narratives differed. While self-reflective narratives contained forward-looking efforts towards future change, in the demanding narratives, teachers reported that they were not skilful enough to implement DI. These findings are in line with Cambridge-Johnson, Hunter-Johnson, and Newton (2014) and Dixon et al. (2014), who found that teachers' lack of familiarity with the best instructional strategies led to their reticence towards inclusive education. Teachers' attitudes towards diversity are hierarchically developed from self-awareness to a commitment to social justice (Mills and Ballantyne 2010). Therefore, teacher narratives can be considered a valuable starting point for change both for the teachers themselves and the education systems they work within.

Throughout the stories, the teachers' individual autonomy was evident, whereas the community-level responsibility for students remained secondary. The narratives were dominated by successful and unsuccessful personal encounters with students related using the first-person singular pronoun. Although this finding indicates the teachers' strong personal commitment to instruction, it could also indicate that they felt individually responsible for unsuccessful situations, as seen in the narratives about failed attempts. Therefore, mentoring and collaborating with colleagues could be helpful for finding practical solutions to the teachers' pedagogical challenges (see Malinen et al. 2013).

The results might have been different if teachers of subjects other than mathematics and science had been included, as natural science teachers probably use different teaching methods than social science teachers. Since the selection procedure was based on consulting the school governing bodies, the data could be biased. Furthermore, the narratives are not direct reflections of the study participants' classroom realities but are told situatedly in the interview contexts. However, the significance of the narratives cannot be downplayed, since through storytelling, teachers' also shape culturally acceptable pedagogical ideologies and construct their professional agency as teachers for whom implementing DI in their day-to-day classroom practices is either possible, infeasible or worth a try.

Conclusion

The findings of this study revealed that DI implementation is also possible in challenging contexts. Although the teachers described large classroom sizes, ill-equipped classrooms and a lack of specialised training, they also expressed their commitment to supporting all students and showed positive attitudes towards DI. These emancipating narratives have wider relevance, as the positive narratives could also be utilised to understand DI more broadly in the future, thereby changing the negative stories narrated by some teachers. Thus, it is important to highlight the narratives about everyday applications of DI in pedagogical discussions within and among schools and in teacher education programmes in different contexts. Especially, the flexible pedagogical approaches and self-reflective understandings of the teachers may help the wider community to see the practice of teaching from a different perspective and incorporate such elements into teaching processes. In poorly resourced education systems, this is particularly remarkable and points to the key role of teachers in improving the quality of education. Finally, the findings regarding the wide range of caring approaches and the personal commitment of teachers to provide emotional support for their students show the importance of the contextualisation of DI beyond the Western countries, where the work roles of teachers and other school staff members are more differentiated but where the need for building the inclusive and caring communities has become increasingly important.

Acknowledgments

The research was conducted under the Finnish-Eritrean higher education cooperation funded by the Ministry of Foreign Affairs of Finland with a research grant from the University of Jyväskylä (No. HEL7M0453–80). Our heartfelt thanks go to the Eritrean teachers who participated in our study despite their heavy workload. We are also grateful to associate professor Yonas Asfaha for his contribution in this study.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Ministry of Foreign Affairs of Finland with a research grant from the University of Jyväskylä [No. HEL7M0453–80].

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