

# Exploring mediagrams as a visual tool to encourage teacher critical multilingual awareness through parent-school interaction in Norway

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## Abstract

*Teachers hold a key position for processes of inclusion and exclusion in parent-teacher relationships. Through teachers' critical analysis of their own contributions in these processes, inclusion can be enhanced. This article explores how a visual representation of a person's linguistic and media repertoires, a mediagram, can foster such teacher critical awareness. More specifically, it investigates the research question: How can mediagrams contribute to teachers' critical awareness related to existing language ideologies in parent-teacher interaction in multilingual settings? To answer this question, an innovative use of the mediagram, where pupils and parents created a shared mediagram, is presented and discussed. Qualitative in-depth interviews with three teachers and four parents who took part in the activity are analysed. Interviews with the teachers are explored in terms of different dimensions of language awareness before and after implementation of the mediagram activity, while interviews with parents complement the teachers' perspectives with parents' perspectives. The study shows that the mediagram has promising potential to enhance teacher critical multilingual awareness in an extended understanding of the concept which also includes digital resources in interaction. Yet, it also points to important discrepancies in the parents' and teachers' evaluations of the tool.*

**Keywords:** *inclusion, mediagram, parent-teacher interaction, teacher critical multilingual awareness, visual representations*

## 1 Introduction

Research has consistently shown that pupils' academic and social development in multilingual contexts benefit from parent-school relationships that are oriented towards empowerment and identity confirmation of both pupils and parents (e.g., Cummins, 2009; García, 2017). However, based on the majority population's and teachers' persistent monolingual practices, language frequently surfaces as a barrier to equitable

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relationships with multilingual, minoritised parents with migration background<sup>1</sup> (e.g., Adebayo & Heinz, 2023; Crozier & Davies, 2007; Mary et al., 2021). Importantly, teachers are regularly unaware of the languages spoken by the parents (Guo, 2012; Schneider & Arnot, 2018).

In contemporary society characterised by mobility and mediatisation, parent-teacher cooperation increasingly takes place in multilingual contexts and is digitally mediated. Opportunities related to digital communication and interaction such as convenience, immediacy, information accumulation and teacher and parent availability hold the potential to improve parent-teacher relationships (e.g., Bønnhoff, 2020; Thompson et al., 2015). However, digital communication and interaction also pose certain challenges, some of which are particular for multilingual settings. On the one hand, language barriers may be exacerbated in digitally mediated relationships (e.g., Bønnhoff, 2020) and on the other, multilingual, minoritised parents may be positioned as 'digitally limited' (Pavlakis et al., 2023, p. 1016). In contexts where language skills in the national language feature as a central prerequisite for social inclusion and participation, teachers run the risk of reproducing essentialist discourses of multilingual, minoritised parents that perpetuate inequitable relations of power if not equipped with a critical stance to their own practices and language ideologies (Cummins, 2009; Kroskrity, 2004). Hence, it is important to engage teachers in a critical analysis of their position in and their contributions to processes of inclusion and exclusion (Cummins, 2009; García, 2017). Therefore, the notion of critical multilingual awareness has been advanced as a key component in teachers' enactment of social justice and inclusion in classrooms and communities (García, 2017).

The aim of this exploratory small-scale study is to address the above-mentioned challenges by investigating how a visualisation of parent's language and media repertoires, the mediagram (Lexander & Androustopoulos, 2021), can contribute to increasing teachers' critical multilingual awareness – as one of several approaches to foster more equitable parent-teacher relationships. The mediagram is based on an understanding of digital interaction as an integral part of transnational and local relationships and offers an overview of a person's use of linguistic and media resources with different groups of interlocutors. In the present study, the teachers introduced the mediagram to the pupils, who created their own versions in the classroom, under the teachers' supervision. Subsequently, the pupils brought their mediagrams home to include a visualization of one of their parent's digitally mediated interaction, before returning this double mediagram to the teacher. By analysing primarily teachers' reflections on this activity and subsequently complementing this analysis with the parents' reflections on the same activity, this paper investigates how the mediagram can contribute to teachers' critical awareness related to existing language ideologies as expressed in interviews. I focus on two sub-questions: How can the mediagram 1) serve as a mapping tool for teachers of parents' linguistic and media repertoires? and 2) encourage the teachers to critically engage with monolingual practices and stereotypical views of multilingual, minoritised parents? The parents' perspectives are included as it is important to look beyond the intention of the initiative itself and towards the relationships that it sets out to improve (cf. Ippolito, 2018, p. 69).

The article starts with a review of the relevant literature (Section 2), followed by an overview of the Norwegian context for the study (Section 3). In Section 4, I discuss the notion of critical multilingual awareness and the use of visual tools to encourage this. In the methodology section (5), I present the mediagram, the participants, the data collection

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1. Different terms are used for these groups in the research literature and in the Norwegian context. In this article, I apply 'multilingual, minoritised parents' to refer to parents who have Norwegian as an additional language and who are often positioned as having lower social and cultural capital in the Norwegian context.

methods, the analytical framework, and ethical considerations. In section 6, the teachers' and parents' perspectives on the mediagram are analysed respectively and the article's main findings are presented, i.e., that the mediagram contributed to enhancing teachers' critical multilingual awareness, albeit with important discrepancies in the parents' and teachers' evaluations of the use of the tool. In the final section, the discussion identifies key opportunities and constraints with the use of the mediagram in this exploratory study and points out directions for future research.

## 2 Literature review

### 2.1 Parent-teacher relationships in multilingual settings

Scholarship on parent-teacher relationships in multilingual settings in the European, North American and Australian contexts has identified success criteria for, as well as barriers to, inclusive and equitable parent-teacher relationships. The keys to success include identity-confirmation of the parents through the schools' validation of their perspectives and knowledge, and through capitalising on their linguistic backgrounds (e.g., Blair & Haneda, 2021; Cummins, 2009). However, studies have repeatedly found that schools and teachers hold deficit views of parents with migrant<sup>2</sup> or minoritised backgrounds (e.g., Adebayo & Heinz, 2023; Crozier & Davies, 2007; Guo, 2012). A qualitative study from the context of Bangladeshi and Pakistani heritage parents' collaboration with schools in England, including interviews with 591 parents and twenty case-study families, turned the common phrase 'hard to reach parents' into the rhetorical question 'why are the schools hard to reach?' (Crozier and Davies, 2007, p. 296). Importantly, this study found that most of the schools operated a 'one size fits all' approach, with little parental involvement. Moreover, there is a clear tendency for schools and teachers to base their cooperation with the homes on their own needs and not sufficiently take the parents' needs and perspectives into account (e.g., Baquedano-López et al., 2013; Crozier & Davies, 2007). From the Norwegian context, a qualitative study including 45 interviews with both non-migrant Norwegian parents and migrant parents, Bendixsen and Danielsen (2020) found that there are discrepancies in teachers' and parents' expectation to the relationship, whereby the teachers' expectations are often based on white, middle-class values. Importantly, inconsistent practices or absence of translation and interpreting make language an important barrier to interaction (Bendixsen & Danielsen, 2020), which is consistent with other studies from other contexts (e.g., Crozier & Davies, 2007; Schneider & Arnot, 2018). Often, such exclusionary practices stem from teachers' lack of insight into the languages spoken by the parents (Guo, 2012; Schneider & Arnot, 2018) and from the teachers' persistent monolingual ideologies (e.g., Adebayo & Heinz, 2023; Mary et al., 2021; Righard et al., 2023). Exclusionary language practices with parents are thus regularly mentioned in this scholarship, but rarely scrutinised in detail. We also know less about digitally mediated communication and interaction in these relationships, including parents' and teachers' reflections and evaluations of these, which is the analytical focus of the present article.

### 2.2 Digitally mediated communication and interaction

The scholarship on digital communication and interaction in linguistically homogeneous contexts shows important opportunities for enhanced parent-teacher relationships through increased availability and flexibility in terms of information sharing (Palts & Kalmus, 2015; Thompson et al., 2015). The opportunities for parents to be involved in and informed about their children's lives are also reported on, both in linguistically

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2. In this section, when referring to a particular study, I follow the term used in that article.

homogenous and heterogenous contexts (e.g., Akselvoll, 2016; Bønnhoff, 2020). Interestingly, despite the opportunities for two-way communication inherent in digital channels there is a tendency that they are primarily used to distribute information (Lewin & Luckin, 2010; Pavlakis et al., 2023; Selwyn et al., 2011; Vigo-Arrazola & Dieste-Gracia, 2019). Additionally, it has been found that schools do not take the families' preferences and needs sufficiently into account when choosing communicative or interactional channels (Bønnhoff, 2020; Head, 2020). Moreover, parents' and teachers' channel preferences may diverge, which may in turn affect the quality of their relationships (Heath et al., 2015, p. 387; Palts & Kalmus, 2015). Palts and Kalmus further found that teachers have presuppositions regarding parents' channel preferences and called for agreement between parents and teachers on communication conventions (Palts & Kalmus, 2015, p. 76).

Turning to the few existing studies at the intersection of language and digital communication and interaction, there seems to be missed opportunities for school websites to serve as an inexpensive and efficient way of making migrant parents feel valued and welcome (Gu, 2017; Piller et al., 2021). Piller et al. (2021) investigated the enrolment information on the websites of 30 linguistically diverse schools in Australia. They found that the web-pages were exclusively in English. The available translation options were also indicated in English (Piller et al., 2021). Pavlakis et al. (2023) found similar practices in a qualitative case study on relationships between Latinx homes and schools in the USA, conducted at one urban, high-tech elementary school, and which included analysis of both digital and physical school documents, observations of on-site school-family events and interview data from parent focus groups, teacher focus groups and individual interviews. Here, only the monthly newsletters to parents were translated, while all other digital information from the school was in English. One of the rare Norwegian studies on digital cooperation between migrant parents and the school system reported on how 16 migrant mothers from less digitalised backgrounds carried out and experienced digitalised home-school cooperation, based on qualitative interviews with the mothers (Bønnhoff, 2020). While Bønnhoff's study confirmed the opportunities mentioned above in terms of accessibility and insights into the children's lives, both language and digital skills constituted important barriers to successful cooperation. The reported language of communication with the school was Norwegian, even for the mothers who had recently arrived in Norway, and the teachers' presupposition of the parents having a sufficient level of digital competence led to challenges in digitally mediated parent-teacher cooperation for the mothers with lower digital skills.

As demonstrated by this literature review, there is a need to continue to find ways to challenge schools' and teachers' monolingual ideologies, and importantly to enhance awareness of digital resources in parent-teacher interaction.

### **3 The Norwegian context**

Approximately 17 % of the Norwegian population are immigrants (Statistics Norway, 2024) and in primary education, 19 % of the children come from families with immigrant background (The Norwegian Directorate for Education and Training, 2022). Responding to this increasing linguistic diversity in the population, Norwegian educational policies promote a language-as-resource orientation (Ruiz, 1984) to both individual and societal multilingualism (Ministry of Education and Research, 2017). In these documents, the schools are given the main responsibility for organising the home-school cooperation in ways that facilitate parents' participation, i.e., through providing information in a language and in a format that the parents understand (White paper 6 (2019-2020), p. 24-25). Moreover, digital interaction has been proposed as a way to enhance the quality in the home-school cooperation as well as to break down language barriers between the home and the school (White Paper 22 (2010-2011), pp. 109-110). Importantly, recognising that

language can be an important impediment to cooperation, the active use of interpreters and the translation of important information are emphasised as key strategies (The Norwegian Directorate for Education and Training, 2020, p. 3).

There are nevertheless competing political and societal discourses on the connections between language and inclusion in Norway (Brekke & Fladmoe, 2022). Polarised debates about migration often centres around rising social inequality, and on how migrants both contribute to the process of amplified inequality and constitute a threat to the Norwegian welfare system (Slottemo, 2020). In these debates, there seems to be a persistent ideological current that constructs Norwegian language skills as a prerequisite for successful inclusion (Djuve & Kavli, 2019, p. 37). In the educational policy, parallel to the value-based resource-orientation to language diversity mentioned above, the provision for mother tongue instruction can be understood as a weak bilingual education model as it primarily plays a role for Norwegian language learning. Additionally, mother tongue skills are not referred to as a value in itself (e.g., Bubikova-Moan, 2017). Research on parent-teacher relationships in Norway confirms prevailing monolingual practices in both digitally and non-digitally mediated interaction, despite the resource perspective foregrounded in the official policy (Bendixsen & Danielsen, 2020; Bønnhoff, 2020).

The educational policy documents also provide the overall guidance of the home-school collaboration. The regulations to the Education Act state that the school shall keep in touch with the parents throughout the school year (Regulation of the Education Act). In the beginning of every school year, a parents' meeting shall take place, and the parents are entitled to at least two planned parent-teacher conferences related to the pupil's academic and social development (Regulation of the Education Act, Section 20). It is particularly the day-to-day communication and interaction that is increasingly digitally mediated in Norway.

#### **4 Conceptual framework: Enhancing critical multilingual awareness through visual methods**

In this study, I join recent efforts to address the power dimension of language awareness in multilingual societies by approaching critical multilingual awareness from a language ideologies perspective (Cots & Garrett, 2017; García, 2017; Prasad & Lory, 2020; Van Gorp et al., 2023). In this line of research, the main aim is to understand the power structures and the inclusive or exclusionary effects embedded in language practices.

I draw specifically on a language awareness framework that combines García's (2017) critical multilingual awareness with James and Garrett's (1992) five dimensions of language awareness, i.e., the affective, social, performance, power and cognitive dimensions. In this framework, it is argued that a deeper understanding of the power domain can be achieved by building in particular on the social and affective domains of language awareness (Prasad & Lory, 2020; Van Gorp et al., 2023). Focusing on teachers' awareness of the roles of language and media practices for processes of inclusion and exclusion in this article, it is these three domains (power, social, affective) that are of relevance for the analysis. First, I follow Prasad and Lory's (2020) definitions of the social and affective domains respectively: The social domain concerns the 'linguistic and cultural identity/ies, understanding linguistic diversity and intercultural aspects of language learning and relationships with language users' (Prasad & Lory, 2020, p. 809). The affective domain concerns the 'socio-emotional feelings associated with languages, language learning and language users' (Prasad & Lory, 2020, p. 809).

Second, the power domain is approached through the lens of language ideologies. Language ideologies have been conceptualised as complexes of ideas, beliefs and practices that connect language varieties to social identities (Kroskrity, 2000; Silverstein, 1979). Through the unequal distribution of power between groups in society, hierarchies of languages are produced, in which some language varieties are accorded higher value

than others (Blommaert, 2005). A central concern in this respect, is to orient the gaze towards processes of misrecognition, through which the language ideology of the dominant population is naturalised and embodied in beliefs and practices (Bourdieu, 1991; Kroskrity, 2004). In this embodied form, language users have low awareness of the circulating language ideologies – which is precisely the main concern in critical approaches to language awareness.

A key feature of the critical multilingual awareness framework is that it includes recent reconceptualisations of the linguistic repertoire (Gumperz, 1964). I will point to three key developments in the literature. First, responding to the increased diversity in society due to migration, the notion of the linguistic repertoire has been oriented towards how individuals draw on all the linguistic resources that have become available to them through their biographical trajectories (Blommaert & Backus, 2013; Busch, 2012). This view of language as an evolving set of resources challenges the conceptualisation of languages as bounded entities (García, 2017). Second, the understanding of the linguistic repertoire has been extended to include resources such as body language, accessories and multimodal aspects, e.g. pictures and sound, covered by the notion of “semiotic repertoires” (Kusters et al., 2017). And third, as a consequence of the proliferation of digital communication and interaction technologies, the linguistic and semiotic repertoires have been expanded to include the semiotic affordances of different digital platforms and channels and also to consider the media itself as part of the repertoires. To theorise this complexity of linguistic, multimodal and digital resources, Lexander and Androutsopoulos coined the notion of mediational repertoires, defined as ‘a socially and individually structured configuration of semiotic and technological resources’ (Lexander & Androutsopoulos, 2021, p. 2). In contexts where digital language practices have become part and parcel of the linguistic and cultural identities, such as in Norway, I therefore argue for the inclusion of digital resources as part of the object of study in critical multilingual awareness research (cf. Androutsopoulos, 2021).

As processes that influence language use operate along a continuum from high metapragmatic awareness to unawareness of dominant language ideologies (e.g., Kroskrity, 2004), the change of mode from thinking through verbal to visual modality may contribute to foregrounding ‘the emotional experience of language, power relations’ (Busch, 2012, p. 521). Therefore, visual representations can be useful for encouraging metalinguistic reflexivity because they offer alternative ways for the expression of and access to information (e.g., Busch, 2012; Kalaja & Melo-Pfeifer, 2019).

In the field of education, visual representations of multilingualism have been used to raise awareness about individual’s multilingual repertoires, and multilingual speakers’ identities and lived experiences of language in language teaching and learning (e.g., Busch, 2010; Kalaja & Pitkänen-Huhta, 2020; Prasad, 2020; Storto et al., 2023; see also Chik & Melo-Pfeifer, 2020, for a meta-review). Not least, bringing critical multilingual awareness and multimodal, visual methods together in teacher education, research has demonstrated that pre- and in-service teachers’ multimodal composition can offer powerful, alternative pathways to foster teachers’ critical multilingual awareness (Deroo & Ponzio, 2023; Fu et al., 2023). More specifically, Deroo and Ponzio emphasised the potential efficacy of using multimodal approaches for enhancing critical multilingual awareness because ‘multimodal compositions supported meaning-making beyond words’ (Deroo & Ponzio, 2023, p. 14). Further, they argued that the use of visualisation is an innovative way to challenge existing understandings of language, identity and power (Deroo & Ponzio, 2023, p. 14). Fu et al. (2023) reported findings from a reflexive study of the effects on two educators of colour participating in a multimodal youth participatory action research. They demonstrated how multimodal forms of expression among the youth opened pathways for critical multilingual awareness for the educators. Furthermore, they called for further research on the use of multimodality for fostering critical multilingual awareness (Fu et al., 2023, p. 372).

The conceptual framework for this article thus builds on the insights discussed in this section to combine the critical multilingual framework with an innovative visualisation of mediational repertoires. Through these lenses, I explore teachers' and parents' reflections and evaluations of the mediagram as a tool to raise teachers' critical multilingual awareness in parent-teacher relationships in primary school. This opportunity has also been suggested by Little and Cheng (2023).

## 5 Methodology

This article draws on data from a larger project investigating language and digital practices in processes of inclusion and exclusion in the interaction between Norwegian teachers and multilingual, minoritised parents with Norwegian as an additional language. In the first phases of this project, the mediagram was used for data collection and analysis of digitally mediated parent-teacher interaction.

During the previous phases of the project, three major findings surfaced, which confirm existing knowledge: 1) Teachers have minimal access to background information about the parents' mediational repertoires; 2) Low critical language awareness among the teachers in terms of their powerful position as representatives of both the majority population and the school; and 3) Reported monolingual language practices with multilingual, minoritised parents. The mediagram was set up as a tool to address these issues, from both teachers' and parents' perspectives.

### 5.1 The mediagram: a visualisation of mediational repertoires

The mediagram is a visual representation of a person's mediational repertoires (Lexander & Androutsopoulos, 2021). It was developed as a methodology for collaborative research on digitally mediated interaction in multilingual and transnational families. As an example, in Figure 1, we see the mediagram of one of the participating mothers in the larger project (not interviewed for the purposes of the present article), following the model of Lexander and Androutsopoulos (2021).

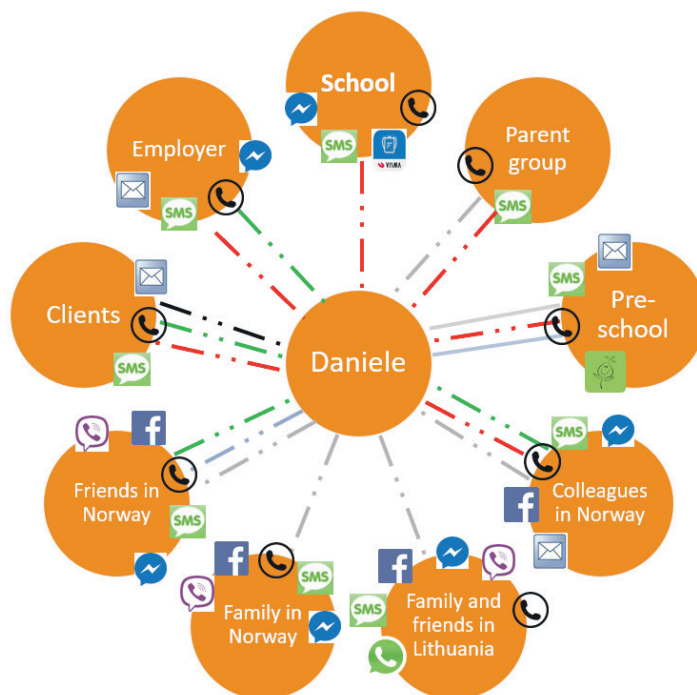


Figure 1: Mediagram, original layout

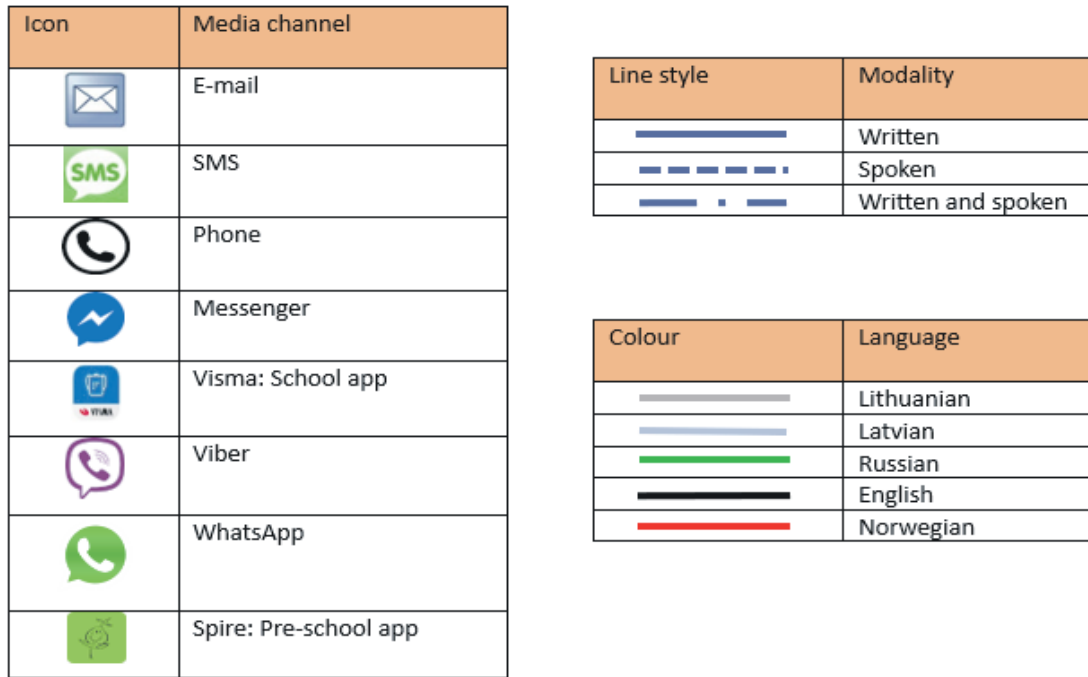


Figure 2: Legend mediagram, based on Lexander & Androutsopoulos, 2023, p. 81

For the purposes of the activity discussed in the present article, double mediagrams were created as a tool to stimulate reflection, featuring both the pupil's and one of the parents' mediational repertoires (see Figure 3). The teacher here appears as a shared interlocutor between the pupil and the parent.

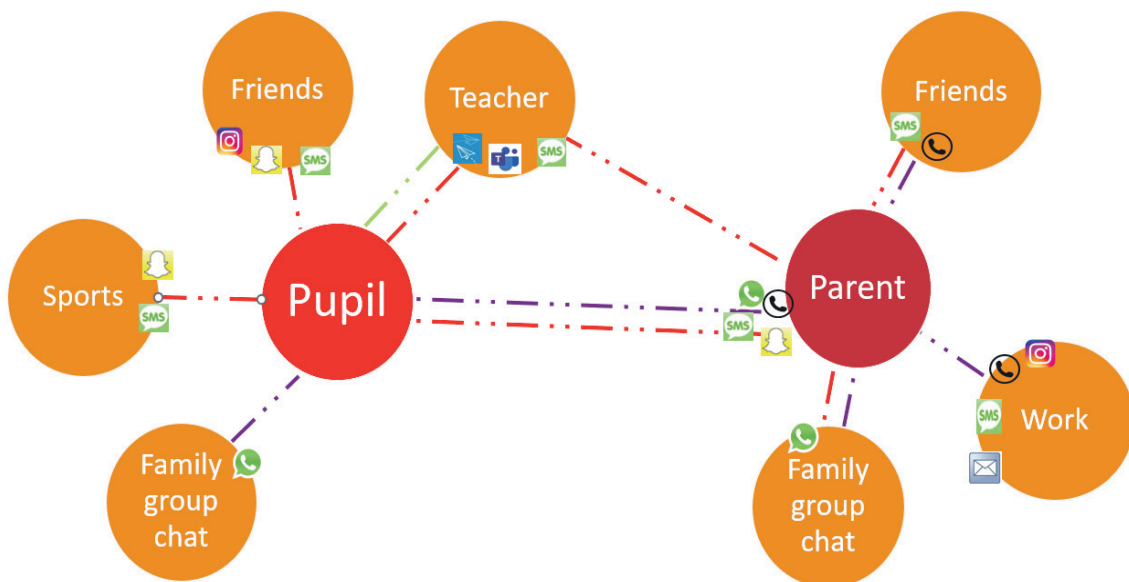


Figure 3: Double mediagram of participating parent and pupil






Colour	Language
	Home language
	Norwegian
	French

Figure 4: Colours representing languages

The twofold aim of including the pupils in the construction of the mediagram was firstly to facilitate its completion by the parents, and secondly to add value for the teachers, who showed great interest in ways to empower multilingual pupils. One advantage of the mediagram as used in this project is that it represents a person's transnational and local relationships and linguistic and media repertoires by groups of interlocutors. In this way, parents' mediational repertoires can be compared, and potentially prompt the teacher to critical reflection related to the teacher's and the school's language practices and media choices as compared with other groups of interlocutors.

The study was designed to explore if – and in which ways – the use of the mediagram could encourage teachers' critical engagement with their currently dominant monolingual practices and ideologies. Therefore, three interviews with the teachers were conducted, one prior to the implementation of the mediagram in the classroom, one after the introduction of the mediagram to the class, and finally one after the families' return of the double mediagrams to the teachers, as illustrated in figure 5.

## Mediagram activity: the process

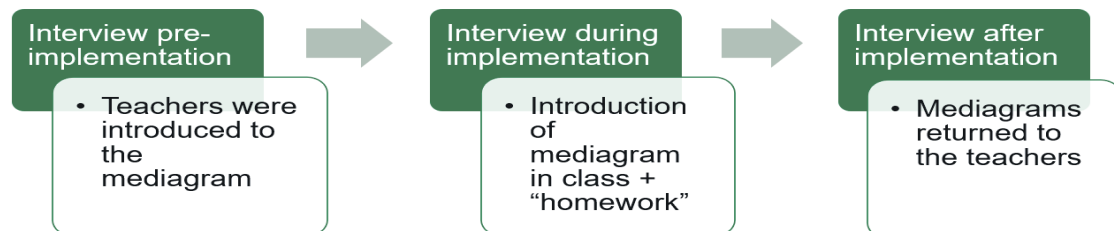


Figure 5: Mediagram implementation

The mediagram was introduced to the pupils in the participating teachers' classrooms and to all the parents in the class through the weekly information to the homes. The tool was primarily implemented by the teachers. In one of the classes, however, I introduced it to the pupils, upon the teacher's request. Apart from this one appearance, I did not take part in the teachers' work with the mediagram in the classrooms, which consisted of two steps. In the first step, the pupils made mediagrams of their own digitally mediated interactions, including groups of interlocutors of their own choice. One class created digital visualizations, while the other created paper drawings upon the teachers' decision. Then each pupil took their visualization home for the parents to add their mediagram to that of their child, as shown in figure 3.

To delve into the teachers' and parents' evaluation of the use of the mediagram and their displayed forms of language awareness, the analytical unit of this article is the

interviews with the teachers and the participating parents, focusing on their experiences of the activity. The only mediagrams that have been actively used, are those of the participating parents as discussed in the interviews.

## 5.2 Data collection and participants

Data collection for this study took place during the autumn 2021 and through 2022. Three teachers in mainstream classrooms were recruited directly: two co-teachers at a primary school (4<sup>th</sup> grade) and one class-teacher at a lower secondary school (9<sup>th</sup> grade). As this is an exploratory study, the findings are valid as first insights into potential opportunities and constraints using the mediagram as a tool to enhance teachers' critical multilingual awareness. Both schools were located in urban, linguistically diverse areas.

When the mediagram had been introduced to the classes (step 2 in Figure 5), the teachers were asked to identify multilingual, minoritised parents in their classes who would be interested in participating in the project. Four family members of three pupils accepted the invitation (see Table 1 for an overview). One of these family members was the adult daughter of one of the parents, who facilitated the interview as an informal interpreter. She decided to join as a participant during the interview to complement her parent's reflections with her own. To ensure confidentiality, these four participants will be referred to as 'parents', and precise language and geographical backgrounds are not disclosed. The family members are from countries in Central Asia, the Middle East, and East Africa.

School	Pseudonyms	Gender	Data	Length of interviews
School 1	Bente, teacher	F	4 individual interviews	190 minutes
School 2	Liv, teacher	F	3 individual interviews + 1 paired interview with Ingrid	271 minutes
	Ingrid, teacher	F	2 individual interviews + 1 paired interview with Liv	159 minutes
	4 family members	1F	2 interviews	136 minutes
		2F	1 paired interview	50 minutes
		1M	1 interview	60 minutes

Table 1: Participating teachers and family members

## 5.3 Methodological and ethical considerations

The data collection and analysis are carried out from my position as a researcher interested in inclusion in multilingual contexts. Having Norwegian as my first language and a background as a teacher, my position is in many ways closer to the participating teachers than the parents, with whom I do not share first language, and cultural and professional background. However, the critical approach adopted in this article brings me somewhat closer to the parents in terms of making their voices heard.

It must be noted that this project was critically framed through highlighting challenges in parent-teacher interaction in multilingual settings as the primary background for the study. This influenced the recruitment process in terms of who I approached and is likely to have influenced what teachers joined.

The project was approved by the Norwegian Agency for Shared Services in Education and Research and informed consent forms in Norwegian were provided to

all participants in line with The National Committee for Research Ethics in the Social Sciences and the Humanities (The Norwegian National Research Ethics Committees, 2023). With two of the parents, I needed an interpreter to facilitate the communication of the consent form and to carry out the interview. Both parents were presented with a choice between a professional interpreter and a language broker of their choice. One of the parents chose their child's bilingual teacher, the other chose their grown-up daughter. While informal interpreting raises questions related to interpreter positionality and their role in the co-construction of knowledge (Chiumento et al., 2018), ethical and methodological challenges should not prevent researchers from including the voices of those who are perceived as the less powerful in the creation of new knowledge (e.g., Copland, 2019, p. 192). In this project, the parents' preferences for interpreting were given prominence.

#### 5.4 Data analysis

Parts of the interviews with the teachers who participated in this mediagram activity have been analysed elsewhere in terms of the teachers' construction of their subject positions related to circulating discourses on language and inclusion (Thyness, 2023). For the purposes of the present analysis, the critical multilingual awareness framework has been added as a lens to analyse the teachers' and parents' reflections on the mediagram, focusing on the power, affective and social domains of language awareness (James & Garrett, 1992; Prasad & Lory, 2020; Van Gorp et al., 2023).

The analysis is based on an interpretive coding of the interview transcriptions. In a first phase, I used a data driven coding (Saldaña, 2016) to allow for the foregrounding of the teachers' and parents' emic perspectives, evaluations, and reports. In a second phase, a theory driven analysis of the interviews were carried out based on the above-mentioned domains.

## 6 Findings: Analysis of interview data

In this section, I first report on the analysis of the interviews with the teachers before the implementation of the mediagram in the classroom (6.1.) as it turned out in the analysis that a critical framing was of relevance for the implementation of the mediagram activity and the teachers' subsequent reflections and evaluations of this use of the mediagram. Subsequently, I report on the analysis of the interviews with the teachers (6.2.) and the parents (6.3.) after they returned the mediagram to the teachers.

### 6.1 Teachers' social, affective and critical language awareness before the implementation of the mediagram

The participating teachers displayed affective and social language awareness before the implementation of the mediagram. This awareness constituted an important motivation for the teachers to join this project, as they wanted to learn more about their pupils and their parents as part of their professional responsibility for inclusion. Bente articulated her motivation this way:

Bente: I want the children and parents to feel seen. That's it.

Researcher: Yes, and how do you see them with this?

Bente: Language is a huge part of our identity, and you see what they know and, that is, it gets very visible, with these colours and yes, to highlight what they know.

Bente: jeg vil at barna og foreldrene skal føle seg sett. Det er vel bare det det går på

Researcher: Ja, hvordan ser du dem med dette?

*Bente: Det språklige er jo en stor del av identiteten vår, og ser mer hva de kan, asså det blir jo veldig synlig, med disse fargene og ja, løfte opp det de kan.*

In her desire to showcase the pupils' and the parents' knowledge of different languages, there is a resource perspective on linguistic diversity that enables Bente to aim for identity confirmation of parents and pupils through the use of this visual tool. For Liv, an important incentive was to find ways to improve her interactional practices, as she stated that 'I know that I to a large degree fall short with minoritised parents' (*jeg vet at jeg kommer veldig til kort med minoritetsforeldre*). In this way, the teachers displayed affective and social awareness based on care and identity confirmation of all pupils and parents (cf., Cummins, 2009; Van Gorp et al., 2023).

Additionally, the three teachers articulated emotional reactions related to the lack of information about the parents and when talking about interactional experiences with parents who have Norwegian as an additional language. Liv, for instance, reported that she felt ashamed of not knowing the languages spoken by their pupils and parents as an important identity feature. Bente reported that 'I felt that like a punch to the stomach' (*den kjente jeg i magen*) when having sensed that she offended a mother by suggesting interpretation for an upcoming meeting, a measure not approved by the mother (Thyness, 2023, p. 12). All three teachers also reflected on how it must feel for the parents when they don't understand the teachers or when their children act as language brokers. Importantly, there seems to be a higher awareness of language choice in non-digital than in digital interaction. In this respect, Ingrid realised during one of the interviews that while she would often provide interpretation for face-to-face meetings, she would routinely distribute written digital information in Norwegian to all parents despite their diverse linguistic repertoires (Thyness, 2023). Her reaction to and evaluation of her own practices was that it 'is almost ugly, really' (*det er nesten litt stygt egentlig*).

The teachers' affective responses are thus oriented both towards the parents' emotions and towards their own feelings related to interactional challenges, whereby the teachers feel inadequate in terms of their articulated responsibility for inclusion. The affective reflections are moreover intrinsically linked to the social domain in that the emotions spring from the teachers' awareness of how their current language and media practices may harm their relationships with the parents and entail the parents' feelings of exclusion.

## *6.2 Enhancing teachers' critical multilingual awareness after the mediagram activity*

This section begins by addressing the first sub-question of this article: how can the mediagram serve as a mapping tool of parents' mediational repertoires? At a basic level of awareness, in terms of knowing their students and their parents, the mediagrams provided the teachers with what they evaluated as important information about the families' mediational repertoires. Focus on linguistic resources, Bente, for example, discovered languages in pupils' and parents' repertoires of which she had previously been unaware. She also found that two of the parents used only Norwegian with the school, and other languages with all other groups visualized in their mediagrams.

The strength of the mediagram as a colourful visualisation was noted by the teachers. This feature made it an easily accessible overview of both pupils' and parents' linguistic repertoires, that by far outstripped a written report. While this appears as quite unsurprising (cf. other work on visualisation of language repertoires, e.g. Busch, 2012), a major strength that emerged from the interviews with Liv was the discretion afforded by the mapping in the form of a figure: 'It gives a simple overview without asking too much [...], I don't feel that I step into their private lives [...] because it allows for staying on the surface, but still, it tells quite a lot' (*Det gir en sånn enkel oversikt uten å spørre om for*

*mye, [...] føler jeg ikke at jeg går inn på privatlivet dems [...] fordi man får lov til å være litt på overflaten, men likevel så forteller det jo ganske mye).*

This discretion was important to the teachers as they were reluctant to asking the parents directly about this background information due to the perceived risk of appearing offensive (cf. Thyness, 2023). This primarily affective orientation (cf. James & Garrett, 1992) displays an awareness of the parents' feelings of being devalued or stigmatised based on stereotypical constructions of "the deficit migrant". Importantly, the mediagram provides insights into the parents' media practices in addition to their language practices. Bente reported about difficulties reaching one of the multilingual mothers via e-mail. While this was not explicitly problematised in relation to the mediagram in the interviews with Bente, it shows how the mediagram may offer opportunities to compare parents' media choices across interlocutors as a point of departure for critically examining the teachers' own media choices and taking the parents' needs into account (cf. Bønnhoff, 2020).

The mediagram can thus serve as an important mapping tool to provide the teachers with key information about the parents' mediational repertoires in a discrete way. Additionally, the unease that the teachers experienced in relation to asking parents directly about linguistic repertoires and skills, may also pave the way for further reflection and reflexivity, enhanced by the work with the mediagram. An explicit example is provided in this statement by Ingrid regarding one of the effects of her reflections on the mediagram: 'one becomes a lot more aware on how terrible we are, really, in our care for the multilinguals' (*man blir fryktelig mye mer bevisst på hvor elendig vi egentlig er på ivaretagelsen av de fremmedspråklige*<sup>3</sup>).

The mediagram thus brought out critical awareness of the schools' and teachers' responsibility through taking into account multilingual, minoritised parents' particular needs for care and inclusion in their encounter with a monolingual school system. This is substantiated by Liv who declared that the mediagram and the participation in this project contributed to keeping the issue of inclusive language practices top of mind.

This awareness of the asymmetrical power balance is substantiated by Ingrid when reflecting on the need for a school app that would help her translate information prior to the distribution to the parents (the underlining represents her emphasis): 'it would have been so much more **inclusive** if they received a message from **me**' (*så hadde det vært mye mere inkluderende hvis de fikk en melding av meg*).

The use of Norwegian in digitally mediated communication and interaction represents a form of symbolic domination (Bourdieu, 1991) through passing the 'communicative burden' (Lippi-Green, 2012, p. 69) to the parents. A message composed by the school in the language preferred by the parent would facilitate a more distributed communicative burden between the school and the parents. This would also be an act of identity confirmation and a step towards more equitable language practices (cf. Cummins, 2009).

Importantly, the mediagram served as a reminder for the teachers of stereotypical assumptions and pejorative views about language, immigration, and inclusion. Particularly for Liv, the discovery of the transnational character of the digitally mediated interaction and the multilingual repertoires of some of the families, made her engage in a reflection about what she referred to as her own prejudices about the relations between parents' poor Norwegian skills and perceived low cultural and social capital, often categorised as 'deprived parents' (*ressurssvake foreldre*). In contrast, parents with strong Norwegian skills are more often depicted as 'advantaged' (*ressurssterk*). While Liv was aware of social categorisations before joining the project, she reported that the mediagram contributed to bringing this erroneous direct association between language skills and negative social features to the fore.

3. A literal translation of *fremmedspråklig* gives 'foreign language speaking'. While this term has deficit connotations in the literature, it does not reflect Ingrid's resource-orientation to multilingual, minoritised parents.

Shifting the gaze to the school level, the three teachers were highly critical towards what they perceived as the school leaders' lack of interest and engagement in multilingual, minoritised parents and the ways in which the parent-teacher interaction seemed to be a privatised part of the teachers' work (cf. Bæck, 2015). All three teachers called for school leader-initiated meetings with multilingual, minoritised parents, preferably early in the school year, to map the parents' needs in terms of language and media choices. Here, the teachers believed that the mediagram could serve both as a mapping tool and as a visual support during the meeting.

As demonstrated through these examples, the three teachers displayed emerging critical multilingual awareness based on affective and social concerns. Their overall evaluation of the mediagram was also positive. In the next section, I turn to the parents' evaluation of the use of this tool.

### 6.3 *The parents' evaluation of the mediagram*

In sum, the four parents' overall response to the mediagram was somewhat unenthusiastic. I will focus here on two aspects that emerged as salient in the analysis: critical perspectives on the use of mediagram and the parents' alignment with monolingual ideologies.

While the four parents did agree that the mediagram can be a useful mapping of the families' mediational repertoires for the teachers, two of them were explicitly critical of the ways in which it was used in this project. One of them, being highly skilled in Norwegian and digital devices and platforms, had a negative evaluation of the mediagram in a hypothetical perspective: 'but if I came to Norway now, from my [home country], I would have found it stupid [...] So, to me, it means that the teacher is not interested in talking to me at all' (*hvis jeg kommer til Norge, nå, fra [hjemlandet], så, jeg hadde syntes at det hadde vært teit [...] Hm så for meg, så betyr det at læreren er ikke interessert i å snakke med meg i det hele tatt*).

The mediagram can in this way be experienced as a lack of involvement by the teachers in their cooperation with the parents by not showing interest in a face-to-face meeting. The parent supported this by commenting that digitalisation has come very far in Norway and that interaction is more frequently conducted face-to-face in many other countries. From this perspective, sending the mediagram home without any plans for follow-up meetings, or even before a face-to-face meeting may amplify a sense of alienation. In this way, the use of the mediagram runs the risk of reproducing asymmetrical power structures through the request for information from the parents without giving anything back.

The other parent was critical towards the schools' current monolingual practices and oriented towards the potential outcomes of the mediagram, that was formulated in a rather critical question: 'Ok, you give me this mediagram, then what are you willing to do, after I have responded to the mediagram, what is sort of the end result?' (*Ok, du gir meg dette mediagrammet, hva er du villig til å gjøre, da, etter at jeg har svart, liksom på det mediagrammet, hva er sluttresultatet, da?*)

Embedded in this excerpt is a demand for social action that is not guaranteed by the mediagram itself. This scepticism can be supported by the unison reports from the parents that the schools, to their knowledge, did not engage in any activities or programs to focus on the multilingual repertoires of their pupils and the multilingualism that exist in the local community.

However, the parents did to a large extent align with and articulate monolingual discourses, placing the primary responsibility and communicative burden (cf. Lippi-Green, 2012) on themselves, the migrant, as one parent stated: 'because we live here, we have to learn Norwegian' (*fordi vi bor her, vi må lære norsk*) as Norwegian is the 'key to

4. The excerpts based on interpretation present the informal interpreter's Norwegian interpretation and my English translation.

talking' (*nøkkel til å snakke*). One of the other parents declared that 'if we misunderstand something, it is our fault as we do not fully understand Norwegian' (*hvis vi misforstår noe, så er det vår feil, fordi vi skjønner ikke helt norsk*). Also, across the interviews, the parents agreed amongst themselves that they had a responsibility for notifying the schools if they needed help. This way, they complied with deficiency perspectives of migrants with poor Norwegian skills and dominant discourses that construct Norwegian skills as the only path to inclusion.

In terms of challenges related to media choice, the parents mostly circumvented this by selecting a channel of their choice. For instance, one parent used SMS to respond to messages in the school app, Visma, as he felt insecure using Visma. While this agentive action by this parent led to successful interaction in terms of media choice, research confirm that schools do not necessarily take parents' needs into account when choosing communication channel (Bønnhoff, 2020; Head, 2020). It is important to note that written digital interaction was preferred by the parents with whom I needed an interpreter if they did not have access to a language broker. This substantiates findings from other parts of the larger study, where written digital interaction, media choice, emoji and punctuation emerged as crucial resources for migrants to negotiate an identity as included (cf. Thyness & Lexander, 2023).

## 7 Discussion and conclusion

In this article, the aim was to explore if the mediagram can serve as a mapping tool of parents' mediational repertoires and to encourage teachers to critically engage with their monolingual practices. The analysis shows that there are both opportunities and constraints related to the present use of the mediagram.

From the teachers' perspective, an important opportunity was identified in terms of the mediagram being a useful mapping tool of parents' mediational repertoires. The lack of this crucial information represents an important institutional barrier, that on a practical level prevents the teachers both from organising appropriate interpreting and translation of written information and from using appropriate digital channels in their interaction with the parents. For these purposes, the mediagram can represent a tool to enhance the social domain of language awareness (cf. Van Gorp et al., 2023). By actively pursuing insights into the parents' transnational mediational repertoires and explicitly making them visible, the mediagram represents an opportunity for the teachers to translate their resource-orientation to diversity into practice. The one parent's scepticism related to potential outcomes of the use of the mediagram emphasizes the need for such initiatives. Importantly, as digitally mediated interaction is an integrated part of the management of parent-teacher relationships, the mediagram offers a contrasting perspective on parent-teacher digital interaction as compared to the parents' linguistic and media repertoires in other domains. In this way, insights into the parents' mediational repertoires can be an important opportunity for encouraging critical reflection, as the teachers are provided with an eye-catching example of their own mediational practices (cf. Bendixsen & Danielsen, 2020; Mary & Young, 2018; Schneider & Arnot, 2018).

A second opportunity of this exploratory use of the mediagram that I noticed was that the widely circulating deficit-oriented assumptions of migrants, in which language skills, and potentially digital skills, are associated with social features, were challenged by the visual representation of the parents' transnational networks and language repertoires. This sign of critical engagement seems to be founded on the teachers' resource-orientation to language (cf. Ruiz, 1984), i.e., the social domain, and their deep-felt inclusive values and care for the parents, i.e., the affective domain (cf. Van Gorp et al., 2023). These two important orientations contributed to a desire to shift the communicative burden and responsibility for inclusion towards the teachers (cf. Lippi-Green, 2012). In this way the mediagram can potentially pave the way for enhanced inclusion of the parents based

on recognition and identity confirmation (e.g., Cummins, 2009). Additionally, the mediagram can be a useful tool for directing teachers' attention to the parents' needs in terms of media choice and the use of other semiotic resources (Thyness & Lexander, 2023). As parent-teacher relationships are increasingly digitally mediated, the findings in this study sustain the need for expanding the notion of critical multilingual awareness with digital resources to enhance inclusive practices in this area.

However, no visualisation is a panacea to critical multilingual awareness (Frijns et al., 2018, p. 110; James & Garrett, 1992, p. 309). A first constraint of the present use of the mediagram is the risk that by taking the mediagram at face value, one may miss important information about the parents. This is sustained by the experiences of creating mediagrams as part of data collection. In this process, the visualisation evolves and becomes more refined and detailed over the recurrent interviews. This insight indicates that there might be potential for using the mediagram as part of follow-up face-to-face meetings with the parents, in line with the evaluation made by one of the parents and the teachers. Furthermore, as also noted by Deroo and Ponzio (2023), with any one-off activity like this, one runs the risk of not achieving sustainable effects.

Secondly, as has been shown in other studies, teachers' critical multilingual awareness development is most successful when part of longer-term programs including several approaches to awareness (e.g., Mary & Young, 2018, 2023; Prasad & Lory, 2020). Thirdly, recalling that the teachers in this project were critically inclined when joining the project, it becomes clear that a mapping of parents' mediational repertoires without a critical framing can potentially contribute to nurturing normalised assumptions about language and deficit categorisation of multilingual, minoritised parents (Deroo & Ponzio, 2023; Hélot et al., 2018, p. 11).

Finally, both the parents' and their children's language and digital expertise should be further mobilised (cf. Prasad, 2014). Without being accompanied by follow-up meetings and changed practices as a direct consequence of the mapping, the mediagram may actually perpetuate inequitable power relations between parents and teachers – and pupils. Importantly, for one of the parents, there is an anticipation that the final and most important dimension of a critical multilingual awareness, i.e., social action, would fail to materialise. Furthermore, the parents' alignment with monolingual discourses indicates the widespread dominant ideologies that contribute to domination by consent (cf. Fairclough, 2015).

Still, these findings support important opportunities of adding the mediagram to the toolbox for visual and multimodal approaches to inclusion in parent-teacher relationships by fostering both teachers' and parents' critical multilingual awareness. To address the limitations related to the use of the mediagram in this exploratory study and echoing calls for further empirical research on the opportunities of visual approaches to enhance critical multilingual awareness (Fu et al., 2023, p. 372), future research should be longitudinal, include several teachers and parents – and also include pupils, and preferably be part of a holistic, whole-school approach to digitally and non-digitally mediated communication and interaction in multilingual contexts.



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The authors have no conflict of interest to declare.

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