



A. S. Hornby Educational Trust

# REPORT ON A.S. HORNBY DICTIONARY RESEARCH AWARD PROJECT

**Title:** Creating plurilingual, pictorial and ‘talking’ dictionaries to support the development of plurilingual and intercultural competences in a Catalan primary school

**Country:** Spain

**Dates:** May 2019 – May 2021

**Lead researcher:** Janine Knight

## 1 BACKGROUND AND OBJECTIVES

### 1.1 Superdiverse language classrooms

This study focuses on the need to foster plurilingual and intercultural competences in schools in recognition of the increasingly plural society in which many families live and explores how dictionaries can be used to achieve this. Many families and schools experience what can be described as linguistic and cultural “superdiversity” (Vertovec, 2007) which reflects the tremendous demographic changes brought about by patterns of migration. This in turn implies the need to develop pedagogical resources and strategies to reflect and support this reality. Essentially, teachers and schools are called upon to mediate such superdiversity. This conceivably can be supported by finding ways to “reduce the distance” (Coste and Cavalli, 2015) between families with different cultural and linguistic heritage(s) to that of the school, alongside finding ways to utilise childrens’ linguistic and cultural resources for meaningful and authentic purposes.

Despite many studies confirming that it is important to build on previously-acquired linguistic knowledge in learning other languages, the teaching and learning of languages in many

European countries is still very much based on a monolingual paradigm where existing languages are excluded from the target language class. A plurilingual approach to language teaching would conceivably not only help to deal with the challenges of a plural society, but also help newly-arrived pupils to integrate into school by using their family languages as meaningful tools for learning other languages.

Many schools experience what can be described as linguistic and cultural “superdiversity” which reflects the tremendous demographic changes brought about by patterns of migration. This in turn implies the need to develop pedagogical resources and strategies to reflect and support this reality.

One way for schools and teachers to “reduce the distance” therefore is by supporting linguistic and cultural superdiversity in classrooms and using mediation activities such as ‘facilitating plurilingual space’, ‘collaborating to construct meaning’ and ‘translating a written text in speech’ (CEFR Companion Volume: Council of Europe, 2018). The reality of superdiverse classrooms also means that schools and teachers can, and conceivably should, make use of children’s existing linguistic repertoires as a force for knowledge sharing and creation as well as to promote intercultural and plurilingual awareness within the school. Such a premise assumes that a pedagogic focus on multiple language use in classrooms can support social cohesion between children as an everyday, lived experience because children can learn concepts, learn about themselves, and learn about each other.

One way in which the Council of Europe suggests such distance can be reduced, and by implication, that empathy and interest between people connected to different cultures (Piccardo, North, Goodier, 2019) can be increased, is through engaging in ‘mediation activities and strategies’ (CEFR Companion Volume: Council of Europe, 2018). According to the Common European Framework for Languages (CoE, 2001), an international standard for describing language ability, “Mediation language activities, (re)processing an existing text, occupy an important place in the normal linguistic functioning of our societies.” (CEFR: CoE, 2001, p.14). Furthermore, “in mediating activities, the language user is not concerned to express his/her own meanings, but simply to act as an intermediary between interlocutors who are unable to understand each other directly, normally (but not exclusively) speakers of different languages. ...” (CEFR: CoE, 2001, p.87).

## 1.2 What is mediation?

In order to understand this study through the 'lens' of mediation, we draw on various theoretical understandings of mediation, particularly how it is understood in the CEFR and Companion volume (CoE, 2001; 2018) due to its relevance to language learning and use.

Mediation is a complex phenomenon that has been classified in many ways (Piccardo, North, Goodier, 2019). Put simply, mediation is concerned with making bridges between the known and the unknown, the new and the other. Therefore, mediation is at the heart of learning and development.

While this study adheres to a holistic understanding of 'mediation' as described above, the CEFR (CoE, 2001; 2018) also 'frames' the notion of mediation in relation to languages. The CEFR Companion (2018) introduced mediation, alongside interaction, to indicate communicative language activities which are not covered by reception and production. This signalled a change in focus in language education from the 'four skills' (Lado, 1961) to the four modes of activity: reception, interaction, production, and mediation (North and Piccardo, 2016).

## 1.3 A role for dictionaries in mediation

This project conceives dictionary *use* as having potential 'mediational means' because dictionaries are potential tools for mediated activities such as understanding new concepts or new words. According to Wertsch (1998), building on the work of Vygotsky (1978), cultural tools are 'mediational means' that can be involved in human action, including learning. This concept forces us to go beyond the individual agent (person) when trying to understand the forces that shape such action(s) (Wertsch, 1998). Examples of such 'tools' can be digital, such as computers, but can also include books as well as 'language' itself (Lantolf, 2000).

In addition, we conceive the process of dictionary *creation* as having potential to 'house' a variety of 'mediation activities and strategies' (CEFR Companion: CoE, 2018). However, while the use of dictionaries is mentioned eighteen times in the CEFR Companion Volume (CoE, 2018), overwhelmingly involving reading and writing, there are no references to dictionary use in relation to 'mediational activities' or activities to develop plurilingual and intercultural competences. Furthermore, while there are numerous studies on the use of bilingual and multilingual dictionaries in the language learning classroom for reading, writing and lexical development to name but a few purposes, as well as studies on the role of dictionaries in supporting plurilingual competences in school contexts (e.g., Fidler 2004; Meißner, 2011; Pujol-Ferran, DiSanto, Núñez Rodríguez, and Morales, 2019; Furlong and Bernaus, 2017),

there appear to be no studies that have linked dictionary *creation* to mediation or plurilingual and intercultural competence development.

Dictionary *creation* and *use* should therefore be potentially explored in relation to mediation and plurilingual and intercultural competence development because of the traditional role dictionaries have played in meaning-making activities, especially relating to understanding concepts and languages that are new to users. Furthermore, making use of all the languages in a classroom, as cultural tools or ‘mediational means’, can conceivably support the learning of school languages. In the case of this project, the languages under focus are Catalan and additional school languages English and Spanish, as well as awareness and use of heritage languages.

Dictionary *creation* and *use* should be explored in relation to mediation and plurilingual and intercultural competence development because of the traditional role dictionaries have played in meaning-making activities.

Dictionary *creation* and *use* reflects a potential shift from viewing dictionaries as predominantly text-based tools for primarily individual, linguistic purposes, towards how they might support social and cultural purposes of children’s and teachers’ language(s) learning and language(s) use in a school context: dictionaries can be used for communication, interaction and cooperation between newly-arrived children and more established children, and therefore we propose that they have potential in “reducing the distance” (Coste and Cavalli, 2015).

Due to the Covid-19 pandemic, the project had to be halted partway through which meant that the second planned phase regarding the children’s and school’s *use* of the dictionaries could not be carried out. However, data collection and analysis for the first, dictionary *creation* phase was completed. This report, therefore, presents how dictionary *creation* supported school classroom-based mediation activities and also gives insight into the potentially changing nature and roles of dictionaries in a dictionary creation process.

#### 1.4 The context of this research project

The considerations surrounding the linguistic and political context in which this project takes place is central to this study. In Catalunya, Spain, language diversity and language use has gone through a number of important historical shifts. Catalan was outlawed from education and public life in general during the Spanish dictatorship of General Franco (1939–1975), and so was relegated only to family and social use. In the post-Franco period, Catalan again

became the official language of Catalunya together with Spanish and the coexistence of the two languages was managed through the *Programa d'Immersió Lingüística*, an immersion system that resulted in a language shift for many children, who spoke Spanish at home and Catalan at school (Sugranyes and Gonzalez Davies, 2014). However, a new linguistic and ethnic scenario has now emerged in Catalunya where many schools, particularly state schools in Barcelona, for example, are characterised by their linguistic and cultural superdiversity. The Catalan Education department recognised this fact in their unveiling of a new Language Model for Catalunya in 2018. In addition, newly-arrived pupils are required to understand and speak Catalan as quickly as possible (Sugranyes and Gonzalez Davies, 2014) hence the language immersion programmes (Vila, 2005).

Given the linguistic and political context outlined above, there is the question for schools and teachers as to *where* in the curriculum and weekly timetable children's plurilingual and intercultural competence can purposefully be planned for. How such conscious linguistic and cultural competence development can be integrated into a school's yearly planning is a complex issue, particularly given that Catalan is still considered by the Education Department as needing to be protected against the more widely-spoken language of Spanish in this context (SGLP, 2018). English too is still considered by many state schools as the third language to be taught in schools. In Catalan public (state-run) schools, the Foreign Language classroom dominated by English, which can be taught either as a separate subject or through Content and Language Integrated Learning (CLIL). Issues of time 'dedicated' to each language in the weekly timetable for children is not only a complex issue but can be perceived as a political one (Bretxa, Comajoan-Colomé and Vila, 2017; SOCS, 2021). Some researchers propose that the Foreign Language classroom is potentially an apt place for plurilingual projects because children experience the same feeling of "foreignness" to Catalan and it can therefore be a levelling experience (e.g. Sugranyes and Gonzalez Davies, 2014). This project, however, took place in the subject 'projecte' (the project class) which takes a cross-curricular approach to the development of various competences in the Primary Curriculum, is typically designed by school teachers, and can also focus on non-linguistic competence development. While schools ultimately decide *where* and *how* children's plurilingual and intercultural competences are developed, teachers in Catalan state schools are required to formally evaluate these competences on children's yearly report card. Schools and teachers therefore need to find 'spaces' to navigate this complex issue. Although this issue is not explicitly addressed in this report, we discuss the results in relation to it in forthcoming publications.

## 1.5 Project aims

In line with the practical challenges and gaps in research previously highlighted, this dictionary project had a number of aims. The first aim was to explore how plurilingual and intercultural professional competences of pre-service teachers could be developed within this dictionary-based project in order to gain insight to inform teaching training programmes. The project was particularly focused on how plurilingual and intercultural professional teacher competences (Goullier, Carré-Karlinger, Orlova and Roussi, 2015) could be developed in relation to superdiverse primary classrooms given the largely heterogeneous linguistic and cultural profile of most pre-service teachers.

The second aim of the project was to understand how dictionary *creation* could support mediation activities (e.g. collaboration, communication, translating text) highlighted in the CEFR Companion (CoE, 2018) of children and pre-service teachers in a primary classroom. We wanted to have a practical example of how mediation activities could be carried out in planned plurilingual school-based projects and produce something that met a real school need.

Finally, related to this second aim, the project sought to gain insight about the potentially changing nature and roles of dictionaries in a primary classroom.

We wanted to have a practical example of how mediation activities could be carried out in planned plurilingual school-based projects and produce something that met a real school need.

For the purposes of this report, the results we present focus on the second aim outlined above, namely to understand how dictionary *creation* can support mediation activities in a primary classroom as well as to gain insight about the potentially changing nature and roles of dictionaries in the dictionary *creation* process. The results pertaining to the pre-service teachers' competency development are presented more fully in other forthcoming publications.

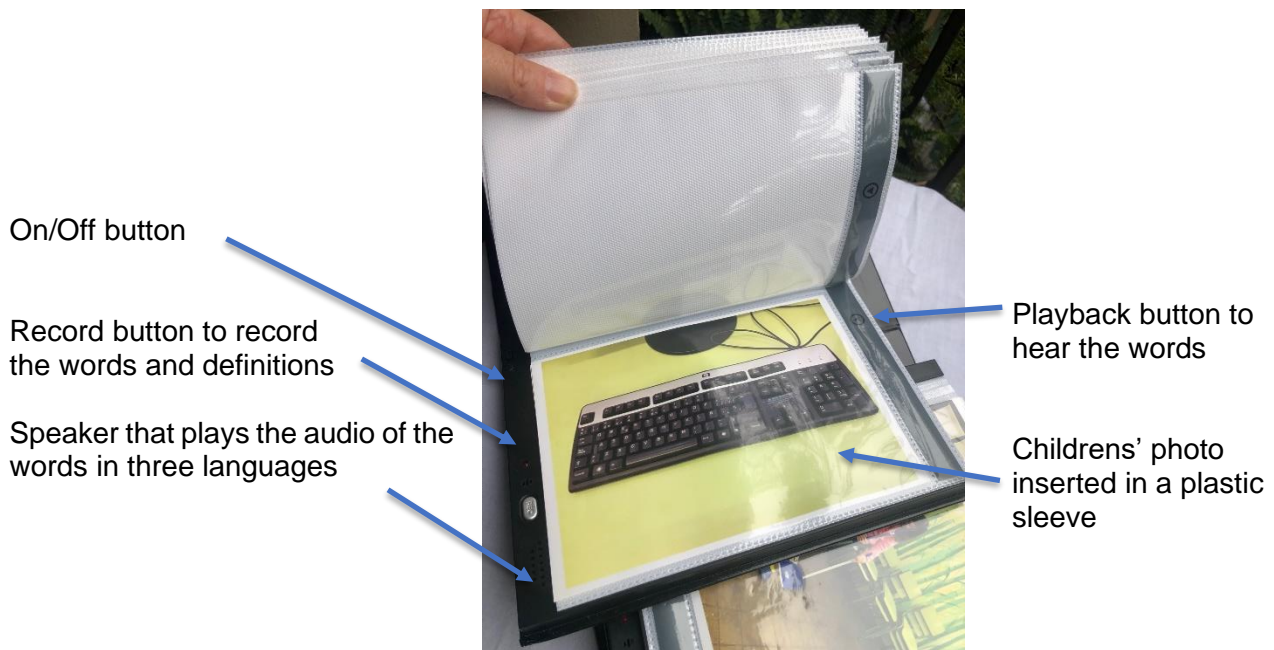
## 2 THE PROJECT OUTLINE

### 2.1 Creating plurilingual, pictorial, talking dictionaries

The first phase of the research involved a school-based project to create plurilingual, pictorial, talking dictionaries that could be used to support communication and understanding of the

school spaces and objects. The material aspects of the dictionaries were created by ‘converting’ pre-bought talking photo albums into a set of nine dictionaries that represented the school spaces and housed photos pertaining to each school space. Each photo was accompanied by a recording in three languages, as shown in **Figure 2**. Users could click on button to play back the corresponding audio again and again, as shown in **Figure 1**.

**Figure 1** The parts of the pictorial, talking dictionary



**Figure 2** Three of the nine dictionaries

School space: *La Biblioteca/ Library*

“*Libros*” (Spanish)  
 “*Llibres*” (Catalan)  
 “Books” (English)

School space: *El Menjador/ Dining room*

“*Escoba*” (Spanish)  
 “*Escombra*” (Catalan)  
 “Broom” (English)

School space: *El pati/ Playground*

“*Arbre*” (Catalan)  
 “*Arbol*” (Spanish)  
 “Tree” (English)





The dictionaries were co-created by school children and first year pre-service teachers making up nine groups, each group being responsible for one school space. The project was entitled *Espais de l'escola* /School Spaces. An important consideration was the need to foreground image and sound as well as (oral) text identified and produced by children. This highlighted the dynamic, multimodal nature of dictionaries involving image for communicating meaning(s) between children beyond purely linguistic means.

The dictionary creation phase aimed to create a 'space' (building on Kramsch's, 1993, idea of 'third space') where children's plurilingual and intercultural competences, and their ability to communicate, interact, and co-operate plurilingually could be consciously recognised, celebrated, and developed by teachers: a space where children could practise and develop this competence. This involved teachers needing to devise (mediation) activities in the first instance, highlighting the innovative nature of this phase.

The creation of a plurilingual dictionaries involved a variety of activities including games, translation activities, and awareness-raising activities. While the process involved the three school languages and children's heritage languages, the final product was in Catalan, Spanish, and English. Other languages were used in this phase including the heritage languages of children if they wished, such as Chinese, Urdu, etc., in order to recognise the already existing linguistic repertoires of children, as a way to learn about languages (e.g. similarities and differences), and to normalise plurilingual ways of working.

The dictionary work began with the creation of a translation table created by each of the nine small groups for their chosen school space. This was then used in lessons to compare similarities and differences between words in different languages including words in English, Catalan, Spanish (as school curriculum languages) as well as words in other languages (including heritage languages or languages that children wanted to learn). During this process, many plurilingual activities and games were played as a way of recognising and normalising plurilingual practices within the classroom. Some games were directly related to the dictionary creation with a focus on the lexical items of the school spaces, while others were open and had no specific relation to the lexical items. The digital tools used during the project included Chromebooks for translations, iPads for taking photos, Talking Point Pro recorders for recording voice/practising pronunciation, and the photo albums which had the ability to record sound.

The creation phase also involved children taking photos of different spaces at the school such as the canteen and the various objects that pertained to each space, such as a fork. These photos were then incorporated into the 'talking' photo album and children recorded the words orally which could then be replayed. The album then repeated what each photo represented



when the play button was clicked. This phase involved 23 children, 21 trainee teachers, an English teacher at the school and a researcher/teacher trainer over the course of 6 school-based sessions (with children) and 6 alternating, university-based sessions (without children).

The general progression of the dictionary creation was as follows:

1. Introduction of project and getting to know you. Work in translation groups in order to identify the languages that exist in the class.
2. Identify the school spaces and the objects in each one. For groups to choose a school 'space' to describe and identify the objects and/or expression used in each one.
3. Look for the words for each object or expression in the other languages (not only in Catalan, Spanish and English)
4. Identify the similarities and differences between the languages (word level).
5. Take photos of each space and object
6. Compile the dictionary using the 'talking' photo albums for each space

### 2.3 Research Questions and Data Collection

The research questions pertaining to dictionaries and dictionary creation were:

1. How does the creation of a dictionary support mediational activities (e.g. collaboration, communication, translating text) of children and pre-service teachers?
2. What does this tell us about the potential to gain insight into the changing nature and roles of dictionaries in the dictionary *creation* process and how this process facilitates various 'mediation activities and strategies'?

In order to answer these questions, a number of data sources were collected as part of an exploratory case study. Data sources included pre-service teachers' weekly reflections over six weeks amounting to 126 reflections (each reflection equating to a paragraph). The pre-service teachers could complete these in Spanish, Catalan or English but had to insert three keywords or phrases that summarised their reflection. The reflection sheets were collected after each school-based class and analysed using thematic analysis. Photos of classroom-based sessions and various artefacts relating to the teaching and learning process (e.g. activities and worksheets created by pre-service teachers) were also collected. The photos were taken by an external photographer during school-based classes. The various artefacts were collected during or after school or university-based classes, including worksheets and screenshots. These last two sources were used to triangulate findings that resulted from the

thematic analysis and support a more focused analysis on mediation activities and strategies as well as tools.

In relation to research question 1, which explored how the creation of a dictionary could support mediation activities, the themes related to the dictionary creation process were separated from the themes generated from the analysis of teachers' reflections. In addition, analytical questions were used to undertake a closer analysis of 'mediational means' (Wertsch, 1998) that asked what 'type of mediation' (North and Piccardo, 2016) was occurring, with what mediational 'tools' (Vyhotsky, 1978; Guerrero Nieto, 2007) as well as through what 'mediation activities and strategies' (CEFR Companion: CoE, 2018).

In relation to research question 2, the lead researcher reflected on the dictionary creation process exploring the nature and role of dictionaries and dictionary creation in this process.



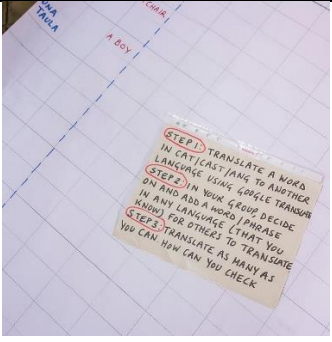













#### 2.4 The Participants

The participants included students in an English class on a Degree in Education programme. They were 21 pre-service teachers of primary and nursery age children, in their first academic year. Students were bilingual (Catalan and Spanish) with English as an additional language. The students' global level of English was approximately B1-B2 level on the CEFR (CoE, 2001) (upper intermediate). Some students had knowledge of other languages, such as French. Participants carried out the project in six sessions, over four months, between November 2019 until February 2020.

Participants also included 23 children, aged 11-12 in the final year at an urban, state primary school in Barcelona, Spain. The class was noted for being "superdiverse" (Vertovec, 2007) because of the large number of languages that were identified as present at the beginning of the project (19 languages in total). This characteristic of the school-based classroom was in contrast to the linguistic profile of pre-service teachers who were plurilingual but with a less diverse linguistic and cultural repertoire collectively within the university cohort. Almost all children were at least bilingual, knowing the official school vehicular language (Catalan) as well as Spanish, that was taught as a second language (as well as being a main societal language in Barcelona). In addition, English was taught as a Foreign Language, although for some it was a heritage language if this was not Catalan or Spanish. In addition, many children had a working knowledge of their home language. One child was considered a complete newcomer as they understood only a few words and phrases in Catalan and Spanish but spoke Bengali and Urdu. This child became a particular focus in the study because they had the linguistic profile of the children that the dictionary use phase of the project was initially designed for. Therefore, it was useful for the school teacher and teacher trainer to observe how this child responded during the project. The project was carried out in the children's

“project class”, timetabled for 1.5 hours each week. The names of the children have been changed throughout this report.

**Figure 3** Photos from each week of the six school-based sessions

<p>Wk1</p>																																																																																																									
<p>Wk2</p>		<p>Espais de l'escola</p> <p>Aula de pati Aula classe Museu Biblioteca Menjador English class Aula d'Accollida ludoteca aula de música aula de plàstica aula de informàtica sala d'actes</p>																																																																																																							
<p>Wk3</p>	<p>Instructions: Cadena lingüística o letter chain</p> <p>The aim of the game is to make a language chain in your group between different languages. The last school languages so that the last word or phrase spoken by the 1st person in the group is the SAME MEANING as the last word or phrase spoken by the last person in the group.</p>  <p>Try to make as many chains as you can in the time you have.</p> <p>You get 1 point for 1 complete chain that you make.</p> <p>You get 1 point for each language in the chain. More languages = more points.</p>																																																																																																								
<p>Wk4</p>																																																																																																									
<p>Wk5</p>																																																																																																									
<p>Wk6</p>	<p>Plurilingual Game/ Joc plurilingüe: La Bomba</p>  <p>You will need:</p> <ul style="list-style-type: none"> <li>your photos in your picture dictionary</li> <li>a timer to time 15 seconds (such as on a mobile phone)</li> <li>a pen and paper to keep a record of your lives</li> </ul>	<p>Hi ha semblances i diferències entre les llengües de la classe?</p> <p>Exemple:</p> <table border="1"> <thead> <tr> <th></th> <th>Català</th> <th>Castellà</th> <th>english</th> <th>Italiano</th> <th>Francès</th> </tr> </thead> <tbody> <tr> <td>quadern</td> <td>quadern</td> <td>cuaderno</td> <td>notebook</td> <td>quaderno</td> <td>cahier</td> </tr> <tr> <td>taules</td> <td>taules</td> <td>mesas</td> <td>tables</td> <td>tavole</td> <td>tables</td> </tr> <tr> <td>llums</td> <td>llums</td> <td>luz</td> <td>lights</td> <td>lumi</td> <td>lumière</td> </tr> <tr> <td>finestres</td> <td>finestres</td> <td>ventanas</td> <td>windows</td> <td>finestre</td> <td>fenêtre</td> </tr> <tr> <td>prestatges</td> <td>prestatges</td> <td>estantes</td> <td>shelves</td> <td>mensole</td> <td>étagère</td> </tr> <tr> <td>cadira</td> <td>cadira</td> <td>silla</td> <td>chair</td> <td>poltrona</td> <td>siège</td> </tr> <tr> <td>rellitoge</td> <td>rellitoge</td> <td>reloj</td> <td>clock</td> <td>orologio</td> <td>montre</td> </tr> <tr> <td>números</td> <td>números</td> <td>números</td> <td>numbers</td> <td>numeri</td> <td>numéros</td> </tr> <tr> <td>pissarra</td> <td>pissarra</td> <td>pizarra</td> <td>blackboard</td> <td>lavagna</td> <td>tableau</td> </tr> <tr> <td>llibres</td> <td>llibres</td> <td>libros</td> <td>books</td> <td>libri</td> <td>livres</td> </tr> <tr> <td>ordinador</td> <td>ordinador</td> <td>ordenador</td> <td>computer</td> <td>computer</td> <td>ordinateur</td> </tr> <tr> <td>altaveu</td> <td>altaveu</td> <td>altavoz</td> <td>speakers</td> <td>altavox</td> <td>haut-parleur</td> </tr> <tr> <td>persianes</td> <td>persianes</td> <td>persianas</td> <td>blinds</td> <td>persiane</td> <td>persienne</td> </tr> <tr> <td>cartells</td> <td>cartells</td> <td>carteles</td> <td>posters</td> <td>cartello</td> <td>affiche</td> </tr> <tr> <td>purfú</td> <td>purfú</td> <td>perfume</td> <td>perfume</td> <td>profumo</td> <td>parfums</td> </tr> <tr> <td>pissarra digital</td> <td>pissarra digital</td> <td>pizarra digital</td> <td>digital blackboard</td> <td>lavagna digitale</td> <td>tableau numérique</td> </tr> </tbody> </table> <p>PAS 1 IDENTIFICAR PARAULES QUE S'ESCRIVEN DE MANERA SEMBLANT</p>		Català	Castellà	english	Italiano	Francès	quadern	quadern	cuaderno	notebook	quaderno	cahier	taules	taules	mesas	tables	tavole	tables	llums	llums	luz	lights	lumi	lumière	finestres	finestres	ventanas	windows	finestre	fenêtre	prestatges	prestatges	estantes	shelves	mensole	étagère	cadira	cadira	silla	chair	poltrona	siège	rellitoge	rellitoge	reloj	clock	orologio	montre	números	números	números	numbers	numeri	numéros	pissarra	pissarra	pizarra	blackboard	lavagna	tableau	llibres	llibres	libros	books	libri	livres	ordinador	ordinador	ordenador	computer	computer	ordinateur	altaveu	altaveu	altavoz	speakers	altavox	haut-parleur	persianes	persianes	persianas	blinds	persiane	persienne	cartells	cartells	carteles	posters	cartello	affiche	purfú	purfú	perfume	perfume	profumo	parfums	pissarra digital	pissarra digital	pizarra digital	digital blackboard	lavagna digitale	tableau numérique	
	Català	Castellà	english	Italiano	Francès																																																																																																				
quadern	quadern	cuaderno	notebook	quaderno	cahier																																																																																																				
taules	taules	mesas	tables	tavole	tables																																																																																																				
llums	llums	luz	lights	lumi	lumière																																																																																																				
finestres	finestres	ventanas	windows	finestre	fenêtre																																																																																																				
prestatges	prestatges	estantes	shelves	mensole	étagère																																																																																																				
cadira	cadira	silla	chair	poltrona	siège																																																																																																				
rellitoge	rellitoge	reloj	clock	orologio	montre																																																																																																				
números	números	números	numbers	numeri	numéros																																																																																																				
pissarra	pissarra	pizarra	blackboard	lavagna	tableau																																																																																																				
llibres	llibres	libros	books	libri	livres																																																																																																				
ordinador	ordinador	ordenador	computer	computer	ordinateur																																																																																																				
altaveu	altaveu	altavoz	speakers	altavox	haut-parleur																																																																																																				
persianes	persianes	persianas	blinds	persiane	persienne																																																																																																				
cartells	cartells	carteles	posters	cartello	affiche																																																																																																				
purfú	purfú	perfume	perfume	profumo	parfums																																																																																																				
pissarra digital	pissarra digital	pizarra digital	digital blackboard	lavagna digitale	tableau numérique																																																																																																				

The photos, in **Figure 3** above, show various aspects from the school-based classes (games played, participants, artefacts produced, tools used, activities carried out) which formed part of the project as bi-weekly school-based classes, alternating with separate classes for both pre-service teachers and children in their own school/university.

### 3 RESULTS AND EVALUATION

#### 3.1 Thematic Analysis

The results of the thematic analysis based on the pre-service teachers' written reflections produced eight main themes:

1. Thankful for the experience of the project
2. The school-based experience
3. Roles and tasks of a teacher
4. Learning about children's learning
5. Awareness of linguistic and cultural diversity and the use of plurilingual repertoires
6. Getting to know and trust each other
7. Mutual learning and cooperation
8. Learning, using and awareness of languages

These themes supported an initial overall understanding of the project from the pre-service teachers' perspective.

While all the themes, and the sub-themes identified within these, are presented in Appendix 1, for the purposes of this report, only the themes that directly pertain to the dictionary creation process are analysed in detail. These were themes 5, 7 and 8.

Research question 1 related to how the creation of a dictionary supported the mediation activities (e.g. collaboration, communication, translating text) of children and pre-service teachers. First, we present the themes directly pertaining to the dictionary creation process and then discuss these themes and activities in relation to the notion of mediation.

#### **Theme 5. Awareness of linguistic and cultural diversity, children's plurilingual abilities and working with children's plurilingual repertoires**

This theme encompassed pre-service teachers' awareness of linguistic diversity, cultural diversity, awareness of children's plurilingual abilities, and developing ways of working to develop children's plurilingual abilities.



Almost all participants expressed their recognition of children's linguistic diversity in terms of surprise at the number of languages present in one class: both at an individual child level and collectively as a class.

One participant highlighted languages spoken at an individual level:

What surprised me was that many of these children could speak 2 or 3 languages and that many of them for example knew Italian or other languages.

El que a mi em va sorprendre va ser que molts d'aquests nens saben parlar 2 o 3 llengües i que molts d'ells per exemple sabien Italià o altres llengües.

While another participant highlighted the collective number of languages.

Among the whole class I was able to check that together we can come to speak and understand more than 10 languages.

Entre tota la classe he pogut comprovar que tots junts podem arribar a parlar i entendre més de 10 idiomes.

Linguistic diversity was made visible through a language audit activity in small groups then as a whole class. This took place in the first two sessions as can be seen in **Figures 4-6**.

**Figure 4**



**Figure 5**



**Figure 6** The final class list



The 'Languages we speak and understand' activity revealed that there was knowledge of 19 languages present in the class, highlighting its superdiverse nature. Most participants highlighted that the superdiversity was not only in terms of the number of languages present in one class but also a recognition that the children could understand or speak so many

languages with such a variety within the class i.e., not from the same root or geographical region. This is mentioned by one participant below:

I thought it was a very nice experience, and we could appreciate the number of different languages in one class: there were children who could speak Japanese, Tagalog, Chinese, German, Portuguese... This makes me think about the diversity that exists today in schools and its importance.

Me pareció una experiencia muy bonita, y podimos apreciar la cantidad de diferentes lenguas que hay en una sola clase: habían niños que sabían hablar japonés, tagalo, chino, alemán, portugués... Esto me hace pensar sobre la diversidad que existe hoy en día en las escuelas y la importancia de ella.

This awareness also encompassed a recognition that many, if not all children, understood/spoke more languages than the officially taught school languages of Catalan, Spanish and English, and in many cases also knew more languages than the pre-service teachers themselves and with greater variety.

As one participant expressed it:

It is curious that the girl Anna knows more languages than we do.

Es curiós que la nena amb la que està l'Anna sap més llengües que nosaltres .

In terms of mediation, we propose that the language audit activity with the children mediated an understanding of the concept of diversity- or “superdiversity” (Vertovec, 2007) - for the pre-service teachers, without them using the term explicitly. The activity involved ‘collaboration in a group’ (CoE, 2018) which also supported the mediation of understanding this concept.

This result concurs with the findings from the written reflections of the university students after session 2. This was when word searches containing the names of different languages were created with the children. Before the pre-service teachers went into the school, the languages they referred to (and implied awareness of) were diverse but Eurocentric. This was evident in the word searches that they created, without the children in a university class planning lesson whereby their choice of languages was predominantly biased towards European countries. In contrast, the word searches that they created with the children in class were more diverse, not only in terms of reflecting an increased number of different languages, but also reflecting languages beyond Europe. An example of how the choice of languages changed after going into the school for the second session can be seen in Appendix 2. In terms of mediation, the language audit activity with the children mediated the awareness of superdiversity which appeared to result in a less ethnocentric understanding of plurilingualism.

Similarly to the emerging awareness of language diversity, the awareness of the diversity of children's different cultural backgrounds was framed by most participants as surprise, being impressed, and/or as a form of 'richness'. 'Richness' was a notion mentioned by many participants, as in the following example:

The big diversity of cultures makes the class very rich.

This awareness was noted in the reflections after the first session at the school when pre-service teachers had their first face-to-face contact with the children, where cultural diversity could be experienced in the initial contact with the children, not only discussed in a university class. Almost all pre-service teachers perceived children's cultural diversity as something positive and/or something they could learn from.

One participant stated:

The variety of cultures and languages in the same classroom was impressive (Bangladesh, China, Morocco, Iceland and many more places) In addition, we learned what diversity really was in the classroom.

La variedad de culturas y lenguas que había en una misma aula era impresionante (Bangladesh, China, Marruecos, Islandia y muchos lugares más) además que aprendimos lo que realmente era diversidad en el aula.

The variety of cultures present led one participant to note the differences between children's gestures which he attributed to cultural differences:

By having in my group three children from three different cultures (South America, Asia and Europe) we can contrast their behaviours and the gestures they make.

Al tener en mi grupo tres niños de tres culturas diferentes (sudamérica, asiática y europea) podemos contrastar sus comportamientos y los gestos que hacen.

A recognition of what children could *do* with languages was also encompassed in Theme 5 and seemed to emerge from school-based session two onwards. Pre-service teachers not only became aware that children knew how to speak in many languages but also that the children could use languages to do many things plurilingually.

One participant describes how she was surprised at how children could orally translate in different languages:

...was pleasantly surprised for the command of the children when translating the same word or expression in many different languages.



The awareness of what children could *do* with languages depended on the specific activities or games that they engaged in, such as playing plurilingually where changing languages orally was necessary. Almost all participants expressed surprise at children's plurilingual abilities, suggesting that pre-service teachers were becoming aware that children had already developed many plurilingual competences previous to the project.

The fourth sub-theme here was 'Working with children's multiple languages'. This sub-theme reflected the fact that many participants during the course of the school-based sessions were learning *how* to support multiple languages in the class and acquiring practical skills and techniques. Many participants highlighted that they learnt *how* to work with multiple languages in the classroom.

One participant described how they learnt about dynamics to do with languages, could experiment at first hand with how to work with plurilingualism, and also observed how activities can be used to leverage knowledge and understanding of children's pre-existing language repertoire, as well as for learning new languages:

This was the first time I was able to experience first-hand and in more depth how multilingualism can be worked on in a classroom.

Aquesta ha sigut la primera vegada que he pogut experimentar en primera persona i amb més profunditat com es pot treballar el plurilingüisme en una aula.

Activities and games helped make children's multiple languages visible in order to work with existing language(s) and extend emerging language(s). One participant explained that this "observing" helped her see that children could learn languages using a plurilingual approach as a way of working with multiple languages:

With each activity we have been able to know and observe the different languages that are spoken in the same school. This helps us to see that children can learn many languages at once and master them without any problems depending on when you have to speak them.

Con cada actividad hemos podido conocer y observar las diferentes lenguas que se hablan en un mismo colegio. Esto nos sirve para ver que, los niños pueden aprender muchos idiomas a la vez y dominarlos sin ningún problema dependiendo del momento que tengas que hablarlo.

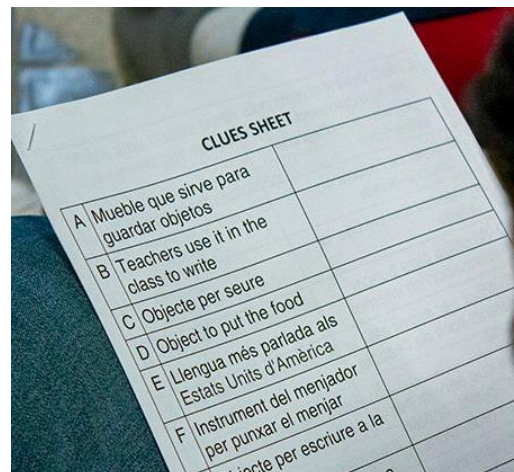
There were two games especially pertinent to the dictionary creation process which appeared to support pre-service teachers in seeing *how* they might work with children in a plurilingual classroom. While the use of games had different pedagogical purposes throughout the project, some of them had a specific role in preparing children for remembering, saying the vocabulary for creating their dictionaries, and learning the words for the dictionaries in the three

languages. The first was the The Alphabet Game where the children had to guess the school space or object related to one of school spaces and write the answer in the language that the question was written in, alternating between Catalan, Spanish and English. The second game was the Bomb Game or 'Boom' which is presented and discussed below in relation to theme 8.

The Alphabet Game can be seen in **Figures 7-9**. **Figure 7** shows the pre-service teachers and teacher trainer explaining the rules before distributing the clue sheets. Behind them is a wheel with letters on to spin and see which letter an arrow lands on. **Figure 8** shows the plurilingual clue sheet, so for example, clue “ B. Teachers use it in the classroom to write” requires “Blackboard” (starting with the letter B) as the answer in English.

**Figure 7** Pre-service teacher and teacher trainer preparing to read the instructions for the The Alphabet Game

**Figure 8** Plurilingual clue sheet co-created by teacher trainer and pre-service teachers to accompany The Alphabet Game



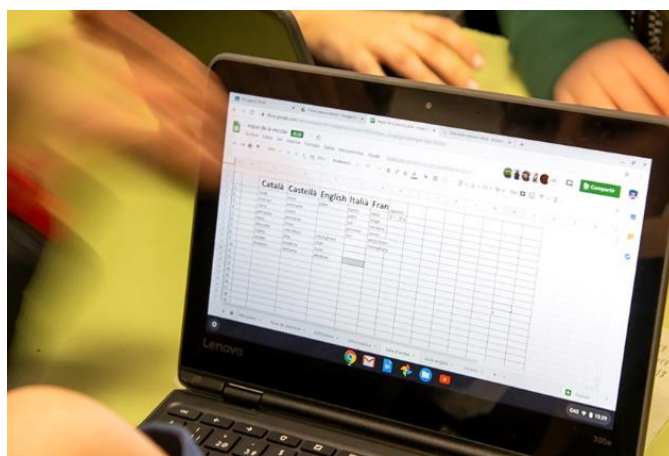
**Figure 9** Reading and completing the clue sheet for the Alphabet Game



The Alphabet Game can be considered a mediation activity focused on ‘collaborating in a group’ that supported ‘facilitating collaborative interaction with peers’ (discussing the answers orally for the clues). This was also confirmed by theme 7 (7.1.Learning together/mutuality: pre-service teachers and children together). Furthermore, the game supported ‘collaborating to construct meaning’ by orally guessing and writing a list of words from their own shared pre-existing and developing (pluri)linguistic repertoire(s).

Also, in the sub-theme of ‘Working with children's multiple languages’ which was focused on *how* pre-service teachers might work in plurilingual classrooms, one teacher highlighted the importance of not only using a list of the words for the dictionary, as can be seen in **Figure 10**, but of using the words with the corresponding pictures. This was especially so that the child who was a newcomer to the school and spoke none of the main school languages could understand the meaning of each school space or object, as can be seen in the following excerpt as the pre-service teacher highlights the need for the “picture” next to the corresponding words.

**Figure 10:** Creating a translation table to learn and understand the words for their School space e.g. the playground/*el pati*



Then we had to write in a list the different objects in the classroom that were allocated to us for the album and the translations into the different languages. As [*the newcomer*] is in our group, it has been very important to put the pictures so that you understand the meaning of each thing.

Després, hem hagut d'escriure en una llista els diferents objectes de l'aula que ens va tocar per l'àlbum i les traduccions als diferents idiomes. Com al nostre grup està [el nouvingut] a sigut molt important posar també les imatges perquè entengui el significat de cada cosa.

This insight highlighted her awareness of the importance of using visual language, not just oral and textual, when working with children who were newcomers and whose understanding in the school languages was still emerging.

In terms of mediation, the need to insert a picture to aid understanding of the text can be understood as a 'mediating strategy'. However, the strategy neither relates to 'explain(ing) a new concept' or 'simplify(ing) a text' which are in the CEFR Companion (CoE, 2018). Instead we propose 'illustrating a concept' as an appropriate descriptor.

### **Theme 7: Mutual learning and co-operation**

Theme 7 encompassed sub-themes of 'learning together' (pre-service teachers and children) and 'co-operating with each other through interaction/communication' (children).

Many participants used the word "mutual" explicitly. In addition, a number of words in Catalan or Spanish also appeared frequently in this theme, reflecting a sense of togetherness. These were the words "*tant*" (is equally for...x as it is for x); "*nosaltres*" (us) and/or the verb in third person e.g., "*aprenem*" (we learn). Some of these features are illustrated in the extract below:

This activity seems to me a good way to work on the subject as there is mutual learning and the role of the teacher is already being put into practice. This learning is as much for the school students as it is for the university students now that the interaction between the two (groups) is in three languages: Catalan, Castellano [Spanish] and English and this helps a lot to practise and learn new things in the three languages.

Aquesta activitat em sembla una bona manera de treballar l'assignatura ja que hi ha un aprenentatge mutu i ja es posa en pràctica la funció de docent. Aquest aprenentatge és tant per part dels alumnes de l'escola com per part dels estudiants universitaris, ja que la interacció entre els dos és en tres idiomes: català, castellà i anglès, i això ajuda molt a practicar i aprendre coses noves de les tres llengües.

Another sub-theme that emerged, related to children's co-operation and communication with each other. Similarly to the previous extract, another participant attributed the facilitation of co-operation and communication to an activity.

That's why my favourite activity was working in a group to make the word search, I think it was a good way to make the children work co-operatively and in which they learned to communicate between themselves.

És per això que l'activitat que més em va agradar va ser la de treballar en grup per realitzar la sopa de lletras, penso que va ser una bona manera de fer treballar els nens cooperativament i en la qual van aprendre a comunicar-se entre ells.

### **Theme 8: Learning, using and awareness of languages**

This theme contained five sub-themes namely: 'children teaching the pre-service teachers' their (the children's) family languages'; 'learning languages through activities and games'; 'children and pre-service teachers' learning about languages'; 'working plurilingually with electronic and digital tools' and 'working plurilingually through games'.

Many participants noted that children were able to teach the pre-service teachers their heritage or other languages and these were predominantly, although not exclusively, non-European languages which these pre-service teachers were not familiar with, and therefore they became more aware of plurilingual repertoires beyond their own Eurocentric plurilingual repertoire, such as Arabic, Bengali and Chinese.

One participant stated:

Today for example I learned a little Arabic thanks to Ayad.

Avui per exemple he après un mica d'àrab gràcies a l'Ayad.

While this theme mainly emerged after playing the telephone game (which was a non-dictionary related game), it did relate to other activities in the dictionary creation process.

Another example was one pre-service teacher who received lexical and pronunciation assistance from a child regarding one of the languages for the dictionary, while they were using the Talking Point Pro tool, referred to as "the speaker" in the excerpt below. This was probably English given that both pre-service teachers were bilingual in Catalan and Spanish and were learning English at the university and there were a number of children whose heritage language was English.

While recording the words in the "speaker" we had to review how the things that came out in the photos were said and thanks to Lali (a school student) we learned words that we did not know or said poorly.

Alhora de gravar les paraules al "speaker" hem hagut de repassar com es deien les coses que sortien a les fotografies i gràcies a la Lali (alumne de l'escola) hem après paraules que no sabíem o que les dèiem malament.

In terms of mediation, the Talking Point Pro tool can be considered a tool for mediation (Vygotsky, 1978; Guerrero Nieto, 2007) for practising speaking, listening to the audio recording, and focusing on the pronunciation of words for the final dictionary.

Most participants noted that children were learning languages through activities and games including learning vocabulary, reading skills and pronunciation. This is highlighted in the two extracts below.

They learned different words in other languages with the different activities they made.

We have finished the last words that remained to be translated, and the children have been surprised to know what the translation of these was like, my "partner" did not know how to read or pronounce them, he has been fascinated. I think that in general he has really enjoyed being able to discover how to write both in his own language and in other languages.

Hemos acabado las últimas palabras que quedaban por traducir, y los niños se han sorprendido de saber como era la traducción de estas, mi "partner" no sabía leerlas o pronunciarlas, se ha quedado fascinado. Creo que en general ha gustado mucho poder descubrir como se escribe tanto en su propia lengua como en otras lenguas.

Specifically, the translation of the words for the dictionaries using Google translate and the Google sheet could be considered a 'mediating activity' that supported 'translating a text in writing' although some children used the Google translate facilitate to hear the word and not only see it translated textually.

Many pre-service teachers highlighted the learning of English as an additional language, a language to be incorporated into the dictionaries.

The boys are involved, eager and interested and strove to practise the English language (which in their case is not the mother tongue / dominant)

Los chicos están involucrados, le ponen ganas e interés y se esfuerzan en practicar la lengua inglesa (que en su caso no es la materna/dominante)

As for the activities done in class, they were very entertaining and helped us get to know each other. They also helped us learn new words and in new languages and compare them with each other.

En quant a les activitats realitzades a classe, van ser molt entretingudes i ens van ajudar a conèixer-nos entre nosaltres. També ens van ajudar a aprendre paraules noves i en nous idiomes i a comparar-les entre elles.

Children and pre-service teachers' learning about languages emerged predominantly in session 5 as children and pre-service teachers carried out a similarities and differences activity. This can be seen in **Figure 11** below. The comparison entailed finding out about non-school languages and non-European languages: languages that the pre-service teachers were less familiar with.



**Figure 11** Translation of words from the School Spaces (Espais de l'Escola): Identifying Similarities and Differences

	CATALÀ	CASTELLÀ	ANGLÈS	FRANCÈS	XINÈS (TRADICIONAL)	ITALIÀ	BENGALÍ	RUS	PASTÚN
1.	Menjar	comida	food	nourriture	食物	da mangiare	খেতে	Есть	د خوړلو لپاره
2.	Cuiner	cocinero	cook	cuisiner	做饭	capacuocu	প্রধান পাচক	шеф-повар	پختی
3.	Monitors	monitores	dining monitor	moniteur	顯示器	monitore	মনিটর	мониторы	خارونگی
4.	Plats	platos	plates	plats	碟子	piatti	খানা-বাসন	посуда	پختی
5.	Gots	vasos	cup	verres	眼鏡	vasi	জাহাজ	суд	عینکی
6.	Forquilles	tenedores	forks	fourchettes	叉子	forcelle	কাটাচামচ	вилки	فورکونه
7.	Ganivets	cuchillos	knives	couteaux	刀	coltelli	ছুর	вилки	چاقو
8.	Culleres	cucharas	spoons	cullière	湯匙	cucchiai	চামচ	ложки	چمچونه
9.	Gerra	jarra	pitcher	gerre	投手	caraffa	জলপাত্র	кувшин	گورد
10.	Cadires	sillas	chairs	chaises	椅子	sedie	চেয়ার	стулья	چوکي
11.	Taules	mesas	tables	tables	桌子	tavoli	টোবল	таблицы	میزونه
12.	Aixeta	grifo	tap	taper	輕拍	rubinetto	কল	кран	ناپی
13.	Lavabos	lavabos	wc	toilettes	盥盆	servizi igienici	টয়লেট	туалеты	نشانیونه
14.	escombra	escoba	broom	balai	掃帚	spazza	sweeps	метет	ورور
15.	Recollidor	recogedor	picker	pelle à poussière	簸箕	picker	জুতো	сборщик	زارونگی
16.	Jocs	juegos	games	jeux	遊戲	giochi	গেম	игры	لوبي
17.	Draps	Trapos	rags	chiffons	破布	stracci	শেকড়	тряпье	گرسونه
18.	Paperera	papelera	paperbin	poubelle	垃圾桶	Cestino	ত্রাশ ক্যান	Мусорный бак	کتابقات دان
19.	Quadres	cuadros	pictures	tableaux	畫作	immagini	ছবি	фотографии	انگورونه

One participant compared Urdu and English:

To conclude, I read them a series of questions that were related to languages and their similarities and differences. We all came to the conclusion that there are many similarities and at the same time many differences between languages, such as English and Urdu have a lot of very similar words that are almost spelled the same

Per finalitzar, els vaig llegir una sèrie de preguntes que estaven relacionades amb les llengües i les seves semblances i diferències. Entre tots vam arribar a la conclusió de què hi ha moltes semblances i a la vegada també moltes diferències entre llengües, com per exemple, l'anglès i l'urdú tenen un munt de paraules molt semblants i que gairebé s'escriuen igual

Another participant identified languages with the same and completely different roots:

We also analysed the differences and similarities that exist in each of the languages and were able to see that there are some that are similar (such as Catalan and French), and others that have nothing in common (such as English and Russian)

També vam analitzar les diferències i similituds que hi ha en cadascuna de les llengües i van saber veure que hi ha algunes que s'assemblen (com per exemple, el català i el francès), i d'altres que no tenen res a veure (com per exemple l'anglès i el rus)

This activity was predominantly highlighted in Theme 7 because it contributed to the sense of mutual learning about languages that was developing between the children and pre-service teachers, by making comparisons between languages together. This was notable in many pre-service teachers' use of the "we" form in Catalan (e.g. *vam arribar*) to describe the activity.



In addition, although comparing the words in different languages did not directly contribute to the making of the final dictionaries as a product, the activity did contribute to visualising and connecting to the heritage languages of children (if they chose) and any other languages they were curious about. In relation to mediation, the words that were being translated into children's heritage languages were the words for the dictionary. The translation activity can be understood as 'mediating text' (the children used Google translate to translate written words for the dictionary between different languages, including heritage languages) and 'mediating concepts' (children collaborated to construct meaning, both written and orally to understand similarities and differences in what they had produced).

Working plurilingually with electronic and digital tools also featured as a prominent sub-theme. Digital tools included Google Chromebooks, the Google Translate website and a shared Excel table in Google drive for creating the tables of the words related to each school space in different languages, including Catalan, Spanish and English but also other languages as they wished. Children included Italian, Russian, Chinese, Portuguese. This can be seen in **Figure 11** above.

The Google Translate tool was used by children to translate the words for their dictionary across languages. Google Translate was also used by the newcomer to the school, to translate words from Spanish or Catalan to his own heritage language: Bengali. Furthermore, the Google Images tool was used by the pre-service teachers who worked alongside him in order to communicate concepts. Both of these examples highlight the role that digital technologies can play in including children with few words in the school languages. These tools can be understood to mediate translation of text but also mediate concepts (e.g. show an image for a word with an unknown meaning).

One participant describes working with multiple languages and multiple people with the Google Chromebooks:

Then we grabbed the Chromebooks and followed the table of elements of the school space, we had the dining room, and continued translating into different languages, such as Chinese, Bengali, and Pashto. At the same time, Maya did it with Italian and Russian.

Després vam agafar els Chromebooks i vam seguir la taula dels elements de l'espai de l'escola, nosaltres el menjador, i vam seguir traduint amb diferents idiomes, com el xinès, el bangalí i el pastún. Ahora, l'Maya ho va fer amb Italià i rus.

Another digital tool used in the dictionary creation process were iPads for taking photos of the school spaces and objects that were to go into the dictionaries. The use of these tools can be considered as 'mediating communication' as the shots were selected by students, edited and

later printed in order to communicate a specific pre-determined concept for their allocated school space.

**Figure 12** Using the iPad for taking photos of the school spaces



**Figure 13** Looking at a Talking Point Pro recorder together to see how it works



Furthermore, The 'Talking Point Pro' electronic recorders were used for practising the pronunciation of the words in the three languages as a way of preparing for recording the final oral version of the dictionaries.

One participant described this plurilingual, electronic process in the following way:

We used material that records the voices and reproduces them again... once they knew how it worked, we went to the photograph and recorded the name in different languages, to familiarise ourselves. They really enjoyed this activity and did not want to stop recording different words

Vam utilitzar material que grava les veus i les torna a reproduir... un cop van saber com funcionava, vam anar fotografia i gravàvem el nom en diferents idiomes, per familiaritzar-nos. Aquesta activitat els va agradar moltíssim i no volien parar de gravar diferents paraules

Another participant noted that the Talking Point Pro served as a “hook” to gain the children’s interest.

They found it fun to place the photos in the album and practise the words in the 3 languages: Catalan, Spanish and English (although they had no idea of the latter). The talking point has served to "hook" them and, being something unknown to them, has attracted the activity from the beginning. The downside is that as they were so excited about the Talking Point and practising the different words (we had 25 photos) the time flew

les ha parecido divertido lo de colocar las fotos en el álbum y practicar las palabras en los 3 idiomas: catalán, castellano e inglés (aunque de este último no tenían ni idea). El talking point ha servido para “engancharlos” y, al ser algo desconocido para ellos, les ha atraído la actividad desde el inicio. La parte negativa es que como estaban tan

entusiasmados con el Talking Point y practicar las diferentes palabras (nosotros teníamos 25 fotos) se nos ha pasado el tiempo volando

The children put the photos on different pages in the albums alphabetically according to the Catalan word. Then they used the recording button on the albums to record the names of the space or object corresponding to the photo on each page. Almost all participants viewed this process positively, with many describing the recording of the words for the dictionary as difficult at times but fun and motivating. This positive view is reflected in the excerpts from the following participants:

...we recorded the words in the dictionary in the different languages. They really enjoyed this activity as it was a lot of fun, and we had a lot of fun. There were words that were difficult for them but in the end, they managed to record them with very good pronunciation.

...hem gravat les paraules del diccionari en els diferents idiomes. Aquesta activitat els ha agradat molt ja que ha sigut molt divertida i ens hem regut molt. Hi havia paraules que els costaven però al final han aconseguit gravarles amb molt bona pronunciació

Once we practised the pronunciation of the words through the previous dynamics, we recorded the voices of the students naming each of the objects of the "pictionary" in Catalan, Spanish and English... Jan and Isiah .. alternated continuously. At this time, both students showed engagement in and interest in the activity. In addition, during this time, they corrected each other and learnt on each other, therefore showing cohesion and self-efficacy. Maybe, this motivation is caused by an innovative technology

Un cop vam practicar la pronunciació dels mots mitjançant la dinàmica anterior vam gravar les veus dels alumnes anomenant cadascun dels objectes del "pictionary" en català, castellà i anglès... Jan i l'Isiah.. S'alternaven continuament. En aquest moment ambdós alumnes es van mostrar actius i interessats per l'activitat. A més, durant aquesta, es van anar corregint i recolçant entre ells, mostrant així cohesió i autoeficàcia. Pot ser, aquesta motivació és causada per l'ús d'una tecnologia innovadora

Working plurilingually through games also formed part of this theme. The games carried out were The Telephone Game, The Alphabet Game and The Bomb Game. These games were created especially for the project and were based on an established cultural television game (*Pasapalabra*- Spanish TV), a board game (La Bomba or 'Boum'), and a language learning game (The Telephone Game). Either the teacher trainers, pre-service teachers and/or the children knew the original versions but made modifications in order to make them plurilingual. The two games that directly related to the dictionary creation process were the The Alphabet Game and the The Bomb Game. The Alphabet Game has already been described in relation to Theme 5 so here we describe The Bomb Game.

The Bomb Game was an idea that emerged from two children in the class and was based on a children's boardgame 'Tic Tac Boum' (Spanish). A time limit was given to each child to say the object or space in the three languages i.e., in Catalan, Spanish and English, based on the photos that they had taken of their school space. This game supported preparation for recording the words in the dictionaries so students had to remember them first, and then also think about clear pronunciation, in order to be understood by listeners.

According to participants, this game supported remembering the names of the words for their school space, learning the meanings and words for the dictionary photos, and fluency in naming the different spaces or objects in the different languages, as highlighted by these participants:

The Bomb Game... At this time, the students showed great fluency in naming the different spaces without any problems

El joc de la Bomba...En aquest moment, els alumnes van mostrar una gran fluïdesa en anomenar els diferents espais sense cap problema

Bomb Game... At first it was difficult for them a bit because they didn't remember many words in English but in the end both Xavi and Babul learnt all the meanings and all the words.

... Al principi els ha costat una mica perquè no s'enrecordaven de moltes paraules en anglès però al final tant Xavi com el Babul s'han après tots els significats i totes paraules.

Almost all participants highlighted how motivating some of the games were, including this participant.

This game has been very enriching, motivating and competitive among them when it comes to making less time as it was timed, it has also made children think and strive to think of the word in 3 different languages (Catalan, Spanish and English), many automatically already knew how to say it and others have learned how to say this word shown in the photograph

Este juego ha sido muy enriquecedor, motivador y competitivo entre ellos a la hora de hacer menos tiempo ya que estaba cronometrado, también ha hecho pensar y esforzarse a los niños y niñas a que piensen la palabra en 3 idiomas distintos (catalán, castellano e inglés), muchos de manera automática ya sabían como se decía y otros han aprendido a saber como se decía esta palabra mostrada en la fotografía

### 3.2 Summary of mediation skills emerging from the project

Analysing the data enabled the identification of many mediational means including 'linguistic mediation' (Council of Europe, 2022; North and Piccardo, 2016), 'technological mediation' (Guerrero Nieto, 2007; Verbeek, 2015; CEFR: CoE, 2018) and 'children as mediators' (Durán, 2003; Guo, 2014) of pre-service teachers' awareness in the school-based classroom. The evolving experience and learning with the children can also be understood as 'pedagogic mediation' (North and Piccardo, 2016) because we deem that the pre-service teachers were involved in successful teaching through collaborative learning with the children.

Firstly, linguistic mediation was evident in the purposeful use of multiple languages during the games and activities: children translated (e.g. using the Google Translate) and interpreted (e.g. in the telephone game) as examples of cross-linguistic mediation. This facilitated the 'Use of (children's) plurilingual repertoires' (Theme 5) as well as contributing to 'Learning, using and awareness of languages' (Theme 8).

Secondly, the concept of children as mediators for the pre-service teachers was also identified. Many children taught the pre-service teachers words or phrases in their heritage language and in some of the written reflections, there was evidence of them teaching pre-service teachers about some aspects of their culture. This was connected to Theme 8. In this sense, the experience with the children appeared to mediate the pre-service teachers' learning about other languages and cultures, particularly non-European ones.

Thirdly, technological mediation was also clearly evident in the results that showed how computers were used to mediate text (e.g. automatic translation tools) and mediate concepts (e.g. show an image for an unknown word). These were connected to Theme 8. Importantly, technological mediation and linguistic mediation were closely linked in the physical creation of the electronic dictionary (requiring both linguistic 'translation' of the meanings of the images into oral text (vocabulary) by children as well as translation of the meanings of the images from one language to another. The mediational means therefore, for physically creating the dictionaries, were both linguistic and technological.

During the analysis of the results, it was noted that the dictionary creation process was made up of four physical 'key events', namely, A) the participants moving through the school taking photos with iPads and choosing the final photos; B) using a translation tool and creating their translation table; C) taking part in the oral and picture games and D) learning how to operate an electronic tool together and recording their voices to match specific images they had chosen for the dictionary. We summarise these events and specifically how different mediation activities and/or strategies 'map' to them, in case other educational institutions wish to replicate or develop them further.

Key event	Mediation activity	Mediation (sub-activity)
A) Participants moving through the school taking photos with iPads and choosing the final photos	'Mediating concepts'	'collaborating to construct meaning' and 'facilitating collaborative interaction with peers'
B) Using a translation tool and creating their translation table	'Mediating a text' 'Mediating communication'	'translating a written text' 'facilitating pluricultural space'
C) Taking part in the oral and picture games as a practice for recognising and recording	'Mediating communication'	'facilitating pluricultural space'.
D) Learning how to operate an electronic tool together and recording their voices to match specific images they had chosen for the dictionary	'Mediating concepts' 'Mediating communication'	'collaborating in a group' 'facilitating plurilingual space'.

To conclude, the dictionary creation process can be understood as a pedagogical activity that can facilitate various 'mediation activities' (CoE, 2018): support 'mediating a text', 'mediating concepts' and 'mediating communication'. Interestingly, some events in the process can facilitate pluricultural space for school languages only, such as the recording of the final dictionaries, or facilitate a plurilingual space to include heritage and other non-school languages such as the creation of the translation table of words of school spaces and objects.

The dictionaries were not used in the process of language learning and teaching whereby meanings are pre-decided by others and presented to the user, but rather as a mediational means for collaboratively constructing shared and agreed understandings of meanings between creators as potential users.

Research question 2 related to the potentially changing nature and roles of dictionaries in the dictionary *creation* process. Firstly, the four key events identified in the creation process



highlighted the dispersed, rather than centralised nature of lexical work, so that meaning-making related to concepts occurred across time and involving different digital and technological tools, not just one tool. Secondly, the dictionaries were not used in the process of language learning and teaching (Lew, 2021) whereby meanings are pre-decided by others and presented to the user, but rather, as a mediational means for collaboratively constructing shared and agreed understandings of meanings between creators as potential users. Thirdly, these meanings were highly localised and matched children's everyday physical spaces through the use of photos taken by them. Fourthly, the dictionary creation process also supported the facilitation of plurilingual text-based and oral spaces that reflected the linguistically and culturally superdiverse nature of the class.

Finally, the facilitation of plurilingual text-based and oral spaces also highlights the dictionary creation process as dynamic and multimodal in nature. This dynamic and multimodal nature was also reflected in the form of the final dictionaries that were trilingual and pictorial (image can be considered a fourth mode). This is in contrast to dictionaries' traditional nature of being monolingual or bilingual. The dictionaries can be understood as "multimodal productions" (Magnusson and Godhe (2019) which not only "acknowledge(s) how young people experience contemporary meaning-making" (Magnusson and Godhe, 2019) but also how they can lead and author in the act of lexical meaning making.

### 3.3. Implications and Recommendations

Regarding dictionary creation, this study has highlighted how a dictionary *creation* project can be an innovative and practical way of 'housing' a number of mediation activities and strategies. The study underscores the importance of conceiving the dictionary creation process both in terms of a 'process' and 'product' with consideration given to which languages are included, when, and how. For example, when the dictionaries are finally used with newcomers to the school, it may be more useful and accessible if the dictionaries were in the school language only given that new children need to learn it as quickly as possible. However, this is a potential future research focus.

The study underscored a potential shift in both the nature and role of dictionary-related work, compared to more 'traditional' dictionary forms and uses. It highlighted the lexical work of naming as dispersed, co-created, contextualised, and plurilingual.

The lexicographic resources that resulted from the project were primarily the nine dictionaries related to the school spaces that the children created with the pre-service teachers. However, the translation tables and posters that resulted from the project can also be considered lexicographic resources.



The study underscored a potential shift in both the nature and role of dictionary-related work, compared to more ‘traditional’ dictionary forms and uses, and highlighted the lexical work of naming as dispersed, co-created, contextualised, and plurilingual.

#### 4 OVERALL REFLECTIONS, DISSEMINATION AND FUTURE PLANS

There are limitations to the study. The most pertinent one is not having data at the level of the (oral) interaction between the children and the pre-service teachers. This would have given more insight regarding plurilingual practices (e.g. translanguaging and in which languages) at a microlevel. In order to do this, conversation analysis or discourse analysis would need to be employed.

Regarding issues that were difficult to overcome, the main one was the Covid-19 pandemic which meant that phase 2 could not be completed and the analysis of phase 1 (pertaining to the children) was delayed. However, with the data collected, new questions and avenues of research have opened up. These are namely in relation to the importance of the multimodal nature of the dictionaries, especially the role of image in understanding and constructing meaning. In addition, the role of games in the project seems to be a particular mediational strategy for teachers in developing plurilingual competences in children (and themselves) that was initially thought of as a ‘warm up’ but should be reconsidered given their central role in the results.

There are a number of possible practical applications of our research. We will share our work with the Professional Teachers Association of Catalunya (APAC) and publish the project in publications aimed at teachers as well as researchers. This dissemination is important because it addresses regional needs as well as offering practical ‘know how’ to other teachers and teacher trainers. Finally, we will publish future articles related to children’s dictionaries and teacher training.

The project has already been ‘showcased’ in two teacher training programmes: one was in collaboration with *Rosa Sensat* (<https://www.rosasensat.org/es/>) a teachers’ association who ran a preparation course for the public exams in Catalunya (*oposiciones*) for teachers who want to teach English in state primary schools. In addition, the project has been used as a ‘case study’ in various teacher training programmes within the Education Faculty at the *Universitat Internacional de Catalunya*.

The future plan for this research is to continue with the original aim of carrying out phase 2 related to dictionary use. This will require re-creating the photographs with another group of children, but the focus will be on using them with newcomers to the school. We will also continue to analyse other data in relation to the children and our other initial research questions pertaining to the non-dictionary related aspects of the project. This will feature in future publications.

## **ACKNOWLEDGEMENTS**

The project was carried out jointly by Janine Knight, a teacher trainer from a small, private university in Barcelona, and Joana Puig, a primary school teacher in a public school. The initial need for the project was identified by Joana and the conceptualisation, initial planning and bi-weekly evaluation were carried out jointly. Janine organised much of the work with the pre-service teachers, while Joana dealt largely with the arrangements for the school-based sessions. Janine collected and analysed the data which was then discussed between both researchers and the report was compiled jointly. We would like to thank all the participants that included the pre-service teachers, the children and Baixeras school for their enthusiasm and commitment to the project.

**Appendix 1.** Themes emerging from the thematic analysis

<b>Theme</b>	<b>Sub-theme</b>
Theme 1: Thankful for the experience of the project	1. Grateful/thankful
Theme 2 The school-based Experience	1. Positive 2. Useful for my future as a teacher
Theme 3: Roles and tasks of a teacher	1. Manage and organise aspects of teaching 2. Teamwork 3. Ensuring that children's learning and achievement takes place
Theme 4: Learning about children's learning	1. What children need for learning to take place 2. Likes/dislikes (children) 3. Motivation (children)
Theme 5: Awareness of linguistic and cultural diversity and the use of plurilingual repertoires	1. Awareness of linguistic diversity of the children in the class 2. Awareness of cultural diversity of children in the class 3. Children's plurilingual abilities-awareness of and working with these abilities
Theme 6: Getting to know and trust each other	1. Initial feelings- pre-service teachers 2. Initial feelings- children 3. Getting to know and understand the other (pre-service teachers and children) 4. Starting to trust (children to pre-service teachers) 5. Creating a connection (pre-service teachers and children)
Theme 7: Mutual learning and cooperation	1. Learning together/mutuality (pre-service teachers and children together) 2. Co-operating with each other through interaction/communication (children)
Theme 8: Learning, using and awareness of languages	1. Children teaching pre-service teachers' languages 2. Learning languages through activities, games 3. Learning about languages (children and pre-service teachers) 4. Working plurilingually with electronic and digital tools 5. Working plurilingually through games

**Appendix 2.** How the languages used in a group of pre-service teachers word search activity changed after going into the school for the second session

The words that pre-service teachers used in their word searches contained orthographic errors but these have not been corrected. The original words have been translated to English. The

European and Non-European languages have been put in 2 different columns to highlight this point.

Group 4.

Pre-service teacher 1's word search before school experience

Spanish English Italian Portuguese French German Catalan Swedish	Chinese Indian
---	-------------------

Pre-service teacher 2's word search before school experience

Catalan Spanish French Portuguese Basque English Italian German	Chinese Indian
--	-------------------

Pre-service teacher 3's word search before school experience

Spanish English Italian French Dutch Portuguese Catalan Basque German	none
---	------

After entering school and creating the word searches with the children the balance of European and non-European languages changed for this group.

<p>Group 4 made up of three children from group 4 and the pre-service teachers 1, 2 and 3 from above.</p>	<p>Basque Portuguese  Italian</p>	<p>Arabic Paraguayan (Guarani) Chinese Colombian (Spanish) Punjabi Japanese Argentinian Mexican Tagalog Urdu</p>
---	---	--

## BIBLIOGRAPHY

- Bretxa, V, Comajoan-Colomé, L, & F Xavier Vila. (2017). *Les veus del professorat. L'ensenyament i la gestió de les llengües a secundària*. Barcelona: Horsori.
- Council of Europe (2001). *Common European Framework of Reference for Languages: Learning, Teaching and Assessment*. Council of Europe, Language Policy Unit: Strasbourg.
- Coste, D. & M. Cavalli (2015). *Education, mobility, otherness: The mediation functions of schools*. Strasbourg: Council of Europe DGII, Directorate General of Democracy, Language Policy Unit. <https://rm.coe.int/education-mobility-otherness-the-mediation-functions-of-schools/16807367ee>
- Council of Europe (2018). *Common European Framework of Reference for Languages: Learning, teaching and assessment. Companion volume with new descriptors*. Council of Europe, Language Policy Programme. Strasbourg.
- Council of Europe (2022). *Linguistic and Cultural Mediation*. Strasbourg: Council of Europe <https://www.coe.int/en/web/lang-migrants/linguistic-and-cultural-mediation>
- Durán, P. (2003). Children as mediators for the second language learning of their migrant parents. *Language and education*, 17(5), 311-331.
- Goullier, F., Carré-Karlinger C., Orlova N., Roussi, M. (2015). *European portfolio for pre-primary educators The plurilingual and intercultural dimension*. Strasbourg: ECML, Council of Europe.
- Fidler, S. (2006). Awakening to languages in primary school. *ELT Journal*, 60(4), 346-354.
- Furlong, Á., & Bernaus, M. (2017). CLIL as a Plurilingual Approach or Language of Real Life and Language as Carrier of Culture. *Research Papers in Language Teaching & Learning*, 8(1).
- Guerrero Nieto, C. H. (2007). Applications of Vygotskian concept of mediation in SLA. *Colombian Applied Linguistics Journal*, (9), 213-228.
- Guo, Z. (2014). *Young children as intercultural mediators*. Bristol, UK: Multilingual Matters.
- Kramsch, C. (1993). *Context and culture in language teaching*. Oxford, UK: Oxford University Press.
- Lado, R. (1961). *Language Testing: The Construction and Use of Foreign Language Tests. A Teacher's Book*. Bristol, UK: Longmans, Green and Company.
- Lantolf, J.P. (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University Press.
- Lew, R. (2021). Introduction. Dictionaries and Language Teaching. *International Journal of Lexicography*. Retrieved 5 February 2022 from [https://academic.oup.com/ijl/pages/dictionaries\\_and\\_language\\_teaching](https://academic.oup.com/ijl/pages/dictionaries_and_language_teaching)
- Magnusson, P., & Godhe, A. L. (2019). Multimodality in Language Education--Implications for Teaching. *Designs for Learning*, 11(1), 127-137.
- Meißner, F. J. (2011). Teaching and learning intercomprehension: a way to plurilingualism and learner autonomy. *Towards multilingualism and the inclusion of cultural diversity*, 37-58.
- North, B., & Piccardo, E. (2016). *Developing illustrative descriptors of aspects of mediation for the CEFR*. Strasbourg: Council of Europe.
- Piccardo, E., North, B., & Goodier, T. (2019). Broadening the scope of language education: Mediation, plurilingualism, and collaborative learning: The CEFR companion volume. *Journal of e-Learning and Knowledge Society*, 15(1).

- Pujol-Ferran, M., DiSanto., J., Núñez-Rodríguez, N., & Morales, A. (2016). Exploring plurilingual pedagogies across the college curriculum. *The Canadian Modern Language Review*, 72 (4), 530-549.
- Sugranyes, C., & Gonzalez Davies, M. (2014). Translating heritage languages: Promoting intercultural and plurilingual competences. In C. Helot, R. Sneddon, & N. Daly (Eds.), *Children's literature in the multilingual classroom*. London, England: Trentham Books. Retrieved from [https://www.researchgate.net/publication/272360864\\_Translating\\_heritage\\_languages\\_Promoting\\_intercultural\\_and\\_plurilingual\\_competences\\_through\\_children%27s\\_literature](https://www.researchgate.net/publication/272360864_Translating_heritage_languages_Promoting_intercultural_and_plurilingual_competences_through_children%27s_literature).
- Subdirecció General de Llengua i Plurilingüisme (2018): *El model lingüístic del sistema educatiu de Catalunya: l'aprenentatge i l'ús de les llengües en un context educatiu multilingüe i multicultural*. Barcelona: Generalitat de Catalunya. En línia a: <https://educacio.gencat.cat/web/.content/home/departament/publicacions/monografies/molingüistic/model-linguistic-Catalunya-CAT.pdf>.
- Societat Catalana de Sociolingüística (2021): *Declaració de la SOCS sobre el model lingüístic educatiu a Catalunya*. En línia.
- Verbeek, P.P. (2016). 'Toward a Theory of Technological Mediation: A Program for Postphenomenological Research'. In J.K. Berg O. Friis and Robert C. Crease, *Technoscience and Postphenomenology: The Manhattan Papers*, pp. 189-204. London: Lexington Books.
- Vertovec, S. (2007). Super-diversity and its implications. *Ethnic and racial studies*, 30(6), 1024-1054.
- Vila, I. (2005). 'Cohesió social i llengua Catalana: Raons per fer del Català la Llengua Vehicular del Sistema Educatiu de Catalunya'. Paper presented at the *Segones Jornades del Grup Català de Sociolingüística i del Centre Universitari de Sociolingüística Llengua i Ensenyament*, Barcelona, November.
- Vygotsky, L.S. (1978). *Mind in Society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wells, G. (2007). Semiotic mediation, dialogue and the construction of knowledge. *Human development*, 50(5), 244-274.
- Wertsch, J. V. (1998). *Mind as action*. Oxford: Oxford University Press.
- Zarate, G. (2003). La médiation en situation de tension identitaire. *Français dans le monde. Recherches et applications*, (33), 173-185