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Developing Phonemic and Phonological Awareness in Italian EFL Learners: a Proposal of Original and Engaging Teaching Materials for Primary School Children

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Introduction

Research has recently investigated the influence of phonemic and phonological awareness on literacy acquisition and has suggested that the early mastery of phonological awareness skills occupy a crucial role in the later development of reading and writing abilities (Gillon, 2018, p. 38-53). The importance of providing learners from a very young age with explicit phonological awareness instruction, especially at the phoneme level, in L1, L2 and FL settings has thus been increasingly explored. A variety of training programmes have been developed and have been proven to be effective in enhancing the literacy skills of children with learning disabilities or reading difficulties, as well as of their typically developing peers (Gillon, 2018, p. 161-162; Ehri et al., 2001, p. 250-287; Adams, 1998, p. 2; Anthony and Francis, 2005, p. 255). Nonetheless, phonology seems to be generally disregarded in EFL teaching, especially in Italian primary schools (Costenaro et al., 2014, p. 209). Including phonological awareness instruction in EFL lessons seems to be particularly challenging due to the limited availability of appropriate teaching resources (Costenaro and Pesce, 2012, p. 588; Daloiso, 2017, p. 103).

The aim of the present research project was thus twofold. Firstly, it consisted in designing original phonemic and phonological awareness activities, embedded in a narrative context, that could be specifically included in Italian primary three EFL lessons. Secondly, the effectiveness of the new resources was evaluated on Italian typically developing pupils learning English as a foreign language. Four eight-year-olds were seen three times a week for seven weeks. A test was administered three times in order to assess the impact of the activities on the participants' phonological awareness skills. The assessments were conducted prior to and immediately after the instructional sessions, as well as three months after the training.

The present dissertation is composed of four main chapters. The first chapter examines the theoretical background at the basis of the new teaching materials that have been developed for the research project. It is subdivided into six sections, each of which analyses crucial aspects related to phonemic and phonological awareness

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that were considered in the creation of the teaching resources. Phonological awareness is defined in the first section, which also provides a description of the typical development of phonological awareness skills. The following subchapter focuses on the influence of the aforementioned skills on literacy acquisition, whereas important factors in L2 phonological acquisition, such as language transfer and age, are discussed in the third section. Since the purpose of the materials designed for the current study was to improve children's recognition and discrimination of specific English sounds that Italian native-speakers tend to struggle to perceive and produce, the fourth subchapter provides a contrastive analysis of the English and the Italian sound systems. It should be noted that the section particularly focuses on the North American English phonological inventory, as this English variety was selected as the pronunciation of reference in the creation of the original narrative and activities. The following section considers effective strategies for planning phonological work that could be included in EFL lessons, as well as recommended approaches to be adopted when teaching to primary school pupils. Finally, the last subchapter examines the tasks that are frequently used to assess phonological awareness skills and that were considered when developing the test for the research project.

The second main chapter of the present dissertation describes in detail the method of the quasi-experimental research, including the participants, the materials used, the duration of the study and the procedures, as well as the analysis techniques. The following chapter discusses the findings of the current research project. Pre- and post-tests' results were compared in order to evaluate the effectiveness of the new teaching materials on enhancing the participants' phonemic and phonological awareness skills. Individual and group performances in each test, as well as in each distinct subtest, are examined. An accurate analysis of the errors is also presented. The most important findings of the current research project are discussed in the last chapter, which also includes considerations on the didactic implications of the study. The limitations of the latter, as well as suggestions for future research, are finally addressed.

Chapter 1 – Phonemic and Phonological Awareness: Literature Review

This chapter aims at examining the theoretical framework underlying the creation of the original materials for the present study, which are described in detail in the following chapter. It is divided into six main sections, each of which analyses important aspects related to phonemic and phonological awareness that were considered in designing the new teaching materials. The first section introduces and defines the concepts of phonemic and phonological awareness, as well as of phonics. Furthermore, it provides a general overview of the different stages that phonological awareness skills progress through. The following subchapter zooms in on the importance of the aforementioned skills in literacy development. The necessity for explicit phonological awareness instruction, especially in EFL classrooms, is thus introduced in this section and investigated throughout the chapter. The third section particularly examines salient aspects related to the acquisition of L2 phonology, such as the Critical Period Hypothesis and the transfer of L1 characteristics on the L2/FL. Since the materials designed for the present study aimed at enhancing children's recognition of specific English sounds that seem to be problematic for Italian native-speakers, the following subchapter focuses on a contrastive analysis of the English and the Italian phonological systems. It should be further noted that North American English was specifically selected as the pronunciation of reference in developing both the narrative and the activities for the present study. Therefore, the section mainly examines the sound system of this English variety, although references to the Standard British English phonology were occasionally provided when deemed necessary. Furthermore, the purpose of the current research project was to design original materials to be included in EFL curricula in Italian primary schools. Therefore, the fifth section considers effective strategies for phonological work especially in the EFL classroom, as well as recommended approaches to be adopted when teaching to primary school children. Finally, since a test was specifically designed for the present study with the aim of evaluating the effectiveness of the original materials in enhancing the participants'

phonological awareness skills, the chapter closes with important considerations on phonological awareness assessments.

1.1 A definition of phonemic and phonological awareness

Phonological awareness has been defined as the metalinguistic "ability to identify, discriminate and manipulate the sound structure of words" (Costenaro and Pesce, 2012, p. 584). It refers to an individual's understanding that spoken words can be segmented into progressively smaller units such as syllables, onsets and rimes, and, ultimately, phonemes (Costenaro and Pesce, 2012, p. 584; Bernhardt and Stoel-Gammon cited in Gillon, 2018, p. 3; Daloiso, 2017, p. 101). Phonological awareness thus involves the capacity to focus on form independently from meaning (Adams et al., 1998, p. 9; Daloiso, 2017, p. 6; Yopp and Yopp, 2000, p. 130). Diverting the attention from meaning in order to concentrate on the structure of language is particularly challenging for children, who need to be explicitly led to notice the "phonological subcomponents of words" (Daloiso, 2017, p. 101). Nonetheless, as observed by Gillon (2018, p. 2), as well as by Costenaro and Pesce (2012, p. 584), children already possess early phonological awareness skills before they become consciously aware of the sound structure of spoken words. In fact, implicit phonological knowledge is spontaneously developed by pre-literate children acquiring a language and allow them, for instance, to correctly determine whether a word belongs to their native-language or not (Costenaro and Pesce, 2012, p. 584; Gillon, 2018, p. 2; Goswami, 2006, p. 490-491; Ukrainetz et al., 2000, p. 332).

As previously observed, phonological awareness skills progress through hierarchical stages, ranging from the syllable to the phoneme level. Words can thus be decomposed into progressively smaller elements, each of which is associated to a distinct level of analysis. They can be divided into syllables, which can be further segmented into onsets and rimes. The *onset* refers to the initial consonant or consonant cluster in a syllable (e.g. /b/ in the syllable "bas"), whereas the *rime* includes the vowel and the following phonological units (e.g. /as/ in the syllable "bas") (Costenaro and Pesce, 2012, p. 584; Gillon, 2018, p. 3; Anthony and Francis, 2005, p. 255-256). Onsets and rimes can be ultimately broken down into individual

phonemes, which correspond to graphemes in alphabetic writing systems (Costenaro and Pesce, 2012, p. 584). The developmental stages of phonological awareness are illustrated in Table 1.1 through the representation of the different structural levels constituting the word "basket".
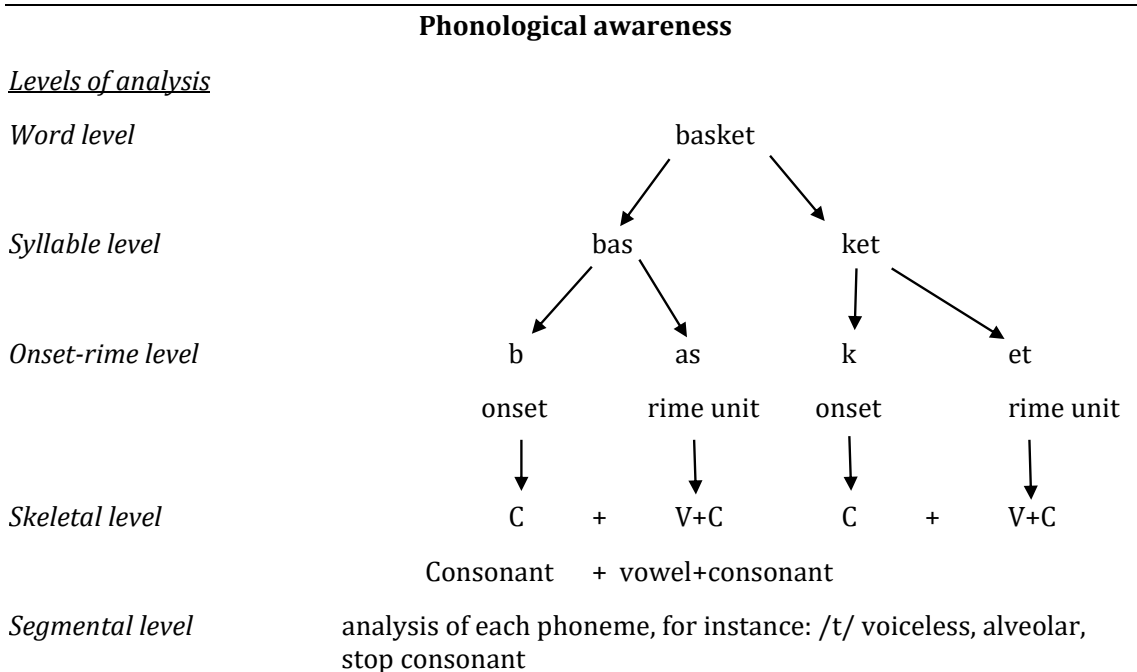
Phonological awareness

Levels of analysis	

Word level   basket

Syllable level   bas   ket

Onset-rime level   b   as   k   et

       onset   rime unit   onset   rime unit

Skeletal level   C + V+C   C + V+C

        Consonant + vowel+consonant

Segmental level   analysis of each phoneme, for instance: /t/ voiceless, alveolar, stop consonant

Table 1.1 Representation of the phonological structure of the word "basket". Adapted from Gillon (2018, p. 4) and Daloiso (2017, p. 7)

In the same manner that words can be described at distinct structural stages, phonological awareness can be represented as embracing skills at a minimum of three different levels of analysis and complexity, namely syllable awareness, onset-rime awareness and phoneme awareness (Goswami, 2006, p. 489). Research has suggested that syllable awareness skills are generally acquired earlier compared to other phonological awareness abilities. The development of the latter then gradually progresses through onset-rime and, ultimately, phonemic awareness skills, which are the most specific and difficult to acquire (Chard and Dickson, 1999, p. 262; Daloiso, 2017, p. 6-7). In fact, several studies have indicated that whereas pre-schoolers can recognise rhyming words, as well as manipulate words at the syllable

level, they lack phonemic awareness abilities, which are typically gained through formal instruction (Costenaro and Pesce, 2012, p. 585-586; Bentin, 1992, p. 168).

As stated by several scholars such as Goswami (2006, p. 490), as well as Anthony and Francis (2005, p. 256), children's acquisition of early syllable and onset-rime awareness abilities seem to be analogous across all languages. On the contrary, phonological awareness at the phoneme level seems to develop at different rates depending on the syllabic structure, as well as the degree of orthographic transparency, of the language being learned. For instance, studies have shown that children learning shallow orthographies such as Greek and Italian achieve mastery of phonological awareness skills more rapidly compared to learners of opaque orthographies such as English and French (Goswami, 2006, p. 490; Anthony and Francis, 2005, p. 256). Daloiso argues that these findings have important consequences especially in EFL teaching contexts, since they suggest that children can benefit from explicit phonological awareness instruction before being introduced to print (2017, p. 8). The aforementioned levels of phonological awareness, alongside examples of tasks generally employed to evaluate learners' skills in this domain, are included in Table 1.2. A comprehensive review of the measures that have been frequently included in phonological awareness assessments, as well as the purposes of the latter, will be provided in the last subchapter.

It has been suggested that the tasks illustrated in Table 1.2 could be classified according to their levels of complexity and of the cognitive demands they place on learners. It may thus be useful to envisage the "skills that represent children's phonological awareness" as laying "on a continuum of complexity" (Chard and Dickson, 1999, p. 262), with syllable awareness and phoneme awareness tasks being situated at the least and most challenging ends of the spectrum, respectively. In particular, blending activities at the different stages of phonological awareness are considered to be easier than segmentation tasks, which in turn, appear to be less difficult to perform compared to deletion and manipulation tasks (Schuele and Boudreau, 2008, p. 6; Chard and Dickson, 1999, p. 262). Following the developmental pattern previously described, syllable awareness tasks are thus considered to be easier to perform compared to onset-rime awareness and,

ultimately, phonemic awareness activities. In particular, operations requiring children to combine syllables together in order to form words appear to be less difficult than dividing words into syllables. Finally, deleting or manipulating syllables within words are considered to be the most challenging tasks among all syllable awareness tasks.

Phonological Analysis Level	Characteristics	Tasks
Syllable	Syllable Awareness (early phonological awareness) Children spontaneously develop syllable awareness as they acquire language skills	• identify syllables • blend syllables together in order to form a word • segment words into syllables • delete a syllable from a word
Onset-rime	Rhyme Awareness (early phonological awareness) Children develop rhyme awareness around age four	• recognise rhyming words • rhyme oddity tasks • generate rhymes • blend onsets and rimes
Syllabic structure	Syllabic Structure Awareness (late phonological awareness) It develops with explicit vowel-consonant instruction	• identify words with the same syllabic structure • discriminate vowels and consonants in a syllable
Phoneme	Phonemic Awareness (late phonological awareness) It develops with formal teaching on sound-letter correspondences and with the introduction to the alphabetic principle	• count phonemes in a word • isolate a distinct phoneme within a word • recognise words containing the same phoneme • blend phonemes together in order to form a word • segment words into their individual phonemes • delete one phoneme from a word • substitute phonemes within a word

Table 1.2 Levels of phonological awareness and examples of phonological awareness tasks. Adapted from Gillon (2018, p. 4-7), Daloiso (2017, p. 7), Costenaro and Pesce (2012, p. 586).

An identical pattern is displayed in the following onset-rime awareness level. Tasks at this stage can be ranked according to their degree of difficulty, with onset-rime blending activities and onset-rime manipulation tasks being the easiest and the most complex, respectively (Yopp and Yopp, 2000, p. 134). As far as phonemic awareness tasks are concerned, activities requiring children to isolate individual sounds within words seem to be the most accessible, followed by phoneme blending, segmentation, deletion and manipulation activities (Schuele and Boudreau, 2008, p. 6; Ukrainetz et al., 2000, p. 332). In particular, Yopp (cited in Gillon, 2018, p. 8) classified these tasks depending on the cognitive demands they place on working memory. Tasks such as segmenting, blending or isolating sounds, which implicate one operation, are thus referred to as "simple phoneme awareness tasks", whereas manipulation activities involving two operations are defined as "compound phoneme awareness tasks" (Gillon, 2018, p. 8).

It should be further noted that phonological awareness is a subcomponent of broader phonological processing skills that allow learners to use phonological information in order to process oral and written language (Gillon, 2018, p. 10; Daloiso, 2017, p. 101). Alongside phonological awareness, phonological processing abilities comprise "coding phonological information in working memory" and "retrieving phonological information from long-term memory" (Gillon, 2018, p. 10). These skills, which are strongly interwoven, have been argued to be closely connected with reading acquisition. In particular, as will be discussed in detail in the following subchapter, literacy development has been demonstrated to be mainly affected by phonological awareness among all phonological processing abilities (Anthony and Francis, 2005, p. 255). In fact, a vast body of research has suggested that early mastery of phonological awareness skills specifically influences later reading success. Explicit phonological awareness instruction thus seems to be necessary in L1, L2 and FL.

At this stage, it seems finally important to briefly mention the difference between phonological awareness and phonics. Whereas phonological awareness indicates the oral manipulation of the phonological subcomponents of words as separate from print, phonics refers to the teaching of sound-letter correspondences. Although phonological awareness can be taught independently, the best results

concerning reading acquisition have been demonstrated to derive from a combination of phonological awareness and phonics instruction (Gillon, 2018, p. 11).

1.2 The role of phonological awareness in reading acquisition

Unlike the development of oral production and comprehension skills, learning to read and write involves a shifting from implicit to explicit phonological knowledge. Since the 1970s (Gillon, 2018, p. 2; Abbott et al., 2002, p. 20), a consistent body of research has investigated the influence of phonological awareness abilities in L1 literacy acquisition, especially in English (for reviews see Gillon, 2018, p. 38-53). As previously discussed, there is a widespread consensus among researchers on the gradual progression of phonological awareness skills, which seem to develop from an understanding of larger to progressively smaller phonological units. Each of these phonological subcomponents of spoken words seems to have a different impact on reading acquisition (Neri and Pellegrini, 2017, p. 78). Some studies have examined the role of onset-rime awareness, as well as syllable awareness, in literacy development. However, their outcomes were fairly inconsistent compared to those provided by the studies that investigated the predictive power of phonological awareness at the phoneme level (for reviews see Neri and Pellegrini, 2017, p. 78; Gillon, 2018, p. 41).

Research findings have thus suggested that phonemic awareness abilities are the strongest predictor for long-term reading and spelling success in alphabetic languages (Gillon, 2018, p. 45; Chard and Dickson, 1999, p. 262; Koda, 1998, p. 195). In fact, understanding that words are composed of distinct phonemes that can be manipulated facilitates children's comprehension of the alphabetic principle, as well as the use of phoneme-grapheme correspondences knowledge in decoding familiar and unknown words (Bird et al., 1995, p. 447; Gillon, 2018, p. 2). In particular, among all phonemic awareness abilities, pre-schoolers' phoneme isolation, segmentation and deletion skills were identified as the most influential in literacy acquisition (Gillon, 2018, p. 43; Bentin and Leshem, 1993, p. 133). Considering the critical importance assumed by phonemic awareness abilities in developing literacy,

poor performance on tasks at the phoneme level has thus been correlated with later reading difficulties. Before accessing schooling, children have already acquired implicit phonological awareness competences that mainly enable them to detect and manipulate larger phonological units. Their initial level of phonological, and particularly phonemic, awareness thus appears to be a crucial factor in predicting future reading success or failure. In fact, it is likely that pupils entering formal education with weaker phonemic awareness skills will experience greater difficulties in learning to read and spell compared to their peers (Anthony and Francis, 2005, p. 255; Costenaro and Pesce, 2012, p. 587). As will be discussed in the last subchapter, assessments of children's phonological awareness skills may thus help identify learners at risk for reading failure (Snider, 1997, p. 203; Costenaro and Pesce, 2012, p. 587).

Several studies have thus suggested a causal relationship between phonological awareness and literacy acquisition (for reviews see Gillon, 2018, p. 38-53 and Goswami, 2006, p. 492-494). In particular, it has been demonstrated that phonological awareness can be developed through explicit instruction, which can benefit not only children with learning disabilities and at risk for reading difficulties, but also their typically developing peers (for reviews see Ehri et al., 2001, p. 250-287; Adams, 1998, p. 2; Anthony and Francis, 2005, p. 255). As briefly addressed in the previous section, studies involving pre-literate participants have revealed that phonological awareness training, especially if combined with teaching of phoneme-grapheme correspondences, results in long-lasting "improvements in phoneme awareness, reading and spelling" (Anthony and Francis, 2005, p. 258). Phonological awareness improves children's reading and writing achievement (Adams et al., 1998, p. 2) and thus appears to be crucial not only in L1 but also in L2 and FL learning contexts. Phonological awareness intervention will be discussed in detail in the fifth section of the present chapter.

The discussion has thus far focused upon evidence supporting the predictive role of phonemic awareness skills in literacy acquisition. As previously examined, since individual phonemes generally correspond to letters in alphabetic systems, phonological awareness knowledge seems necessary in order to understand the alphabetic principle and hence develop reading and spelling abilities (Bentin and

Leshem, 1993, p. 126). Nonetheless, some researchers have observed that reading experience can, in turn, affect phonological awareness development (Bird et al., 1995, p. 447; Gillon, 2018, p. 46; Scalisi et al., 2013, p. 45-60). "Exposure to formal reading and spelling instruction" (Gillon, 2018, p. 47) has been suggested to influence phonemic awareness skills, as the latter have been noticed to substantially improve in the first year of schooling. This assumption has been particularly supported by a study conducted on illiterate adults, which has showed that participants' initial poor phonemic awareness skills significantly incremented following reading instruction (Morais et al. cited in Gillon, 2018, p. 47).

Bentin and Leshem (1993), along with other distinguished scholars, assert that the two views presently considered are not incompatible. On the contrary, they support the hypothesis that phonological awareness and reading acquisition are strictly intertwined, thus mutually influencing each other (Gillon, 2018, p. 46; Bentin and Leshem, 1993, p. 127, Chard and Dickson, 1999, p. 263). Whereas a basic knowledge of the phonological structure of words seems to be necessary in order to acquire reading and writing abilities, "experiences in decoding and encoding print" (Gillon, 2018, p. 47) appear, in turn, to particularly develop phonemic awareness skills. Hence, "gains in reading engender corresponding gains in phonemic skills, which, in turn, promotes further reading enhancement" (Koda, 1998, p. 196). Furthermore, Bentin and Leshem (1993) state that reading disabilities may arise if learners lack phonological awareness skills, especially at the phoneme level, and if the latter are not naturally triggered by literacy experience. As previously mentioned, these children thus may particularly benefit from explicit instruction aimed at fostering the development of phonemic awareness skills (Bentin and Leshem, 1993, p. 145).

Although the considerations provided thus far concerning the relationship between phonological awareness and literacy development are fairly valid for all alphabetic languages, it seems important to examine language-specific factors, such as orthography transparency, that may influence the process of learning to read. As mentioned in the previous section, studies have revealed that phonological awareness skills develop more rapidly in learners of shallow rather than deep orthographies. In addition to this, the pace of acquisition of the aforementioned

abilities is affected by the level of complexity of the language syllabic structure (Goswami, 2006, p. 490). It can thus be concluded that reading acquisition varies across languages and its pre-requisites depend upon the features and peculiarities of the language considered (Neri and Pellegrini, 2017, p. 77).

In particular, Gillon, alongside other researchers, states that alphabetic languages with a higher degree of transparency and a simpler syllable structure, such as Spanish and Italian, are relatively easier to "read using a phonological strategy" compared to English (2018, p. 57). CVC, CCVC, CVCC and CCCVC syllable structure patterns frequently recur in the English language, as opposed to the typical CV pattern of Italian (Dombey, 2009, p. 4). Therefore, the greater complexity of the English syllable structure compared to Italian contributes to consistently slow down the learners' development of reading and writing skills in this language. Furthermore, the opaqueness of the English language, which is characterized by an apparent inconsistency of sound-letter correspondences, has been identified as the main cause of children's delay in L1 literacy development. Explicit and direct phonological awareness, as well as phonics, instruction thus appears to be crucial in languages with deep orthographies, such as English. Neri and Pellegrini (2017, p. 86) further supports the suggestion that phonological awareness skills are more relevant in learning to read in opaque languages, compared to languages displaying a higher degree of transparency, such as Italian. In these languages they have nonetheless been considered as valuable resources, especially for dyslexic learners.

The correlation between phonological awareness and literacy acquisition in L1, which has been examined in this section, seems to have important implications for second and foreign language learning. From the analysis provided thus far, it can be inferred that phonological awareness development is pivotal not only in learning to read in the mother-tongue, but also in a second or foreign language. With regard to the English language, considering the fact that phonemic awareness is specifically held as the strongest predictor of reading and spelling success, its instruction in EFL settings seems particularly necessary. Furthermore, the Linguistic Interdependence Hypothesis advanced by Cummins has indicated that when learning a second language, phonological awareness abilities transfer from the L1 to the L2 (Cummins cited in Costenaro and Pesce, 2012, p. 588). Cross-language studies have widely

supported this hypothesis, revealing that acquiring literacy skills in one language can positively or negatively affect the reading and writing process in another language, thus "suggesting some levels of transfer or interactions between L1 and L2" (Gillon, 2018, p. 69; Cameron, 2010, p. 136; Chiang and Rvachew, 2007, p. 295). Hence, it can be evinced that engaging FL, and specifically EFL, learners in explicit phonological awareness activities will contribute to the development of phonological awareness skills in both L1 and L2 (Costenaro and Pesce, 2012, p. 588; Gillon, 2018, p. 69; Koda, 1998, p. 195). The concept of language transfer will be tackled in detail in the following section.

1.3 Important factors in L2 phonological acquisition

In order to thoroughly understand the importance of phonology instruction in L2 and FL contexts, it seems necessary to examine salient aspects related to L2 phonological acquisition, such as the cross-linguistic transfer and the Critical Period Hypothesis. These two factors have been considered, among others, to profoundly influence the level of difficulty in acquiring a second or foreign language sound system, as well as "the accuracy (or "nativeness") of L2 speech" (Edwards and Zampini, 2008, p. 1).

As mentioned in the preceding section, previous experiences in the L1 have been demonstrated to either facilitate or hinder the L2 and FL learning process. Although transfer of L1 features to the L2 has been suggested to occur within different linguistic areas, such as morphology and syntax, it is specifically within the phonological domain that it seems to assume a central role (Edwards and Zampini, 2008, p. 2). Extensive research conducted in this area has indicated that the difficulties learners encounter in acquiring the sound system of a second language vary according to the degree of affinity between the L1 and the L2 phonological systems. In particular, Fries' (1945), Weinreich's (1953) and Lado's (1957) studies (cited in Edwards and Zampini, 2008, p. 2) led to the formulation of the Contrastive Analysis Hypothesis, which proposes that the phonological features of the L2 that differ from the L1 are more challenging to acquire compared to those sounds that

are similar in the two languages. Weinreich particularly identified different sound transfer categories including the following:

- *Sound substitution.* The learner replaces an L2 sound with the closest L1 equivalent. For instance, French speakers generally employ /s/ and /z/ when learning English /θ/ and /ð/ sounds, respectively.
- *Phonological processes.* The learner employs the L1 allophone that does not appear in the same context in the L2 (e.g. the production of velarized [ɫ] in word-final position instead of clear [l] in L1 English/L2 French individuals).
- *Underdifferentiation.* The L2 phonological system has contrasts that do not occur in the L1. For instance, two sounds correspond to distinct phonemes in the L2 (e.g. /ɪ/ and /i/ in English), whereas they are allophones in the L1 (e.g. /i/ in Italian).
- *Overdifferentiation.* Conversely, overdifferentiation occurs when the L1 sound system includes distinctions not present in the L2. For instance, two distinct phonemes in the L1 (e.g. /d/ and /ð/ in English) are allophones in the L2 (e.g. /d/ in Spanish).
- *Reinterpretation of distinctions.* The learner interprets L2 secondary or redundant features as primary or distinctive features. For instance, German ESL/EFL learners reinterpret tense/lax distinctions, which are primary features in English, as secondary, whereas length is erroneously judged as the L2 distinctive feature.
- *Phonotactic interference.* The learners adjust the L2 syllable structure so that it suits the syllable structure of the L1.
- *Prosodic interference.* The learner transfers L1 prosodic patterns to the L2.

(Adapted from Major, 2001, p. 32-33 and Major in Edwards and Zampini, 2008, p. 67).

Other theories that have further investigated L2 phonological acquisition and cross-linguistic transfer, such as Eckman's (1977) Markedness Differential Hypothesis, Flege's (1995) Speech Learning Model and Best's (1995) Perceptual

Assimilation Model (all cited in Edwards and Zampini, 2008, p. 3), are all based on the assumption that learners' L2 perception is influenced by their mother-tongue (Major in Edwards and Zampini (Eds.), 2008, p. 75). Eckman slightly adjusted the Contrastive Analysis Hypothesis so as to include the concept of "markedness", which refers to the "universal preferences in language for certain forms or features – e.g. voiceless over voiced sounds" (Edwards and Zampini, 2008, p. 4). Therefore, according to Eckman, difficulties in acquiring the L2 phonological system depend not only on the degree of similarity or dissimilarity between the L1 and L2 sounds, but also on the level of markedness of the latter. Typologically marked L2 sounds that are absent in the L1 are thus considered to be more complex to learn compared to new L2 sounds which are also unmarked (Mastrantuono, 2010, p. 55).

Flege's Speech Learning Model and Best's Perceptual Assimilation Model share similar aspects. In both models, in fact, "L2 perceptual processing is conceived of as a process of mapping L2 sounds onto L1 speech categories" (Celata in Watkins et al. (Eds), 2009, p. 64). Therefore, difficulties in discriminating non-native phonetic segments are largely determined by the degree of resemblance of L2 sounds to the corresponding native segments. This factor is central to Best's Perceptual Assimilation Model, which proposes a classification of L2 sound contrasts according to their probability of being "perceptually assimilated to L1 phonological categories" (Strange and Shafer in Edwards and Zampini (Eds.), 2008, p. 170). Best hypothesises three distinct possible situations concerning L2 sound perception. In fact, according to his model, non-native phonetic segments can be assimilated to a native category, they can be identified as "uncategorizable speech sounds" (Strange and Shafer in Edwards and Zampini (Eds.), 2008, p. 170), thus leading to the creation of a new category, or not be discerned at all, hence failing to be assimilated. Non-native contrasting sounds that can be assimilated to L1 phonological categories are further classified into three separate categories depending on the (dis)similarities between the L2 phones, as well as the L2 and L1 sounds. The three patterns thus identified, namely Two Category, Category Goodness and Single Category, can predict learners' "relative discrimination difficulties" (Strange and Shafer in Edwards and Zampini (Eds.), 2008, p. 170). According to Strange and Shafer (in Edwards and Zampini (Eds.), 2008, p. 170), discrimination is expected to be easiest if members of the L2

contrast are perceptually assimilated to two distinct native categories (Two Category). Discrimination is predicted to be poorer if both members of the L2 contrast are assimilated to the same L1 category, yet one member is considered to be a better exemplar of that phonological category (Category Goodness). If both L2 phones are assimilated to the same native category, discrimination will ultimately be most problematic (Single Category).

Similarly, Flege suggests that the degree of affinity or divergence between L2 and L1 phonetic segments influences the potential assimilation of non-native sounds to L1 categories. In fact, his Speech Learning Model (described by Strange and Shafer in Edwards and Zampini (Eds.), 2008, p. 170) postulates that L2 segments perceived as identical or similar to L1 sounds will be assimilated to native categories, whereas new categories will be developed for those L2 phones that considerably differ or are absent in the L1 phonology. Like Best, Flege asserts that discrimination of L2 sound contrasts will be most problematic if both members are assimilated to the same L1 category. For instance, Italian native-speakers are likely to encounter great difficulties in discerning, and hence producing, American English [ɑ] and [ʌ] phones, as they may be perceptually assimilated to the Italian [a]. Therefore, Italian learners will struggle not only to discriminate the two contrasting L2 segments, but also to distinguish both non-native phones from the native one. Flege, like Best, concludes that the more L2 phones diverge from the L1, the easier it will be to perceive them, whereas non-native phonetic segments that greatly resemble those in the L1 inventory will be more problematic to acquire. In such case, the mother-tongue will interfere to a greater extent with the acquisition of L2 phonology and transfer will thus persist (Moyer in Edwards and Zampini (Eds.), 2008, p. 72).

As reported by Aliaga-García and Mora (in Watkins et al. (Eds), 2009, p. 2), Flege further proposes that perception precedes production. In fact, it has been observed that learners who struggle to perceive L2 phones experience major difficulties in producing them as well. It can thus be inferred that phonetic training may be effective in leading learners to achieve greater accuracy in perception and, hence, in production. In particular, perception training has been designed with the purpose of enhancing learners' abilities to recognise and differentiate the L2 sounds.

Nonetheless, Aliaga-García and Mora (in Watkins et al. (Eds)) note that the efficacy of phonetic training is mainly attributed to "how successful it is in directing both the attention and L2 sound-processing ability of learners to the phonetic cues that native speakers attend to" (2009, p. 2) rather than to the quantity or intensity of exposure to the non-native sounds. Finally, a crucial aspect that needs to be considered when developing perception training programmes is the relation between the L1 and L2 phonological systems, since, as previously mentioned, learners' difficulties in discriminating L2 phones and sound contrasts can be ascribed to their degree of similarity to the L1 (Bradlow in Edwards and Zampini (Eds.), 2008, p. 291). Since the materials designed for the present research project aimed at improving Italian EFL learners' abilities in discriminating and identifying specific English sounds, the focus of the following subchapter will thus precisely be on comparing the English and Italian phonological systems.

Lastly, in addition to cross-linguistic transfer, another aspect that has been deemed relevant in L2 phonology is age of acquisition and, in particular, the hypothesis of a critical period for language learning (Daloiso, 2017, p. 100; Edwards and Zampini, 2008, p. 5). The Critical Period Hypothesis was first advanced by Lenneberg (cited in Lightbown and Spada, 1993, p. 11) in relation to the L1 learning process and eventually extended to L2 and FL acquisition. According to Lenneberg, the ability to successfully learn a language is strictly related to age and it progressively decreases at puberty due to biological changes in the brain. Lenneberg identifies the first few years of life, in particular from two years of age to puberty, as representing "an essential window of opportunity for learning one or more languages" (Daloiso, 2017, p. 100). However, at the end of this sensitive period, acquiring a language becomes increasingly more complex and demanding as a result of the gradual weakening of brain plasticity (Daloiso, 2017, p. 100; Moyer, 2004, p. 18). In particular, among all linguistic domains, phonology seems to be the most influenced by this process. Therefore, whereas older learners may achieve mastery of other language skills, it is unlikely that they will attain native-like pronunciation (Daloiso, 2017, p. 101; Moyer, 2004, p. 1; Edwards and Zampini, 2008, p. 5).

Flege's Speech Learning Model, which has been previously examined, seems to support this correlation between L2 phonological acquisition and age. In fact,

Flege (cited in Edwards and Zampini, 2008, p. 6) argues that the ability to accurately discriminate and produce L2 sounds declines with age. Young learners "do not have the native-language perceptual categories as firmly fixed in their phonological system as older learners do" (Ioup in Edwards and Zampini (Eds.), 2008, p. 49-50), hence when perceiving L2 sounds, they will be influenced to a lesser extent by their L1 compared to adults. Although recent studies have questioned the assumption of a single fixed critical period, thus identifying several consecutive sensitive periods for language acquisition, they have broadly acknowledged the relevance of the first few years of life in learning a language (Daloiso, 2017, p. 101). Overall, the significant impact that age has on the acquisition of L2 phonology underlies the necessity to expose learners from a very young age to explicit phonological instruction.

1.4 A contrastive analysis of the Italian and English sound systems

As mentioned in the previous subchapter, when designing training programmes aimed at enhancing learners' perception and production of L2 sounds, it is important to consider the interference of the mother-tongue on the second or foreign language to be acquired. With regard to the present research project, it thus seemed essential to examine the degree of similarity between the English and Italian sound systems so as to establish the English sounds that may be most challenging to discern for Italian EFL learners. It should be noted that the section particularly focuses upon the differences between the North American English (General American) and the Italian phonologies, since this English variety was chosen as the pronunciation of reference in developing the original teaching materials for the present study. Nonetheless, considerations on the Standard British English (Received Pronunciation) sounds will be provided as well, especially in the discussion on vowels. In fact, the phonological systems of the two English varieties largely coincide as far as consonants are concerned, whereas North American English vowels significantly differ from British English. Comparisons between some American English and British English vowels will thus be drawn when deemed necessary. Finally, with regard to the structure of the present subchapter, a

contrastive analysis of the English and Italian consonants precedes a detailed discussion on vowels.

		Bilabial	Labiodental	Interdental	Alveolar	Alveopalatal	Retroflex	Palatal	Velar	Glottal
Plosive	*voiceless*	p			t				k	
	voiced	b			d				g	
Nasal		m			n				ŋ	
Fricative	*voiceless*		f	θ	s	ʃ				h
	voiced		v	ð	z	ʒ				
Affricate	*voiceless*					tʃ				
	voiced					dʒ				
Approximant		w			l		ɹ	j		

Table 1.3 British English and North American English Consonants. Adapted from Gordon (2014, p. 19) and Zuanelli Sonino (1976, p. 122)

		Bilabial	Labiodental	Interdental	Alveolar	Alveopalatal	Retroflex	Palatal	Velar	Glottal
Plosive	*voiceless*	p			t				k	
	voiced	b			d				g	
Nasal		m			n			ɲ		
Fricative	*voiceless*		f		s	ʃ				
	voiced		v		z					
Affricate	*voiceless*				ts	tʃ				
	voiced				dz	dʒ				
Lateral					l			ʎ		
Approximant		w						j		
Trill					r					

Table 1.4 Italian Consonants. Adapted from Zuanelli Sonino (1976, p. 122)

Consonants. Table 1.3 shows the consonants that characterise the American English and British English sound systems, whereas the Italian consonants are illustrated in Table 1.4. As can be evinced from a comparison of the two phonological systems, English phonemes such as /θ/, /ð/, /ʒ/, /ŋ/, /h/ do not have an Italian equivalent. Zuanelli Sonino (1976, p. 121-129) provides a detailed analysis of the discrimination and production difficulties that Italian native-speakers may encounter when learning the English language. The aforementioned English sounds seem to be particularly challenging for Italian EFL learners due to the fact that they are absent from the Italian inventory.

First of all, Zuanelli Sonino suggests that the existence of the /ʃ/ phoneme in the Italian inventory should facilitate the acquisition of the English /ʒ/ sound. Substitutions of the target phoneme with another L1 sound thus appear to be unlikely, although it may seldomly occur that learners confuse the phoneme in question with /dʒ/ or /z/, which share either its manner or place of articulation (Zuanelli Sonino, 1976, p. 124-125). On the contrary, the acquisition of the other phonemes that are absent from the Italian inventory seems to be characterised by a negative interference from the L1. In fact, learners frequently tend either to replace these sounds with other similar phonemes present in the L1 or not to discern, hence produce, them at all, as it is the case for the /h/ sound.

As far as the /ŋ/ phoneme is concerned, Zuanelli Sonino asserts that although this consonant sound does not classify as a phoneme in Italian, it appears as an allophone of the /n/ phoneme. In fact, when followed by /k/ or /g/, the /n/ sound is pronounced [ŋ] in Italian (Zuanelli Sonino, 1976, p. 121). Considering Weinreich's different types of sound transfer examined in the previous subchapter, it is likely that Italian native-speakers will thus "underdifferentiate" the English /n/ and /ŋ/ phonemes, which may result in major inaccuracies in both perception and production.

Zuanelli Sonino (1976, p. 124) further argues that Italian EFL learners frequently struggle to perceive the /h/ phoneme. Difficulties in discerning this specific sound may cause particular communication problems due to the fact that some English words vary in meaning according to whether the /h/ sound in word-initial position is present or absent. In fact, failing to recognise the /h/ phoneme in

words such as "hand", "hill" or "hold" may lead Italian speakers to perceive, hence probably produce, "and", "ill" or "old", respectively.

With regard to the /θ/ and /ð/ sound pair, Zuanelli Sonino (1976, p. 125-128) states that Italian EFL learners are likely to substitute them with those Italian consonants that have some articulatory features in common with the new sounds. Therefore, /θ/ is typically perceived and produced as /f/ or /s/, whereas /ð/ is frequently confused with /v/ or /z/. Wheeloc (2016, p. 45) further indicates that Italian native-speakers tend to replace the /ð/ phoneme with the alveolar plosive /d/. As observed for the /h/ phoneme, the incorrect discrimination of the two sounds may result in communication impediments, as learners may struggle to differentiate between minimal pairs such as "three" and "free". Both comprehension and production are thus likely to be affected.

Finally, it has been suggested that substitutions of the /t/ and /ʧ/ sounds may occur, especially in consonant clusters (Hawkins, 2018). Confusing the /t/ phoneme, particularly when followed by /r/ or /w/, with the /ʧ/ sound may thus result in difficulties to perceive and produce word pairs such as "chain"- "train" or "chew"- "two".

It seems ultimately important to observe that although some consonants are present in both sound systems, they may be articulated differently in English when they occur in specific environments. For instance, the voiceless plosives /p/, /t/ and /k/ are aspirated if they appear at the beginning of an accented syllable (Zuanelli Sonino, 1976, p. 128; Daloiso, 2017, p. 109). Likewise, English /l/ phoneme has two allophones: a "bright" [l], which correspond to the Italian /l/ and a "dark" [ɫ], which is absent from the Italian inventory. Italian speakers tend to struggle to recognise and produce the latter, thus frequently replacing it with the more familiar variant (Zuanelli Sonino, 1976, p. 129). Finally, learners should also be encouraged to notice the different realisations of the /t/ and /d/ phonemes in English compared to Italian, as well as the articulatory divergence of the English /ɹ/ from the Italian /r/ (Zuanelli Sonino, 1976, p. 128-129).

Vowels. A comparison of the North American English and Italian vowels represented in Figure 1.1 and 1.2, respectively, reveals that the North American English, as well as the British English, vowel systems are larger compared to the
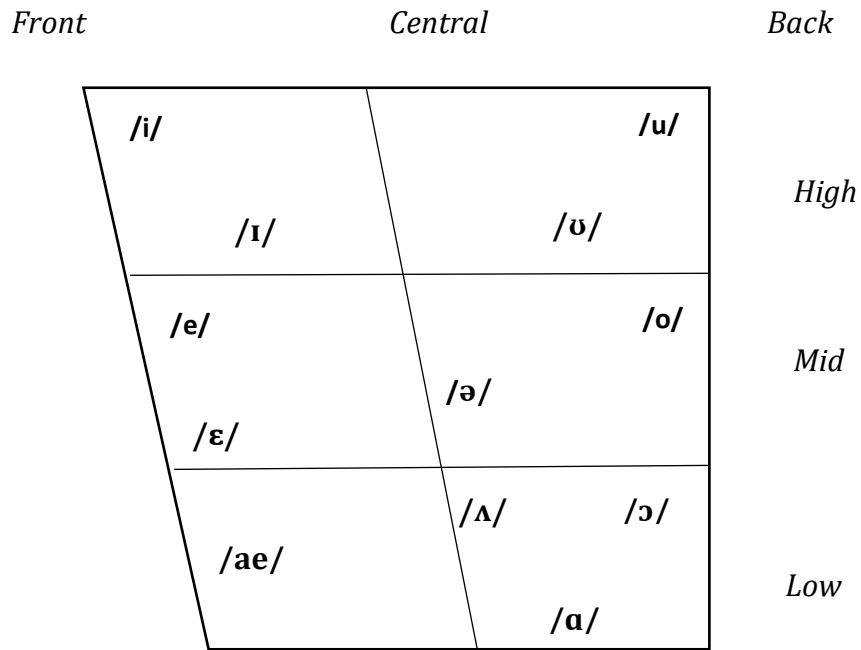
Front   Central   Back

/i/   /u/
                                                        High
        /ɪ/   /ʊ/

/e/   /o/
                                                        Mid
                         /ə/
    /ɛ/

                    /ʌ/   /ɔ/
        /ae/   *Low*

                              /ɑ/

Figure 1.1 North American English Vowel Chart. Adapted from Gordon (2014 p. 20), Leutenegger (1963, p. 38), Sonino (1976, p. 106)

Front   Central   Back

/i/   /u/
                                                        High

/e/   /o/
                                                        Mid

/ɛ/   /ɔ/

                                                        Low

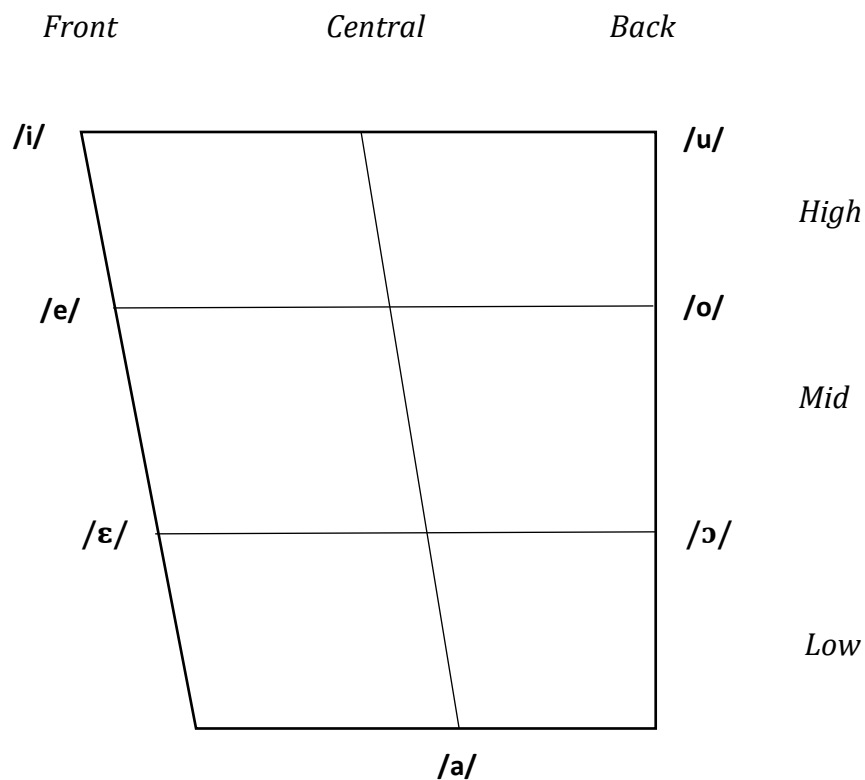   /a/

Figure 1.2 Italian Vowel Chart. Adapted from Sonino (1976, p. 106)

Italian one. It should be noted that American English r-controlled vowels were not included in Figure 1.1, as they were not deemed relevant for the purposes of the present study. Overall, English phonology includes vowel sounds that are absent in Italian and are thus particularly problematic to discriminate, identify and produce for Italian native-speakers. Zuanelli Sonino emphasises the necessity to explicitly instruct learners to perceive and accurately discern the new phonemes, in order to be consequently able to produce them correctly (Zuanelli Sonino, 1976, p. 108). In particular, learners' attention should be drawn to those phenomena specific to the English language, such as vowel length difference, which are not present in Italian and which may hence cause communication problems.

For instance, the English /i/-/ɪ/ vowel contrast does not exist in Italian. Both English phonemes are frequently confused and substituted with the closest Italian equivalent, namely /i/. Failing to discriminate this distinctive opposition may thus engender significant comprehension difficulties, as words such as "sheep" and "ship", which exclusively "differ by a long/short vowel" (Daloiso, 2017, p. 110; Zuanelli Sonino, 1976, p. 109) are likely to be perceived as identical. Misperceptions of this vowel contrast tend to result in significant inaccuracies on the production level, which may lead to major communication impediments. It should be further remarked that alongside duration, another contrastive feature of the aforementioned vowels is tenseness. In fact, /i/ is long and tense, whereas /ɪ/ is short and lax (Gordon, 2014, p. 20). Zuanelli Sonino (1976, p. 109) and Busà (1995, p. 107) suggest that, in addition to /i/, Italian EFL learners may also confuse the English /ɪ/ phoneme with the Italian /e/. This substitution is likely to affect oral comprehension, as well as production, since a word such as "lit" could be perceived and produced as "let".

The English /u/-/ʊ/ vowel contrast appears to engender analogous discrimination and production problems. As observed for the /i/ and /ɪ/ phonemes, learners' inability to discern the new sounds prevent them from successfully differentiating minimal pairs such as "pool" and "pull", thus considerably contributing to hindering comprehension, as well as production (Mioni, 1973, p. 171). In particular, Zuanelli Sonino (1976, p. 115) hypothesises that negative transfer from the L1 is likely to occur when perceiving, and consequently producing,

the /ʊ/ phoneme, as Italian native-speakers generally confuse the English sound with either the Italian /u/ or /o/. Furthermore, as observed by Wheeloc (2016, p. 49), since /ʊ/ is not included in the Italian sound system, Italian speakers tend to remove it from the /oʊ/ phoneme (indicated as /o/ in Figure 1.1), thus substituting the new sound with the Italian /o/. As a consequence, a word such as "go" is likely to be perceived and produced as [go] instead of /goʊ/.

Another contrast that creates particular problems for Italian EFL learners is the one constituted by the /ae/ and /ɛ/ vowels. Firstly, it should be mentioned that although the /ae/ phoneme exists in both American English and British English sound systems, the American English /ae/ frequently corresponds to the British English /ae/ and /ɑː/. For instance, the word "answer" is pronounced /ˈɑːn.səʳ/ in British English, whereas it is produced as /ˈæn.sɚ/ in American English (Canepari, 1979, p. 239). The present discussion will exclusively focus upon the American English realisation. According to Zuanelli Sonino (1976, p. 110-111) and Busà (1995, p. 115), influence from the mother-tongue can lead Italian speakers to perceive and produce the English /ae/-/ɛ/ vowel contrast as the Italian /e/ or /ɛ/. As observed in the cases previously examined, failing to discriminate the two sounds generally results in major communication problems, as minimal pairs such as "bed" and "bad" are unlikely to be correctly discriminated and identified (Zuanelli Sonino, 1976, p. 110).

Nonetheless, Busà (1995, p. 120) observes that Italian EFL learners may struggle to differentiate the /ae/ vowel not only from the American /ɛ/, but also from the /ʌ/ and /ɑ/ sounds. In fact, the results of her study on Italian speakers' perception and production of American English vowels revealed that participants equally replaced the /ae/ phoneme with either the Italian /ɛ/ or /a/. Data further suggest that the /ʌ/ vowel was exclusively substituted with the Italian /a/, whereas /ɑ/ was most frequently confused with the Italian /ɔ/ or /a/, as well as with /ɛ/ sporadically. In particular, it should be noted that /ɑ/ is typically considered as the shortest among the three aforementioned vowels, whereas the lengths of /ae/ and /ɑ/ do not significantly differ. Furthermore, as far as the latter is concerned, this phoneme seems to typically occur in American English. On the contrary, the British English counterpart of this vowel is represented by /ɒ/ (Mioni, 1973, p. 186).

Therefore, a word such as "rock" is pronounced /rɒk/ in British English and /rɑk/ in American English. As it was the case for the /ae/ phoneme, the American English pronunciation will be exclusively considered for the purposes of the present study. Busà's findings indicate that successful discrimination of the aforementioned phonemes is crucial in order to correctly recognise minimal pairs such as "hot" (/hɑt/), "hut" (/hʌt/) and "hat" (/haet/). Therefore, explicit instruction on these new vowels may contribute to minimising the communication errors which may arise from an inaccurate perception and production of the phonemes.

This subchapter has examined the main difficulties that Italian native-speakers may experience when acquiring the American English phonology. The discussion has highlighted the essential necessity to provide learners with direct support in discriminating and recognising the sounds of the English language. The following section will thus consider effective strategies and methods for phonological work in L1, L2 and FL settings and it will specifically focus on the English language. Furthermore, age has been widely identified as a major factor in L2 acquisition, thus indicating that learners may benefit from phonological instruction from a very young age. Therefore, since the original teaching materials developed for the present research project were intended for use with primary school children, the subchapter will also examine appropriate methodologies to adopt when working with young learners.

1.5 Effective strategies for explicit phonological awareness instruction

As previously discussed, phonological awareness, specifically at the phoneme level, has been indicated as the strongest predictor of later reading success. The considerations provided in the previous sections regarding the pivotal role assigned to phonological awareness in literacy development, along with the main factors influencing L2 phonological acquisition, namely cross-linguistic transfer and age, have contributed to emphasising the importance of explicit phonological awareness instruction in L1, L2 and FL settings. In particular, when designing activities aimed at enhancing young learners' recognition and discrimination abilities of the non-native sounds, it is necessary to consider the peculiarities of the L1 and L2/FL

phonological systems (Mastrantuono, 2010, p. 56). This is the reason why the preceding subchapter has specifically focused upon a contrastive analysis of the American English and Italian sound systems so as to identify the phonemes that may be most challenging to acquire for Italian EFL learners.

Research has extensively investigated and demonstrated the effectiveness of phonological awareness trainings in improving learners' reading and writing skills from a very young age. Gillon (2018, p. 161-162, see list below) has reviewed the major studies that have evaluated the efficiency of phonological awareness intervention on different populations, hence identifying the individuals that have thus far been proven to particularly benefit from phonological awareness instruction, which include:

- Children with, or at risk for, dyslexia;
- Young children at risk from low socioeconomic backgrounds;
- Kindergarten children and pupils entering formal education with poor phonological processing skills;
- Preschool and school-age children with spoken language impairments;
- Struggling readers;
- Deaf pre-schoolers or pupils with hearing impairments;
- Native speakers of various languages, such as English, Spanish, German, Danish, Swedish, Hebrew, Dutch and Arabic;
- Pupils with developmental disabilities, such as children with Down syndrome.

A wide variety of learners thus seem to benefit from phonological awareness training programmes, which have been further indicated to be particularly successful when embedded within other "meaningful literacy experiences" (Ukrainetz et al., 2000, p. 331-355) such as "shared reading and writing" (Ukrainetz et al., 2000, p. 331-355) or storytelling (Gillon, 2018, p. 163). Researchers have identified other conditions that should be considered when planning phonological

awareness intervention, as they can contribute to increasing its effectiveness (Gillon, 2018, p. 164; Chard and Dickson, 1999, p. 264). These include the followings:

- The progression of phonological work should be consistent with the sequential development of phonological awareness, which has been described in the first subchapter. Work on larger phonological units, such as syllables or onsets and rimes, should thus precede phonological awareness work at the phoneme level (Chard and Dickson, 1999, p. 264);
- Phonological awareness tasks should be presented according to their level of difficulty, which has been discussed in the first subchapter. Therefore, activities considered to be less challenging to perform (e.g. blending tasks) should be presented prior to more complex tasks, such as segmenting or deleting (Chard and Dickson, 1999, p. 264);
- Intervention intended for school-age pupils should specifically focus on enhancing phonemic awareness skills (Gillon, 2018, p. 165);
- The teaching of phonological awareness should be combined with phonics instruction and "should make explicit the links between speech and print" (Gillon, 2018, p. 164).

In addition, it should be noted that since music training has been shown to improve phonological processing (Fonseca-Mora et al., 2015, p. 3), recent studies have increasingly investigated the effectiveness of integrating phonological awareness training programmes with music trainings in developing learners' phonological awareness and literacy skills. However, including music instruction in phonological awareness trainings does not seem to significantly influence their efficacy (Fonseca-Mora et al., 2015, p. 1-14; Kempert et al., 2016, p. 1-26). However, further research in this area seems to be needed.

Nonetheless, despite its relevance, "the role of phonological awareness is still generally underestimated, both in the first language (L1) and in the foreign language (FL)" (Costenaro and Pesce, 2012, p. 582). In particular, with regard to the English language, Huo and Wang (2017, p. 1-13) have observed that studies examining the beneficial effects of incorporating phonological awareness instruction in EFL

curricula are considerably limited compared to the vast body of research available on the effectiveness of teaching phonological awareness in L1 and L2 settings. However, they argue that EFL learners, especially at the primary school level, may particularly benefit from explicit phonological awareness instruction, which they suggest should be included in the daily activities, as it appears to be "most effective when delivered regularly and discretely" (Huo and Wang, 2017, p. 11).

Costenaro et al. observe that phonology instruction is particularly marginalised in EFL teaching in Italian primary schools "in favour of a communicative approach" (2014, p. 209). Including phonological awareness activities in EFL classes seems to be especially problematic due to the limited availability of teaching resources intended for use in FL settings (Costenaro and Pesce, 2012, p. 588; Daloiso, 2017, p. 103). In fact, although several programmes have been developed with the purpose of improving English native-speakers' phonological and phonemic awareness skills in their mother-tongue, they are difficult to adopt in EFL contexts (Daloiso, 2017, p. 103). Nonetheless, considering the cardinal importance of direct phonological instruction, Daloiso (2017, p. 103), along with Costenaro and Pesce (2012, p. 588), deem it necessary that these programmes' principles and materials are adjusted to be integrated in EFL classes.

According to Daloiso, young EFL learners' phonological knowledge can be developed through implicit or explicit "phonological awakening work" (2017, p. 104). "Implicit phonological awakening work" consists in facilitating pupils' spontaneous phonological and phonemic awareness development by providing them with constant and massive exposure to the FL sounds during daily activities (Daloiso, 2017, p. 104). In particular, storytelling and nursery rhymes can be effective tools for enhancing young "learners' awareness of the phonological properties of the foreign language" (Daloiso, 2017, p. 106). In fact, if carefully selected, nursery rhymes and stories, could be useful for implicit phonological awakening, as they can contain repetitions of sounds and rhymes (Daloiso, 2017, p. 104-105; Ukrainetz et al., 2000, p. 332). He thus encourages teachers to identify and adopt nursery rhymes and/or story extracts that are "interesting from a phonological point of view" (Daloiso, 2017, p. 105), for example because they

include the non-native sounds that they want children to focus upon (Daloiso, 2017, p. 106).

On the other hand, "explicit phonological awakening" refers to engaging pupils in activities specifically developed with the purpose of increasing their recognition and meta-phonological abilities (Daloiso, 2017, p. 104). Unlike in the previous situation, children here are fully aware of the phonological work that is being conducted (Daloiso, 2017, p. 104). It should be further noted that combining explicit and implicit phonological awakening work seems to be more effective compared to carry them out separately (Daloiso, 2017, p. 104). The present discussion will thus examine some methodological principles that, according to Daloiso (2017, p. 108-113), should be considered in order to effectively include explicit phonological awareness work, especially at the phoneme level, in Italian EFL classes. Furthermore, the Sound Pathways Project designed by the author, alongside Costenaro and Favaro (2014), will be briefly described, as it particularly inspired the creation of the original teaching materials for the current study.

When developing phonological awareness activities aimed at improving children's abilities in identifying and discerning non-native sounds, teachers should firstly select the English phonemes they want children to focus upon. In particular, the difficulties that Italian-native speakers frequently experience in perceiving and producing specific English phonemes, which were analysed in the previous subchapter, may help teachers decide what sounds to tackle. Once the target phonemes have been identified, Daloiso (2017, p. 112) suggests that, in order to be effective, phonological work should be based on the following main theoretical principles:

- *Multi-sensory approach.* Research has indicated that the stimulation of different sensory channels, such as auditory, visual and tactile, improves learning. Dyslexic children, in particular, can benefit from teaching practices that encourage pupils to use all of their senses in processing the information presented. With regard to phonological awareness instruction, the traditional "listen and repeat" exercises, which exclusively activate the auditory channel, may be replaced by more engaging and multi-sensory

activities. Therefore, as suggested by Daloiso, not only could the target sounds "be associated with gestures and movements", but pupils could also be led to "feel" and "see" them (2017, p. 112). For instance, in order to understand the difference between voiced and unvoiced phonemes, children may be asked to place a hand on their throat and notice whether the vocal cords vibrate or not when pronouncing specific pairs of words.

- *Playful methodology.* Activities intended for primary school children should be based on a playful methodology, which contributes to creating a motivating and anxiety-free learning environment, particularly essential in foreign language teaching contexts (Caon and Rutka, 2004, p. 17-25; Costenaro and Pesce, 2012, p. 594). Since ludic experiences have been suggested to lead to steady and long-lasting language acquisition (Caon and Rutka, 2004, p. 22), it seems fundamental that this approach is adopted when teaching phonological awareness as well.

- *Narrative context.* Working with sounds may be challenging for "young learners, who generally focus on meaning and communicative efficacy when learning a new language" (Costenaro et al., 2014, p. 215). As mentioned at the beginning of the present section, phonological work thus seems to be more captivating and effective when phonemic and phonological awareness games and activities are embedded within a narrative context (Ukrainetz et al., 2000, p. 331-355; Gillon, 2018, p. 163; Daloiso, 2017, p. 112; Costenaro and Pesce, 2012, p. 596).

- *Phonology work structure.* According to Daloiso, phonological instruction should follow specific steps, progressing from sound discrimination to production and ultimately presenting phoneme-grapheme associations (Daloiso, 2017, p. 112; Costenaro et al., 2014, p. 212-213).

The aforementioned methodological principles were considered by Costenaro, Daloiso and Favaro (2014, p. 209-228) in developing the Sound Pathways Project, a sound syllabus specifically intended to improve phonemic awareness in Italian dyslexic primary school children learning English as a foreign language. The primary purpose of this project was to

"assist pupils in becoming more sensitive (and thus accustomed) to non-native sounds, help children's ears become tuned to those sounds, and children's articulatory organs articulate difficult or new sounds, so that they do not represent a barrier within any activity of oral comprehension or production" (Costenaro et al., 2014, p. 216)

The teaching material is divided into eight sections, each of which tackles either individual English phonemes or sound pairs that Italian native-speakers tend to confuse. For instance, one "Sound Pathway" juxtaposes /θ/ and /f/, whereas one section addresses the /h/ sound alone (Costenaro et al., 2014, p. 216). Sounds that are absent from the Italian phonological system, as well as phonemes that have an Italian equivalent but that are articulated differently in English, were thus included in the sound syllabus. It should be noted that the phonemes selected were considered to be problematic not only for pupils with learning disabilities but also for typically developing children.

Furthermore, the sound syllabus is meant to be used in association with the Class Book. Since each section of the project corresponds to a Class Book Unit, phonemes were selected that were also included in songs, dialogues and words in the *Treetops Book* (Costenaro et al., 2014, p. 222). For instance, children were expected to be familiar with words such as "Holly" and "Hedgehog", as they are among the protagonists of the Treetops Wood. Therefore, the two words were adopted in the first Sound Pathway, which focused on the /h/ phoneme (Costenaro et al., 2014, p. 220). Each learning unit in the Sound Pathways is characterised by five main phases. The first step consists in introducing the target sounds, each of which is associated to a gesture and to a "character from the Treetops Wood, who contains the sound in his/her name" (Costenaro et al. 2014, p. 221). By following the adventures of the protagonists, children are thus particularly motivated to engage in phonological work. Afterwards, pupils are encouraged to participate in activities aimed at enhancing their abilities to identify and discriminate the sounds presented. The following sequential stages include presenting children with production and sound-letter matching tasks, and ultimately with multi-sensory synthesis activities

(Costenaro et al. 2014, p. 222). As will be observed in the following chapter, the sound syllabus presently described, as well as the methodological principles previously examined, were at the basis of the original teaching materials designed for the current research project.

1.6 Phonological awareness assessment

Finally, since a test was specifically developed for the current research project and administered to the participants in order to evaluate the effectiveness of the original teaching materials in improving their phonological awareness skills, it seems important to briefly examine the main tasks that researchers have frequently included in phonemic and phonological awareness assessments. First of all, it should be noted that phonological awareness tests may be conducted for multiple reasons. As mentioned in the previous sections, phonological awareness has been demonstrated to strongly influence literacy development. Therefore, assessing phonological awareness skills may be necessary in order to "identify children at risk for reading failure (…), to monitor children's progress in acquiring critical reading skills, and to help describe the level of phonological impairment in children being diagnosed with reading disabilities" (Al Otaiba et al., 2012, p. 116). Phonological awareness tests have been further employed in order to evaluate the effectiveness of intervention programmes specifically designed with the purpose of enhancing learners' phonemic and phonological awareness skills (Chard and Dickson, 1999, p. 265; Gillon, 2018, p. 139).

A vast body of research has suggested that phonological awareness progresses through different stages, from an understanding of larger to progressively smaller word units, thus covering a broad spectrum of skills. In fact, as examined in the previous subchapters, phonological awareness skills at the syllable level generally develop earlier compared to onset-rime and particularly phonemic awareness abilities, which have been identified as the most specific and complex to acquire (Chard and Dickson, 1999, p. 262; Daloiso, 2017, p. 6-7). This developmental sequence, as well as the level of difficulty of phonological awareness

tasks, which has been discussed in the first section, should thus be considered when evaluating learners' phonological awareness abilities.

The tasks included in phonological awareness tests vary according to the participants involved in the study being conducted, its objective and the "type of information needed" (Sodoro et al., 2002, p. 224). In fact, researchers have investigated several aspects related to phonemic and phonological awareness in different contexts (L1, L2 and FL) and learners. Samples could include individuals from diverse socioeconomic backgrounds, of various nationalities and ages, monolinguals or bilinguals, as well as typically developing or impaired participants.

Selecting appropriate assessment measures thus seems to be fundamental. In particular, Yopp (1988), Chard and Dickson (1999), Al Otaiba et al. (2012), Sodoro et al. (2002) and Gillon (2018) have reviewed some of the tasks that have been frequently adopted in order to evaluate learners' syllable awareness, onset-rime awareness and phonemic awareness skills, which include the following:

- *Syllable and/or phoneme blending*. Individual syllables or phonemes are presented to the participants who are then asked to combine them together to form a word. In particular, phoneme blending tasks are among the main measures adopted in the Phonological Awareness Literacy Screening (PALS) described in Gillon (2018, p. 144-145);

- *Syllable and/or phoneme segmentation*. The participants are asked to divide words into their distinct syllables or phonemes. Phoneme segmentation measures are particularly included in the Phonological Awareness Literacy Screening (PALS) and in the DIBELS assessment both described in Gillon (2018, p. 144-145/148), as well as in the Yopp-Singer Test cited in Chard and Dickson (1999, p. 267-268);

- *Syllable and/or phoneme deletion*. The participants are asked to remove one syllable or phoneme from a given word and enunciate the remaining part. The Phonological Awareness Skills Program Test developed by Rosner (cited in Gillon, 2018, p. 146) particularly assesses syllable and phoneme deletion skills;

- *Rhyme recognition and production*;

- *Phoneme counting*;
- *Phoneme isolation*. This task, which requires participants to identify the sound(s) in word initial-, medial- and/or final-position, is particularly included in the Test of Phonological Awareness (TOPA-2; Torgesen and Bryant, 2004 cited in Gillon, 2018, p. 147);
- *Specifying deleted phoneme*. This type of task requires participants to specify the phoneme that has been eliminated from a given word;
- *Phoneme substitution*. Participants are required to replace one sound within a word with another phoneme in order to form a new word;
- *Phoneme reversal*. Participants are asked to transpose the first and the last sound of a word;
- *Spoonerism*. This task consists in swapping the first sounds of two words;
- *Non-word spelling*. This task specifically aims at analysing "students' attempts at phonetically plausible spellings" (Gillon, 2018, p. 155);
- *Rapid Letter Naming*. Participants are allowed one minute to correctly "name as many letters as possible" (Chard and Dickson, 1999, p. 268). This task is particularly proposed in the DIBELS assessment cited in Chard and Dickson (1999, p. 268), as well as in Gillon (2018, p. 148);
- *Oral reading fluency* is particularly assessed in the DIBELS test by identifying "the number of words accurately read aloud in one minute from a reading passage" (Gillon, 2018, p. 148).

Gillon (2018, p. 144-154) suggests that phonemic awareness tasks requiring pupils to blend, segment, delete and generally manipulate phonemes within given words are particularly suitable measures for assessing English primary school children's phonological awareness skills in their mother-tongue. Nonetheless, it should be noted that the aforementioned tasks, if carefully selected and adapted, can also be used in studies involving speakers of other languages. As previously mentioned, it is thus important that factors such as the participants' age, socio-economic and cultural background, as well as the aim of the assessment, are considered so as to adopt appropriate phonological awareness tasks. For a detailed

review of different tests intended for use with English native-speakers, as well as with bilingual or multilingual children of various ages, see Gillon (2018, p. 138-159), along with Chard and Dickson (1999).

In addition to the measures presently analysed, a test conceived by Marotta et al. (2004) with the purpose of assessing Italian children's phonemic and phonological awareness abilities in their mother-tongue, was particularly examined and taken as the starting point for the development of the test for the current research project. Marotta et al.'s test consists of several subtests that include some of the tasks previously reviewed, such as syllable identification, blending, segmentation and deletion, rhyme recognition, as well as phoneme blending, segmentation and spoonerism. Nonetheless, it comprises two measures that are absent from the list provided above. In fact, participants are further asked to identify minimal pairs and to enunciate as many words starting with a given phoneme as they can recall in one minute. A detailed description of the measures included in the phonological awareness test developed for the present study will be provided in the following chapter.

Chapter 2 – The Study

2.1 Statement of purpose and research questions

As examined in the previous chapter, the importance of phonemic and phonological awareness explicit instruction in the L1, L2 and FL has been increasingly explored. Research has extensively investigated the impact of phonemic and phonological awareness skills on literacy acquisition. Several studies have thus suggested and evaluated phonemic and phonological awareness programmes on typically developing learners as well as on students with learning disabilities. However, despite being strongly correlated with reading success, phonology seems to be still disregarded in foreign language teaching practices (Costenaro and Pesce, 2012, p. 582). Its instruction is especially marginalized in EFL curricula in Italy (Costenaro et al., 2014, p. 209). Few teaching resources have been suggested to be appropriate for phonological awareness work, particularly at the phoneme level, in Italian primary schools (Costenaro and Pesce, 2012, p. 588; Daloiso, 2017, p. 103).

Therefore, the aim of the present research project was twofold. Firstly, it consisted in designing original phonemic and phonological awareness activities to be included in Italian primary three EFL lessons. Secondly, the effectiveness of the original material was evaluated on typically developing Italian children who were learning English as a foreign language. A test was administered three times to four eight-year-olds in order to assess the impact of the activities suggested on the participants' phonemic and phonological awareness skills. The children were tested prior to and immediately after the instructional sessions, as well as three months after the conclusion of the study.

This chapter addresses the method of the present quasi-experimental research, including the participants, the materials used, the duration of the study and the procedures, as well as the analysis techniques.

2.2 Method

This section describes the participants, the materials used, the duration and the procedures of the research project. The latter involve a detailed explanation of the structure of the original teaching materials, as well as of the lesson plans and of the activities designed.

2.2.1 Participants

The sample consisted of four eight-year-old children, three girls and one boy, enrolled in the third year of the Italian primary school. The children were Italian native-speakers learning English as a foreign language. Three children were attending three different classes at the same primary school, whereas one participant was attending a different school. Both primary schools were located in the province of Modena, Italy. None of the participants, except for one, had ever taken private English lessons before. The three children started learning English in the first year of primary school. All participants have been attending EFL lessons at their local primary schools for two hours a week ever since. One hour was added to the English curriculum in one of the classes starting this year. Therefore, one participant was receiving English instruction three times a week during the period of time in which the present research project was conducted.

Since the purpose of this study was to assess the efficacy of original materials on typically developing pupils, children that did not have any certified learning disability and any type of cognitive or speech impairment were selected to participate in the study. However, during the research project, Student A underwent the dyslexia assessment and was diagnosed with dyslexia and dysorthographia. Before beginning the experimental study, the researcher met with the parents and the children to explain in detail the purpose of the research project and to answer any questions related to the study. Informed consent forms were given to the participants' parents who returned them signed, thus allowing their children to be involved in the research project. A copy of the form can be found in Appendix A.

2.2.2 Materials used

A test was specifically designed in order to collect data to determine the participants' progress and thus the effects of the innovative activities on the development of phonemic and phonological awareness skills. The test was administered to the children before the beginning of the study and immediately after its conclusion. The test was conducted a third time three months after the study. Pre-test and post-test scores were then compared in order to assess the children's improvement. The measures included in the test were adapted from different phonemic and phonological awareness assessments.

Several studies were examined in order to design the test for the research project. The main measures contained in most phonological awareness assessments, which have been reviewed in the previous chapter, were selected to be included in the present test. The tests considered were thus taken as a starting point for the development of the pre-test and post-test's measures adopted in this study, which included rhyme recognition, syllable and phoneme blending, segmentation and deletion, phoneme isolation and substitution, as well as minimal pairs discrimination. These tasks were adapted to suit the purpose of the current research. In fact, they had to be age-appropriate and intended for EFL learners attending the third year of primary school.

The test had a general-to-specific structure. Rhyme recognition tasks were tackled first. As already mentioned in the previous chapters, research has suggested that syllable awareness skills generally precede the ability to discriminate and manipulate the individual sounds of the language (Chard and Dickson, 1999, p. 262; Daloiso, 2017, p. 6-7). Therefore, the test progressively zoomed in on syllable manipulation, blending and segmentation tasks in order to finally focus on phonemic awareness tasks and minimal pairs discrimination. The level of difficulty of the tasks gradually increased as well. For instance, as stated in the literature review, blending and segmentation tasks are considered to be relatively easier to perform compared to deletion tasks (Schuele and Boudreau, 2008, p. 6; Chard and Dickson, 1999, p. 262). This sequence was observed in designing the present test.

Measures for both the syllable and the phoneme level proceeded from blending tasks to segmentation, deletion and, ultimately, manipulation tasks.

It should be noted that the test designed for the current research project did not include any tasks requiring children to read a passage in English or any measures such as rapid letter naming, oral reading fluency or nonsense word fluency. The latter are specifically comprised in the DIBELS phonological awareness test mentioned in the previous chapter, which monitors "young children's development in phonological awareness and other early literacy skill areas" (Gillon, 2018, p. 148). The aforementioned tasks were considered inappropriate and relatively complex for Italian eight-year-olds learning English as a second language. In fact, unlike English native-speakers, Italian EFL learners are not constantly exposed to the English language and their knowledge of English sound-letter correspondences is particularly limited. Therefore, reading words or entire sentences in English was deemed extremely challenging for the participants and irrelevant for the purposes of the present research project. In fact, the focus of the study was specifically on sound discrimination and recognition. Since phoneme-grapheme associations were not tackled in the materials, improvements in this area were not expected to occur. Therefore, it was decided not to include these tasks in the assessment.

The test consisted of ten different subtests, each of which included ten items. The participants were required to perform all tasks orally. Two examples were provided before each exercise. Instructions to complete each task were delivered in Italian in order not to cognitively overload the participants, since the tasks alone were already extremely demanding. One point and zero points were assigned for each correct and incorrect or partially correct answer, respectively. The participants did not receive any feedback on their responses. The test lasted approximately thirty minutes. The syllable division, as well as the IPA transcription, of the words selected for the test were checked in the Online Cambridge English Dictionary. A copy of the test can be found in Appendix B.

Rhyme Recognition Subtest. Ten pairs of words (six were rhyming word pairs, while four were not) were presented orally to determine the children's ability to

recognise rhyming words. For instance, children were asked whether the words "pun" and "gun" rhymed or not.

Syllable and Phoneme Blending Subtests. Separate syllables of a word were presented orally. Children were asked to combine them and say the word as a whole. For instance, they were asked to blend the syllables "chap" and "ter" in order to obtain the word "chapter". The phoneme blending subtest similarly required children to combine individual phonemes into words. For instance, participants were asked what word could be obtained by blending together different phonemes such has /h/, /æ/, /t/.

Syllable and Phoneme Segmentation Subtests. As far as the syllable segmentation subtest is concerned, words were presented and children were asked to divide them into syllables. Regarding the phoneme segmentation task, participants were asked to pronounce the individual phonemes that constituted the words presented. They were thus asked to separate words such as "chin" into its distinctive sounds, namely /tʃ/, /ɪ/, /n/.

Syllable and Phoneme Deletion Subtests. These tasks consisted of asking the children to say the remaining part of a word from which one syllable or single phoneme had been removed. For instance, when performing the syllable deletion subtest, participants were asked what remained of the word "basket" if its first syllable "bas" was deleted. As for the phoneme deletion task, the children were required to utter the residual part of words such as "sun" or "inch" without the initial and the last sounds, respectively. Medial phoneme and syllable deletions were excluded from the task. The participants were to remove exclusively initial or final sounds and syllables.

Phoneme Isolation Subtest. Participants were asked to identify the initial or the final sound of ten words. It was decided to include this task in the test in order to assess the children's ability to recognise different sounds at the beginning or at the end of a word. Specific words were selected so that the phonemes the participants had to discern corresponded to the sounds that the phonemic awareness activities designed by the researcher focused upon. For instance, children were asked to distinguish the first and the last sound of the words "shame" and "youth", respectively.

Phoneme Substitution Subtest. This phonemic manipulation task was included in order to determine not only if the children could discern the first sound of a word, but if they could also substitute it with another phoneme in order to create a new word. Participants were thus asked, for example, to replace the first sound in "pin" with the phoneme /θ/ in order to originate the word "thin". Words were chosen that contained at least one of the nineteen sounds targeted in the original materials developed by the researcher.

Minimal Pairs Discrimination Subtest. The children were asked to indicate whether they perceived the pairs of words presented as the same or different words. Two pairs of identical words were included in the subtest along with eight minimal pairs. Each minimal pair presented two sounds that were compared in the original material developed for the research project.

2.2.3 Duration of the research

The test was administered to the four participants before the beginning of the experimental study in order to collect data on their initial phonemic and phonological awareness skills. The first meeting was thus dedicated to testing the children individually. The test lasted approximately thirty minutes. Once the pre-test had been administered, the training began. The researcher met with the children at least three times a week for seven weeks, from November to December 2018. Throughout this time period, the children experienced story-reading, along with phonemic and phonological awareness tasks. Fifteen effective lessons, which excluded the two meetings dedicated at administering the pre-test and the post-test, were planned and taught. During these lessons, the original materials and activities designed by the researcher were presented to the participants. The private lessons lasted forty-five minutes to one hour each. Children were seen not only individually but also in pairs in order to determine whether the activities and the games suggested could be potentially extended to a classroom context. A detailed explanation of the new teaching materials is introduced in the section dealing with the research procedures. The same test that had been administered at the beginning

of the research project was administered again at its conclusion and three months after the study in order to assess the children's progress.

2.2.4 Procedures

A phonological awareness programme was designed that could be incorporated in third year EFL curricula in Italian primary schools. The original teaching resources were constituted of phonemic and phonological awareness activities embedded in a storytelling context. Their aim was to enhance learners' recognition of specific English sounds considered to be problematic for Italian native-speakers. Therefore, a short narrative divided into ten chapters was conceived that targeted those specific phonemes. Each chapter introduced either a pair of sounds or an individual phoneme. Alongside this narrative structure, engaging games and tasks were suggested for each chapter with the purpose of improving the students' phonological and, in particular, phonemic awareness skills. The next sections explore the structure of the new teaching materials and examine the lesson plan.

The structure of the original teaching material

Daloiso identifies storytelling and nursery rhymes as being possible effective tools for developing phonemic and phonological awareness skills in children (2017, p. 104). In fact, texts and nursery rhymes, in particular, contain repetitions of sounds, rhymes, alliterations and assonances (Daloiso, 2017, p. 104-105; Ukrainetz et al., 2000, p. 332). Therefore, if carefully selected, they might be used as a starting point to work on specific sounds in order to promote phonemic and phonological awareness in young learners (Daloiso, 2017, p. 104-106).

Daloiso's suggestions, as well as the structure of the Sound Pathways Project developed by the author, alongside Costenaro and Favaro (2014), were particularly considered in creating the original materials for this study. Nonetheless, several sound pairs were included in the present phonological awareness programme that were absent from Costenaro et al.'s (2014) sound syllabus. Furthermore, whereas

the latter was specifically designed with the aim of supporting dyslexic children's development of phonemic and phonological awareness skills, the present teaching materials were mainly intended for use with typically developing learners.

Firstly, it was decided to conceive a short narrative divided into ten chapters. Some chapters of the story have been included in Appendix C. Each chapter, except for the third one, which focused on the /h/ phoneme alone, targeted pairs of English sounds that Italian native-speakers may struggle to perceive and produce. The pairs included not only phonemes that are absent from the Italian phonology, such as the /θ/ sound, which could thus be easily mistaken with other sounds, but also sounds present in the native language that are articulated differently in the L2, such as the /h/ sound, which is aspirated in English at the beginning of a word. Furthermore, vowel sounds were included in the chapters in order to encourage young learners' noticing of the broader range of English vowel sounds compared to Italian, along with some peculiarities of the English phonology. In fact, the materials not only tackled vowel pairs that Italian EFL learners may struggle to discriminate, but it also introduced some English phenomena, such as vowel length, which are not present in the L1.

As far as the general structure of the narrative is concerned, Table 2.1 indicates that the first five chapters addressed pairs of consonants that Italian native-speakers learning English as a foreign language tend to confuse, as well as individual sounds that are often produced incorrectly. The considerations on the Italian and English phonologies provided in the fourth section of the previous chapter were taken into account for the selection of the consonant pairs. The first chapter is devoted to the /ʧ/-/t/ sound pair, as it has been observed that the /t/ phoneme is likely to be substituted with /ʧ/, especially in consonant clusters (Hawkins, 2018). Likewise, since it has been suggested that Italian EFL learners tend to confuse the English /θ/ and /ð/ phonemes with /f/ and /d/, respectively, (Zuanelli Sonino, 1976, p. 125-128; Wheeloc, 2016, p. 45), two chapters addressed the /θ/-/f/ and /ð/-/d/ sound pairs. One chapter was then entirely devoted to the /h/ phoneme, which has been argued to be particularly difficult to perceive and produce by Italian native-speakers (Zuanelli Sonino, 1976, p. 124). Finally, it was decided to pair the /ʒ/ sound with the /ʃ/ phoneme, as it has been indicated that the

existence of the latter in the Italian phonology should facilitate the acquisition of the /ʒ/ sound, which, conversely, is absent from the Italian phonological inventory (Zuanelli Sonino, 1976, p. 124-125).

Chapter	Teaching Point		Sample words
	Sounds	Letters	
1. Richard the chatty teacher and Tom the fast tiger	/ʧ/ /t/	ch t	chew two
2. Shannon the Spanish fish and Vision the Asian television	/ʃ/ /ʒ/	sh sion, sure	shoulder television, treasure
3. Hannah the horse in high heels and Harry the hungry hippo	/h/	h	hello
4. Theodore the thirsty python and Fred the friendly frog	/θ/ /f/	th f	three free
5. Theodore's mother and Dan the dirty dog	/ð/ /d/	th d	mother mud
6. Bob the fox in socks and Justin the funny monkey	/ɑ/ /ʌ/	o u	hot hut
7. Jack the black cat and Jess the red hen	/ae/ /ɛ/	a e	bat bet
8. Nick the big pig and Colleen the green sheep	/ɪ/ /i/	i ee, ea	ship sheep, cheap
9. Shawn the yawning strawberry and Rose the old flamingo	/ɔ/ /o/	aw o	raw rose
10. Brooke the book made of wood and Cooper the kangaroo in boots	/ʊ/ /u/	oo oo	book boot

Table 2.1. The structure of the original narrative. Chart adapted from Daloiso (2017, p. 109)

On the other hand, the last five chapters focused on vowel sounds whose discrimination seems to represent an obstacle for Italian EFL learners. The discussion on sound transfer, as well as the contrastive analysis of the Italian and

English sound systems, which have been presented in the previous chapter, have provided valuable insight into the difficulties that Italian native-speakers may encounter in perceiving and producing specific English phonemes. These considerations were particularly taken into account when selecting the vowel pairs to include in the phonological awareness programme. The choice of the set of vowel contrasts to tackle was particularly influenced by Flege's and Best's theories, which have been described in the third section of the first chapter. In fact, according to Flege's Speech Learning Model and Best's Perceptual Assimilation Model, discrimination of L2 sound contrasts is most challenging when both L2 sound segments are assimilated to the same L1 category (Strange and Shafer in Edwards and Zampini (Eds.), 2008, p. 170). Therefore, as confirmed by Zuanelli Sonino's (1976, p. 109-111/115), Busà's (1995, p. 107/115/120) and Wheeloc's (2016, p. 49) findings, which have been mentioned in the previous chapter, Italian EFL learners are likely to experience major difficulties in discerning and producing American English vowel contrasts such as /ʌ/-/ɑ/, /ae/-/ɛ/, /i/-/ɪ/, /ɔ/-/o/ and /u/-/ʊ/, as they can be perceptually assimilated to the Italian /a/, /e/, /i/, /o/ and /u/ sounds, respectively. Therefore, in each contrast, Italian native-speakers are likely to struggle not only to discriminate the two contrasting L2 segments, but also to distinguish both non-native sounds from the native one.

Overall, nineteen sounds were targeted in both the narrative and the activities. As already mentioned, each chapter focused on a sound pair or on an individual phoneme, as it is the case for Chapter Three. In line with Daloiso's assertion, the aim of the story and of the activities created by the researcher was to help children "distinguish between similar sounds which are likely to be confused" (Daloiso, 2017 p. 111). The short narrative was designed so that children could easily notice and recognise the single phonemes introduced in each section. It was thus decided to associate each sound with a character. The protagonists of each chapter mainly communicated using the phoneme assigned to them. Furthermore, an alliteration of the target phoneme was already contained in their names to simplify children's identification of the specific sounds. Alliterations, assonances, as well as rhymes were included in the story. This way, children should be able to

immediately perceive the phonemes that are a chapter's focus when the latter is read aloud by the teacher.

Alongside this narrative structure, activities were developed for each section in order to work on the children's phonemic and phonological awareness skills. A field trip at the zoo where a Halloween treasure hunt occurs was the basic plot of the narrative. As the twenty children protagonists of the story, the students encountered different characters and sound pairs in every chapter, each of which had a clue for the treasure hunt. Learners were thus positively motivated to follow the children's journey and to perform phonological tasks in order to obtain all the clues and finally discover the treasure. In fact, the activities designed for each chapter were presented as necessary steps in order to be able to move forward in the story. Although phonological awareness tasks were sporadically suggested, the objective of most games the children were engaged in was to develop phonemic awareness skills.

Furthermore, particular attention was devoted to the word selection process. Since the purpose of administering a pre-test and two post-tests was to assess the efficacy of the original teaching materials, most words used in the test contained the phonemes targeted in the activities and in the narrative. However, the words employed in the exercises and in the games that tackled the same sounds differed from the ones adopted in the test. In fact, if the words included in the different sections of the test had been used in the same phonological tasks during the quasi-experimental research, the pre- and post-tests' results might have been considered unreliable. For instance, if the activities on Chapter Seven had involved the words "bat" and "bet", one might have argued that the children's performance in the test had been influenced by the training that they had received on those specific words. However, this word selection depends on the objective of the activity. For example, the word "shop", included in the phoneme blending task in the test, was not used in phoneme blending activities during the research project. Nevertheless, it was presented in other sound recognition games, especially in Chapter Two and Six that focused precisely on the /ʃ/ and /ɑ/ phonemes.

Considering the age of the participants, a multi-sensory and ludic approach was adopted in designing the tasks. As mentioned in the previous chapter, research

has suggested that teaching practices involving students' different sensory channels result in more effective learning experiences compared to mono-sensory approaches (Daloiso, 2017, p. 112). In line with Daloiso's suggestions (2017, p. 112), it was thus decided to associate each character of the story not only with a specific sound, but also with a distinct movement. In sound recognition activities, children were then asked to perform the correct gesture when hearing the phoneme associated to it. For instance, children were asked to stand on one foot when they heard the /o/ sound associated with Rose the old flamingo or to push their noses up to form a pig snout when they heard the /ɪ/ sound associated to Nick the big pig. A complete list of all gestures used can be found in Table 2.2. Moreover, active games were combined with more sedentary activities. These strategies were necessary in the creation of a stimulating and anxiety-free environment, fundamental in foreign language teaching contexts.

Since the purpose of both the narrative and the activities developed was to enhance the learners' abilities to discern specific English sounds, production and/or letter-sound association activities were not included in the present research project. Nevertheless, the possibility of implementing such activities was considered. This is the reason why original tongue-twisters or songs were included at the end of each chapter. In fact, these were specifically conceived to be adopted as a starting point by primary school teachers for the creation of production activities on the sounds presented in each section.

Activities concerning sound-letter matching might be developed as well. Teachers might use some sections of the story to introduce the most common spelling of each sound presented, such as the "sh" grapheme for the /ʃ/ phoneme. Each chapter is preceded by drawings of the protagonists that include the orthographic representations frequently associated with the sounds considered. Tasks requiring the children's noticing of regular spelling patterns might thus be developed. However, as suggested by Daloiso (2017, p. 112), these exercises should follow an accurate work on the improvement of recognition and production skills first. It should be noted that both the most and least frequent spelling patterns were adopted in the creation of the dialogues in the story. For instance, in the second chapter, words containing the /ʃ/ sound were employed that had different

orthographic representations than the most usual "sh", such as "ocean". In fact, the story was meant to be read aloud by the researcher, not by the children, in order to encourage the learners' noticing of the target phonemes. Since the focus of the present research was on sound recognition, orthographic patterns, as well as the meaning of the words selected, were not focussed upon. The same considerations that have been made concerning sound reproduction and letter-sound associations can be applied to vocabulary teaching. In fact, the story created for the present study could be used to introduce new words to young learners. However, as already mentioned, this was not the specific purpose of the current research project.

Characters	Sounds	Gestures
Richard the chatty teacher	/ʧ/	Stick your fingers together and make them bounce repeatedly on your thumb (Italian gesture used to indicate a person who is very chatty)
Tom the fast tiger	/t/	Bend your fingers towards the palm of your hand. Move your hand as if it was a tiger's paw
Shannon the Spanish fish	/ʃ/	Act like a fish gasping for air
Vision the Asian television	/ʒ/	Pretend to have a remote control in your hand and to press a button to turn on the television
Hannah the horse in high heels and Harry the hungry hippo	/h/	Click your tongue
Theodore the thirsty python	/θ/	Stick your hands together and move them as if they were a slithering snake
Fred the friendly frog	/f/	Bend your fingers on a flat surface as if you were playing the piano. Make your hand jump like a frog
Theodore's mother	/ð/	Stick your tongue out of your mouth and quickly pull it back. Repeat the movement two or three times
Dan the dirty dog	/d/	Pretend that your fingers are drumsticks
Bob the fox in socks	/ɑ/	Pretend that your finger is a fox' tail
Justin the funny monkey	/ʌ/	Scratch your armpits
Jack the black cat	/ae/	Crawl around the room

Jess the red hen	/ɛ/	Move your elbows close to your chest. Push them away from your body then move them close to your chest again
Nick the big pig	/ɪ/	Push your nose up to form a pig snout
Colleen the green sheep	/i/	Bend your head downwards and pretend to eat something
Shawn the yawning strawberry	/ɔ/	Yawn
Rose the old flamingo	/o/	Stand on one foot
Brooke the book made of wood	/ʊ/	Pretend to turn the pages of a book
Cooper the kangaroo in boots	/u/	Jump around like a kangaroo

Table 2.2. The gestures and the sounds associated to each character

Finally, the issue regarding which English variety to adopt in the present quasi-experimental study should be briefly addressed. In fact, since sounds, particularly vowels, can differ from one English variety to the other, it seems important to specify that American English was taken as the pronunciation of reference for the development of the narrative and the activities. One of the main reasons underpinning this choice was to encourage children to become aware of the existence of different English varieties in addition to Standard British English, which is predominantly taught in Italian schools. Moreover, considering the widespread influence that American culture exercises nowadays, it is likely that, while growing up, children will be to some extent exposed to this pronunciation in non-academic settings. Finally, the researcher spent one semester during her Bachelor's Degree and another semester during her Master's Degree studying in the United States as part of exchange programs promoted by her universities. During her last experience abroad, the researcher attended classes that dealt with American phonology and that analysed issues in teaching phonemic and phonological awareness to English native-speakers. The researcher was thus able to gather meaningful material on the topic and adapt it to her research project. IPA transcriptions for each word selected and employed in both the story and the activities were checked in the Online Cambridge English Dictionary.

The lesson plan and the activities

Considering the short period of time in which the research project was conducted, one or two lessons of forty-five minutes to one hour were dedicated on average to work on each chapter of the story. The teaching units were generally divided into three parts. In the first phase, a revision activity was suggested that combined most, if not all, the phonemes encountered thus far. A new pair of sounds was then presented. Children were told that they would listen to a new chapter of the story and they were asked not to focus on the word meaning or on trying to understand what was happening in the story, but on the sounds they heard. After reading the chapter, they were asked whether they had noticed any particular sound(s) that was/were frequently repeated. If children had not grasped the sound(s) the section focused upon, the chapter was read again stressing the phoneme(s) the researcher wanted the children to recognise. Afterwards, the association of the specific sound with the character from the narrative was explicitly stated. Drawings of the characters encountered were shown in order to make the activity more compelling and stimulating for the participants. Gestures for each character were then presented and children were encouraged to imitate both sounds and movements.

The following steps involved recognising sound tasks. Children were told that the researcher would read half of the story again while performing the movement(s) associated with the character(s) each time they said the target phoneme. Participants were then required to execute the correct movement(s) for the other half of the story. Finally, children were engaged in two activities. The first one was designed to work specifically on the sounds just introduced. The second activity was either a revision exercise or a game that included the phonological and phonemic tasks contained in the pre- and post-tests. Considering the limited attention span of eight-year-olds, it was necessary to frequently vary the activities presented for each chapter. However, some games were occasionally repeated throughout the training and adapted to the new sounds.

Fifteen lessons that covered the ten chapters of the story were taught overall. Therefore, a lesson and a half were employed, on average, to work on each section.

The lesson plan typically opened with a warm-up or revision activity followed by the reading of the chapter and the introduction of the new sounds. The first task requiring children to identify the sounds considered was then suggested. The activities on the chapter were completed in the following lesson where children were asked to perform a sound recognition task combining the phoneme(s) just learned with the sounds previously encountered. These games thus concluded the teaching unit. As most sounds were reviewed in these activities, they could be considered as revision exercises like the opening tasks. Revision games were thus presented both at the beginning and at the conclusion of the unit that focused on a chapter of the story. A limited set of sounds that had been previously encountered were practiced in these tasks. No more than seven phonemes, with few exceptions, were generally reviewed in these activities. The warm-up or revision exercise, along with the sound presentation and identification games related to a new chapter were then introduced in the other half of the same lesson. Table 2.3 illustrates a variety of activities that were designed and suggested for each step of the lesson plan.

Phase	Sample activities
Warm up – Revision (at the beginning and at the end of each teaching unit)	• Association of pictures containing a specific phoneme with the right character • Phonetic noughts and crosses • Phonetic memory game • Rhyme recognition game
Presenting sounds	• Storytelling • Association of each character with a specific sound and gesture
Recognising sounds	• What's missing • Phonetic bingo • Twister • Phonetic treasure map • "One" game

Table 2.3. The activities designed and associated with the different phases of a teaching unit

The researcher addressed the children both in English and in Italian during the lessons. English was mainly employed to communicate with the participants. However, the researcher considered it necessary to switch to the children's native language on some occasions. For instance, the rules of the games were explained in

English first, then repeated in Italian in order to ensure the children's understanding. In the phase concerning the introduction of the new sounds, the Italian language was employed to explain the story to the participants. This occurred after having read a new chapter and having associated the character(s) with the specific sound(s). The purpose in doing so was to maintain children's attention and motivation throughout the lesson and the research project in general. In fact, by knowing the events occurring in the narrative, the children were stimulated to complete the phonological tasks suggested in each chapter in order to progressively discover the clues for the treasure hunt and, ultimately, the treasure.

Several sources were consulted in the process of designing the activities. Alongside original games, different exercises were adapted particularly from Erickson's published materials aiming at strengthening Italian children's phonological awareness skills in their mother-tongue. Among the books considered for developing the activities for the present study were Dutto (2014), Baldoni et al. (2014), as well as Judica et al. (2008). The activities suggested in these works were intended for either kindergarten children or primary school students with learning disabilities. In order to be included in the research project, it was thus necessary to adapt them so that they could be appropriate for typically developing eight-year-old Italian children learning English as a foreign language. In addition to these, texts that specifically suggested phonemic and phonological awareness activities in English for both L1 and L2 students were examined. Tarantini and Benatti (2017) suggest games that can be used in Italian primary schools' EFL lessons. Several activities were thus slightly modified and included in the present research project. Finally, Adams et al.'s (1998) programme was reviewed. The latter aims at enhancing English native-speakers' phonemic awareness skills in their mother-tongue. The activities suggested are particularly conceived for kindergarten and special education children, as well as pupils in their first year of primary school. The structure of the curriculum and the objectives of each game presented were thus mainly considered in developing the original materials for the present study.

The tasks designed to introduce the new sounds did not vary throughout the units as they merely consisted of encouraging the children to identify the sounds that were frequently repeated in a chapter. Afterwards, the association of each

character with a specific phoneme and movement was explicitly stated. Therefore, the next paragraphs will focus upon both revision and sound recognition tasks. A detailed description of all the activities designed for the present research project will be provided. It is worth mentioning that all the activities suggested can be adapted to work on different sets of sounds and/or to suit learners of varying ages and English language proficiency levels. The complexity of each game and exercise can be adjusted as well.

Activity n. 1: Phonetic Bingo
Material used: a sheet of paper and images of words containing the target sounds
Objective: to recognise two or more distinct sounds
Number of participants required: two or more participants

This activity was used twice throughout the experimental study. Two versions were designed that differed in their level of difficulty. Whereas the simpler version can be used to work on two phonemes, the more complex alternative is meant to review multiple sounds.

The easier option was chosen for the first sound recognition task involving the phonemes /ʧ/ and /t/ introduced in Chapter One. Fourteen images of words starting or ending in these sounds were selected, seven for each phoneme. Two copies of each illustrated picture were made. The specific words included in the activity were: *sandwich, witch, chocolate, children, chair, cheese, chess* for the /ʧ/ phoneme; *tiger, toilet, tennis, two, turtle, train, tea* for the /t/ phoneme. Since the focus of the game was on distinguishing different sounds, the participants were not required to know the meaning of the words. The children were asked to choose seven pictures among the fourteen images presented. The other fourteen copies were placed in a small bag. It was necessary that the bag was not see-through so that the participants could not identify the pictures. The researcher participated in the game if the lesson was taught individually. Once each player had pasted their seven images on a blank sheet of paper, the game could begin. Each participant was asked to take turns and blindly pick up a card from the small bag. The researcher pronounced the word. Children were then required to perform the correct gesture

corresponding to the sound contained in the word. Participants had been introduced to the new sounds in the previous phase, where the gestures for each character had been presented. Therefore, when hearing a word such as "chess", children had to execute the movement associated with Richard the chatty teacher. If they had the same image on their sheet of paper and if they performed the right movement, they could take the card. The game continued until one participant had found all the matching images.

This game was adapted towards the end of the instructional sessions in order to revise eleven sounds. The phonemes considered were: /ʧ/, /t/, /ʃ/, /ʒ/, /h/, /θ/, /f/, /ð/, /d/, /ɑ/, and /ʌ/. Six words were selected for each sound. Two words that contained the phoneme in initial position, two in medial position, and two in final position. Table 3.4 shows the list of the words included in the activity. Drawings of the characters of the story associated to each sound were given to each player. As in the easier version, the participants were asked to paste the eleven characters on a blank sheet of paper. The images corresponding to the words selected were placed in a bag. Before starting the game, the teacher should decide whether to concentrate on initial-, middle-, or final-sound identification, with middle-sound recognition being the most difficult one. Some sounds might be excluded from the game, depending on the aim that was chosen.

Phonemes	Sounds in initial position	Sounds in medial position	Sounds in final position
/ʧ/	cheese, cherries	kitchen, armchair	sandwich, peach
/t/	tree, twenty	winter, star	meat, sit
/ʃ/	shark, shell	potion, ocean	wish, brush
/ʒ/	X	confusion, illusion	X
/h/	hook, honey	behind, grasshopper	X
/θ/	three, thorn	bathroom, marathon	mouth, south
/f/	fire, family	muffin, coffee	leaf, surf
/ð/	that, this	grandfather, brother	smooth, with
/d/	door, deer	radio, window	bed, sad
/ɑ/	octopus, October	rock, sock	X
/ʌ/	umbrella, uncle	mug, plum	X

Table 3.4. A complete list of the words used in the second version of the phonetic bingo

For example, due to the absence of English words starting and ending with the /ʒ/ sound, this specific phoneme should not be considered if the focus of the game is on initial- or final-sound recognition. Children had to pick up a card. The researcher said the word aloud. The participants had to indicate whether they could hear any of the sounds associated with the characters, as well as the place of the specific phoneme in the word. Finally, they were led to reflect and decide whether they could take the card. The game continued until one participant had found all the right matches.

Activity n. 2: Odd one out
Material used: drawings of the characters associated with the target phonemes. Three sets of three images each.
Objective: to distinguish among two separate phonemes
Number of participants required: one or more participants

Three sets of three words each were presented to the children. The participants were provided with images representing the words selected. The latter included the two phonemes targeted in the chapter of the narrative introduced in the same lesson. For each set, children were asked to identify the word that started with a different sound compared to the other two. They were then asked to place the image of the words starting with the phonemes the chapter focused upon on the correct drawing of the character associated with those specific sounds. This game was adapted from the activity suggested in Tarantini and Benatti's published work (2017).

Activity n. 3: phonetic mazes
Material used: two phonetic mazes drawn by the researcher
Objective: to distinguish between two separate phonemes
Number of participants required: one or more participants

This activity was used to work on the /ʃ/ and /ʒ/ sounds pair. It was adapted from Judica et al. (2008). As mentioned previously, this book is intended for Italian

kindergarteners and primary school children with reading and writing difficulties. Moreover, it aims at developing phonemic and phonological awareness skills in the children's mother tongue. Therefore, the complexity of the mazes, as well as the words selected, had to be modified in order to be included in the present research project. Two mazes, one for the /ʃ/ sound and one for the /ʒ/ sound, were thus designed. In both mazes, images were placed in strategic points where children had to make a decision exclusively based on the sound they heard. In order to solve the maze, they had to identify the sound the activity focused upon. Similarly sounding words were selected when possible. For instance, in the /ʒ/ maze, the children had to choose the right alternative among pairs of words such as "potion" – "explosion" and "station" – "invasion". In the /ʃ/ maze, on the other hand, words containing the /ʃ/ phoneme were particularly juxtaposed to words that included both the /ʒ/ and the /s/ phoneme. "Six" – "ship" and "seal" – "shell" were among the word pairs the children encountered. A copy of the mentioned mazes can be found in Appendix D.1.

Activity n. 4: phonetic noughts and crosses
Material used: a chart specifically designed for the activity and images containing the target sounds
Objective: to recognise multiple phonemes
Number of participants required: two or more participants

This activity represents a revised version of the popular noughts and crosses game. A six-column and six-row chart was created. Four phonemes were practiced, namely the /ʧ/, /t/, /ʃ/ and /ʒ/ phonemes. Images of words containing these phonemes were selected. Nine illustrated pictures were chosen for each phoneme. Two images per phoneme had already been placed on the chart before starting the game. The other images were divided between the players. In order for the children to remember the sound contained in each picture, drawings of the characters associated to the phonemes concerned were provided. The researcher pronounced the word aloud when distributing the images. The children were thus required to identify the target sound within the word and to place the image on the character the sound was associated with. For instance, words such as "dish" and "shower" had

to be collocated on the drawing of Shannon the Spanish fish. The game could then begin. The aim of the activity was to have four pictures with the same sound in a row. Images could be combined vertically, horizontally or diagonally. Since the participants were not familiar with the vocabulary adopted for the activity, they were encouraged to ask the researcher to repeat the words that had already been placed on the chart. As a matter of fact, having a chart overview helped them consider what image to select and where to position it. A copy of the chart can be found in Appendix D.2.

Activity n. 5: sound recognition game with music
Material used: drawing(s) of the character(s) associated with each phoneme. A blank sheet of paper with a cross drawn on top, in case the activity was meant to work only on an individual phoneme. Music.
Objective: to recognise a single sound or multiple phonemes
Number of participants required: one or more participants

This activity was designed to work on the individual phoneme /h/ included in Chapter Three. A list of word pairs that vary in meaning according to whether the /h/ sound in word-initial position is absent or not, was prepared. The pairs specifically selected for this activity were:

- Had/add
- Hit/it
- Hand/and
- Hat/at
- Hall/all
- Hold/old
- Hill/ill
- Heat/eat

Two sheets of paper were positioned on the floor. One sheet of paper consisted of a drawing of one of the characters associated with the /h/ sound in the original narrative. For the purpose of the game, the drawing represented the words that contained the phoneme in question. On the other hand, a cross had been drawn on top of the other sheet of paper, symbolizing the absence of the /h/ sound in the word presented. Afterwards, a song was played. The participants were asked to dance around while the music was playing. When the music stopped, the researcher said a word from the word pairs selected. The children had to decide whether the word pronounced contained the /h/ sound and position themselves accordingly on the right picture. This activity was conceived considering the difficulty most Italian native-speakers exhibit in perceiving the aspirated /h/ sound in word-initial position. Furthermore, the children were led to notice that the deletion of the /h/ phoneme resulted in a new word with a different meaning. Although it was decided to focus on the recognition of an individual phoneme, this game can be adapted to work on two or multiple sounds.

Activity n. 6: phonetic memory game
Material used: memory cards
Objective: to recognise multiple phonemes
Number of participants required: two or more participants

Three versions of varying difficulty were designed for the present research project. Whereas the aim of the easier version was to work on the recognition of two sounds, the more complex alternatives were used at the beginning or at the end of a teaching unit in order to revise multiple phonemes.

The simpler option consisted in providing the children with sixteen images, eight for each phoneme. Since this activity was included in the unit on Chapter Eight, the focus was on distinguishing the two phonemes /ɪ/ and /i/. When possible, words that only differed in the length of the vowel sound were selected. Therefore, words such as "bin", "dip" and "hill" were chosen for the /ɪ/ sound, whereas images corresponding to the words "bean", "deep" and "heel" were selected for the /i/ sound. Players had to match the cards that contained the same sound.

This activity can also be used to review multiple phonemes. In the present study, it was adopted at the end of Chapter Three in order to practice the five sounds previously encountered, namely the /ʧ/, /t/, /ʃ/, /ʒ/ and /h/ phonemes. The procedure and the aim of the game were unvaried. When possible, similar sounding words that might be easily confused by Italian EFL learners were selected. For instance, "chain", "train", "chair, "hair", "ship", "hip", "potion", "explosion", "station" and "invasion" were among the words included in the activity.

The level of difficulty of this phonetic memory game can be adapted depending on the aspect the teacher needs to focus upon. For instance, teachers can use this activity to work on phoneme isolation and identification. They could select words that contain the target phonemes in the same position within a word and ask the children to match the cards correctly. The activity should not necessarily involve more than one phoneme. If working on the /ʃ/ sound, teachers might decide to present images containing the phonemes in word-initial, medial, and final position. They might then ask the children to identify the pictures ending with the same sound. Therefore, a word such as "dish" could be matched to "fish", whereas it could not be paired with "shop".

Activity n. 7: rhyme recognition game
Material used: worksheets prepared by the researcher and a pen
Objective: to recognise different words that rhyme with a target word
Number of participants required: one or more participants

This activity consisted of six rhyme recognition tasks. For each task, an image had been pasted on a sheet of paper on top of other pictures. A minimum of four and a maximum of six images had been selected and pasted below the given picture. The researcher pronounced the words for each task aloud. Afterwards, the participants were required to discern the words that rhymed with the given word and to connect the images with a line. At least two words among the options provided for each set rhymed with the target one. A list of the words used is illustrated in Table 2.5 and a copy of the activity can be found in Appendix D.3.

Given word	Options	Rhyming words
Reach	beach, peach, teach, feet, teeth	beach, peach, teach
Lip	crib, ship, hip, sheep, rich, chip	ship, hip, chip
Wish	dish, miss, fish, kiss	dish, fish
Lotion	potion, ocean, erosion, explosion	potion, ocean
Illusion	fusion, television, collision, confusion	fusion, confusion
Walk	cloak, chalk, talk, hawk, smoke	chalk, talk, hawk

Table 2.5. A list of the words used in the rhyme recognition game

Activity n. 8: what's missing

Material used: flashcards

Objective: to discern two distinct phonemes

Number of participants required: one or more participants

This game was adapted from the activity suggested by Tarantini and Benatti (2017). During the research project, the activity was included in Chapter Four and thus aimed at encouraging the children to discern the two new phonemes introduced, namely the /θ/ and the /f/ sounds. Three flashcards were created for each phoneme. They were shown to the children and placed on a table or a flat surface. The participants had to memorise the whole word or at least the phoneme contained in it. Afterwards, the players were asked to close their eyes while the researcher hid one of the flashcards. Once the flashcard had been hidden, the participants were asked to open their eyes and indicate the missing image. As already mentioned, since the focus of the activity was not on learning new vocabulary, it was acceptable for the children to merely identify the missing sound in case they did not remember the whole word. This game could be used to work on multiple phonemes as well.

Activity n. 9: phonetic treasure map

Material used: a treasure map created by the researcher and images to paste on the map.

Objective: being able to isolate phonemes in word-initial and final positions

Number of participants required: one or more participants

This revision activity was suggested at the end of the teaching unit on Chapter Four in order to revise the phonemes encountered thus far. Ten words were selected that started, ended or contained at least one of the phonemes considered, namely /ʧ/, /t/, /ʃ/, /ʒ/, /h/, /θ/ and /f/. An image representing each word was chosen. An incomplete treasure map was then created. The map consisted of a track were three images ("helmet", "television" and "tennis") had already been positioned. The participants were asked to place the other seven pictures in the right sequence in order to arrive at the cross symbolising the location where the treasure was hidden. In order to complete the itinerary, the children had to position the images in a chain as if they were domino blocks. Each word thus had to start with the same sound the previous word ended with. The final chain should appear as follows: ***helmet – teach – chat – television – north – thief – foot – tennis – Spanish – shell***. A copy of the activity is included in Appendix D.4.

Activity n. 10: phonetic ball-and-spoon race

Material used: a ping-pong ball, a plastic spoon and seven plastic cups

Objective: to recognise seven distinct phonemes

Number of participants required: one or more participants

Although this activity can be realised even with only one participant, it is advisable to play this game in teams. Due to the fact that the children were mainly seen individually during the research project, it was necessary to adopt the first version. Seven plastic cups were positioned around the room where the lesson occurred. A drawing of seven characters from the original narrative corresponding to seven distinct phonemes were placed in front of each plastic cup. The researcher said a word containing one of the target phonemes. When possible, minimal pairs

were selected in order to increase the level of complexity of the game. The children were then asked to hold the spoon in their mouth. After hearing the word pronounced by the researcher, they had to balance a ping-pong ball upon the spoon and race with it to the cup associated to the right character. One point was assigned every time the participant chose the correct cup.

Activity n. 11: phonetic game of the goose

Material used: a game of the goose board designed by the researcher, a dice and some pieces

Objective: to perform similar phonemic and phonological awareness' tasks contained in the pre- and in the post-tests

Number of participants required: two or more participants

This activity was adapted from Judica et al.'s published work (2008). An original game of the goose board was designed by the researcher and it has been included in Appendix D.5. The track consisted of twenty-five different tasks that the children had to complete in order to reach the treasure at the end. Since the setting of the game was a desert island, each number was written on a stone. Some obstacles were added so as to increase the children's likelihood of encountering most of the activities presented. The children had to take turns throwing the dice and performing the exercises associated with each number. Feedback was provided by the researcher for each response. A complete list of the tasks designed for the game follows.

Stone n. 1 – syllable segmentation task

Find two words that start with the same syllable:

- **Cheesecake**
- Chewing gum
- Cheerful
- **Cheeseburger**

Stone n. 2 – rhyme recognition task

Find two rhyming words:

- Teeth
- **Thief**
- Teach
- **Leaf**

Stone n. 3 – phoneme segmentation task

Pretend to be a robot. I am going to say two words and I want you to try and separate all the sounds in the words:

- Teach: /t/, /i/, /ʧ/
- Fish: /f/, /ɪ/, /ʃ/

Shark n. 4

You see a shark! Go back to the start.

Stone n. 5 – phoneme deletion task

What is "hand" without the sound /h/?

Stone n. 6 – minimal pairs task

Listen to the pairs of words that I am going to read. Do you think that they are the same word or different words?

- Sea/she
- Think/sink
- Two/do

Stone n. 7 – phoneme isolation task

Find three words that start with the same sound:

- **Train**
- Chain
- **Tree**
- Three

- **Twenty**

Stone n. 8 – syllable segmentation task

Find two words that end with the same syllable:
- **Notebook**
- Overlook
- **Textbook**
- Unhook

Stone n. 9 – syllable deletion task

What is "fusion" without "fu"?

Wave n.10

A big wave takes you back to stone n.7!

Stone n. 11 – phoneme substitution task

Replace the first sound in "tree" with the sound /θ/: three

Stone n. 12 – syllable segmentation task

Pretend to be a robot. I am going to say a word and I want you to try and break the word into syllables.
Starfish: star – fish

Stone n. 13 – phoneme segmentation task

Pretend to be a robot. I am going to say a word and I want you to try and separate all the sounds in the word.
Thief: /θ/, /i/, /f/

Rain n. 14

It is raining! Jump on stone n. 15!

Stone n. 15 – phoneme isolation task

Find three words that end with the same sound:

- **Breathe**
- Breath
- **Smooth**
- **Loathe**
- Load

Stone n. 16 – phoneme isolation task

Find two words that contain the same sound:

- **Potion**
- Explosion
- **Impression**
- Impressive

Stone n. 17 – minimal pairs task

Listen to the pair of words that I am going to read. Do you think that they are the same word or different words?

First/Thirst

Wind n. 18

It is windy! Go back to stone n. 16!

Stone n. 19 – phoneme substitution task

Replace the first sound in "hip" with the sound /ʃ/: ship

Stone n. 20 – phoneme deletion

What is "dice" without the first sound /d/?

Stone n. 21

Create a chain of words were each word has to start with the sound the previous word ends with.

Hoo**d** – **d**entis**t** – **t**oo**th** – **th**ie**f** – **f**eather

High tide n. 22

There is high tide! Use the ladder and go to stone n. 24

Stone n. 23 – rhyme recognition task

Find three rhyming words:

- **Tea**
- Sheep
- **Three**
- **Sea**
- Deer

Stone n. 24 – sound recognition task

Associate the following words to the right characters:

Theodore's mother /ð/:

- Smoothie
- Leather
- Mother

Dan /d/:

- Dragon
- Bed
- Mud

Theodore /θ/:

- Throne
- Thigh
- Bathroom

Fred /f/:

- Flower
- Leaf
- Knife

Stone n. 25 – minimal pairs task

Listen to the pair of words that I am going to read. Do you think that they are the same word or different words?

Catch/cat

Activity n. 12: phonetic chart

Material used: a chart designed by the researcher and a pen

Objective: to distinguish among two or more sounds

Number of participants required: one or more participants

This activity was inspired by one of the exercises suggested by Judica et al. (2008). During the research project, it was used as a revision activity at the end of Chapter Five in order to review all the consonant sounds encountered. Two charts were thus created. One was a three-column and three-row chart, whereas the other had seven columns and seven rows. Images of words containing different sounds were positioned in the top row. Other pictures with the corresponding sounds were then selected and placed in the first column on the left. Random graphemes were written in the other blocks except for three graphemes in the first chart and seven in the second one. Children had to match the images containing the same sound in both the top row and the first column in order to discover the names of the two protagonists of the following chapter of the story, namely "Bob" and "Justin". A copy of one of the charts has been included in Appendix D.6.

Activity n. 13: complete the drawings

Material used: drawings created by the researcher and crayons

Objective: to recognise two distinct phonemes

Number of participants required: one or more participants

This activity consisted of two drawings specifically created in order to work on the phonemes that are the focus of Chapter Six of the original narrative. The sounds the children were required to distinguish among were the /ɑ/ and /ʌ/ phonemes associated with Bob the fox in socks and Justin the funny monkey, respectively. Drawings of a fox and a monkey were thus conceived. Multiple paws, tails, arms, along with other elements in the background, were added so that the children could not easily discern the final image. A number was assigned to each body part and to each object. Words containing either the /ɑ/ or the /ʌ/ sounds were associated to each number in the drawings. For each picture, the participants were required to colour exclusively the sections corresponding to the word containing the correct sound in order to reveal the complete image. The children thus had to colour the areas associated with a word that included the phoneme /ɑ/ in the drawing of the fox and the /ʌ/ sound in the drawing of the monkey. For instance, two tails had been drawn in the picture of the monkey. They had been assigned two different numbers and two distinct words, namely "luck" and "lock". In order to colour the right tail, the participants thus had to identify the word that contained the /ʌ/ sound. A copy of the drawings can be found in Appendix D.7.

Activity n. 14: ball toss game
Material used: a ping-pong ball, plastic cups and drawings of the characters associated with the target sounds
Objective: to distinguish between two or multiple phonemes
Number of participants required: one or more participants

During the research project, this game was used to develop the children's ability to recognise two distinct vowel sounds. The phonemes considered were /ae/ and /ɛ/. However, the same activity might be adopted to revise multiple phonemes. Two American red cups were placed on the floor. A drawing of the characters associated with the target phonemes was positioned in front of each plastic cup. The researcher read a list of words containing either the /ae/ or the /ɛ/ sound. The participant had to identify the phoneme within each word and throw the ping-pong ball in the right cup.

Activity n. 15: phonetic "One" game

Material used: original "One" cards

Objective: to distinguish between four distinct phonemes

Number of participants required: two or more participants

This activity was adapted from the popular "Uno" game. It was called "One" in order to encourage the participants to use the English word while playing, rather than the Italian one. For this phonetic "One" game, original cards were created by the researcher. The four different colours included in the "Uno" game were replaced by the four distinct sounds the activity focused upon, namely /ɑ/, /ʌ/, /ae/ and /ɛ/. Four sets of cards were designed, one for each phoneme. Each set consisted of nine cards with a number from one to nine, one Skip card, two Reverse cards and one Draw Two card. An image of a word containing the sound in question was included in each card. Moreover, a Wild card and a Wild Draw Four card were created. For these two cards, the colours were replaced with the four images of the characters from the narrative associated with the four target phonemes. The rules of the game were not altered. As far as the word selection is concerned, minimal pairs were used when possible. Table 2.6 shows a complete list of the words employed in the activity. Since the purpose of the game was to enhance the children's ability to discern four different phonemes, the word choice did not have to be exclusively limited to words familiar to the participants. Words were repeated multiple times by the researcher in order to help the children identify the distinct phoneme contained in each of them. Moreover, drawings of the four characters associated with the four sounds were given to the children so as to simplify the task. The words corresponding to the images included in each card were repeated. The participants were then encouraged to recognise the phoneme contained in each word and to place the cards on the right drawings. It was observed that having a visual overview of the cards they possessed divided according to the sounds contained in them helped the children during the game. A copy of some of the cards has been included in Appendix D.8.

	/ɑ/	/ʌ/	/ae/	/ɛ/
1	dock	duck	fan	deck
2	rock	cup	cap	bed
3	clock	bun	band	bend
4	pop	hum	ham	hen
5	pond	pup	pan	pen
6	shop	shut	apple	bell
7	not	nut	bat	net
8	pot	sun	pat	pet
9	hockey	honey	flash	yell
Skip card	boss	bus	sand	send
Reverse card	rob	rug	map	egg
Reverse card	block	gloves	black	leg
Draw Two card (+2)	mop	bucket	back	desk

Table 2.6. The list of words used in the phonetic "One" game

Activity n. 16: phonetic hopscotch

Material used: drawings of the characters associated with the target phonemes, some tape and a paper clip

Objective: to recognise multiple phonemes

Number of participants required: one or more participants

The present activity was designed to revise the eight vowel sounds encountered before introducing the last chapter of the narrative. The game was adapted from the activity suggested by Tarantini and Benatti (2017). The eight drawings of the characters corresponding to the target vowel sounds were placed on the floor. The images were distanced from one another. The children had to throw a paper clip on the first drawing. If the clip landed on the image, they had to hop on one foot, reach the image and perform a sound recognition task in order to proceed. Each task consisted of four sets of four words each. For each set, the children had to indicate the word that contained the phoneme associated with the character of the story they were standing on. For instance, the participants standing on the drawing of Nick the big pig had to identify the /ɪ/ sound in each of the following sets:

- Seat (/i/), **sit (/ɪ/)**, set (/ɛ/), sat (/ae/)

- **Rid (/ɪ/)**, read (/i/), read (/ɛ/), road (/o/)
- Fell (/ɛ/), feel (/i/), **fill (/ɪ/)**, fall (/ɔ/)
- Choke (/o/), check (/ɛ/), cheek (/i/), **chick (/ɪ/)**

Activity n. 17: phonetic twister

Material used: twister game

Objective: to recognise four phonemes

Number of participants required: two or more participants

This activity was conceived in order to work on the two sound pairs presented in the last two chapters of the narrative. The four colours were replaced by the /ɔ/, /o/, /ʊ/ and /u/ phonemes. Images of words containing these sounds were placed on the plastic mat. Six words were selected for each phoneme. When possible, similar sounding words such as "ball", "bone", "book" and "boot" or "fall", "phone", "foot" and "food" were chosen. The rules of the game were not altered.

Activity n. 18: indoor obstacle course

Material used: a chair, the characters' drawings, three plastic cups and one dice

Objective: to perform similar phonemic and phonological awareness' tasks contained in the pre- and in the post-tests

Number of participants required: one or more participants

This activity was suggested at the conclusion of the experimental study. It was thus conceived to review most of the sounds encountered in the narrative, as well as to practice phonemic and phonological awareness tasks similar to those constituting the pre-test and the post-tests. These exercises represented the obstacles that the participants had to overcome in order to complete the course. A detailed description of the tasks that the children were required to perform follows.

Step n.1 – Rhyme recognition task

The participants were required to discern three rhyming words in the two following sequences:

- **Book**
- **Cook**
- Good
- **Look**
- Foot

- **Sheep**
- Ship
- **Sleep**
- Sea
- Sleeve
- **Keep**

If the task was executed correctly, the children had to crab walk towards a chair.

Step n. 2 – Phoneme deletion task
1. What is "hot" without the first sound /h/? [ɑt]
2. What is "ship" without the first sound /ʃ/? [ɪp]

If the children answered both questions correctly, they had to run around the chair three times.

Step n. 3 – Syllable segmentation task
Pretend to be a robot. I am going to say two words and I want you to try and break them into syllables.
1. Adventure (ad-ven-ture)
2. Decision (de-ci-sion)

If the task was performed correctly, the children had to reach a table or a flat surface hopping on one foot.

Step n. 4 – Phoneme isolation task

Some images were scattered around the table/flat surface. The children were asked to create a sequence in which each word started with the sound the previous word ended with. The word chain should ultimately appear as follows:

Egg – glove – volcano – old – dentist – teach – chess – Spanish – sheep – push – shop

If the children were able to complete the exercise, they could go to step n. 5.

Step n. 5 – Phoneme blending task

Three drawings of the characters from the original narrative were placed on the floor in order to form a word. The first character was positioned on the left side, the second one on the right side, while the last one the left side again. The children had to jump from one image to the other while saying the individual phoneme associated to each character. Afterwards, they had to blend the phonemes together in order to discover the word.

1. The drawings of Fred the friendly frog (/f/), Nick the big pig (/ɪ/) and Shannon the Spanish fish (/ʃ/) were positioned on the floor in order to form the word "fish"
2. The drawings of Hannah the horse in high heels (/h/), Jack the black cat (/ae/) and Tom the fast tiger (/t/) were positioned on the floor in order to form the word "hat"

If the participants completed the activity correctly, they could proceed towards the next step.

Step n. 6 – Phoneme segmentation task

This activity was similar to the one encountered in the previous step. However, this time the children were given a word and asked to choose the right characters corresponding to the sounds that constituted the word. For instance, the researcher said the word "foot". The participants had to segment the words into its distinct

phonemes by selecting the drawings of Fred the friendly frog (/f/), Brooke the book made of wood (/ʊ/) and Tom the fast tiger (/t/). As for the second task, the word "dot" was delivered and the children were required to choose the drawings of Dan the dirty dog (/d/), Bob the fox in socks (/ɑ/) and Tom the fast tiger (/t/) in order to complete the activity.

Once the activity was finalized, the children could go to step n. 7.

Step n. 7 – minimal pairs task

Six minimal pairs were presented to the children. The latter were asked whether they perceived the words as identical or different. They were then required to identify the individual phonemes that varied in the two words and to indicate the drawings of the characters associated with them.

1. *Full/fool*: /ʊ/ Brooke the book made of wood - /u/ Cooper the kangaroo in boots
2. *Pan/pen*: /ae/ Jack the black cat - /ɛ/ Jess the red hen
3. *Pop/pup*: /ɑ/ Bob the fox in socks - /ʌ/ Justin the funny monkey
4. *Rich/reach*: /ɪ/ Nick the big pig - /i/ Colleen the green sheep
5. *Bought/boat*: /ɔ/ Shawn the yawning strawberry - /o/ Rose the old flamingo
6. *Ship/chip*: /ʃ/ Shannon the Spanish fish - /ʧ/ Richard the chatty teacher

If the activity was performed correctly, they had to crawl to the following step.

Step n. 8 – Phoneme substitution task

The children were asked to replace the last sound in "cat" with the sound /ʧ/, giving the word "catch" and the second sound in "cheek" with /ɪ/, giving the word "chick". Once the activity was completed, a dice and three plastic cups were shown to the children. The dice was placed under one of the cups. The three cups were moved multiple times in order to confuse the participants. The latter were then asked to guess the location of the dice. Finding the dice allowed them to proceed to the next step.

Step n. 9 – Syllable blending task

The researcher separated two words into its syllables. They said the distinct syllables aloud. The participants were then asked to blend the syllables together and say the two words they formed.

1. Dan – ger (danger)
2. Fam – i – ly (family)

If the activity was completed correctly, the children had to walk towards the end of the obstacle course while balancing a book on their head.

Step n. 10 – Syllable deletion task

In order to ultimate the obstacle course, the children had to say the residual part of two given words where a syllable had been deleted. They were then asked what remained of the words "playground" and "today" if the syllable "play" and "day" were removed, respectively.

2.3 Data analysis

The data was analysed by comparing the pre-test and the post-tests' scores. One point and zero points were assigned for each correct and incorrect or partially correct answer, respectively. As previously mentioned, the focus of the present quasi-empirical research was on sound discrimination. However, some tasks such as phoneme blending, segmentation and deletion involved not only perception but also production skills. When evaluating the participants' performance in the aforementioned tasks, it was thus decided not to consider as incorrect any responses containing errors related to the speech production domain. For instance, if the children pronounced the individual phonemes in the word "hand" as /h/, /e/, /n/, /d/ instead of /h/, /ae/, /n/, /d/, or if they made vowel length errors, the task was considered successfully completed. In fact, it was observed that when asked to indicate the character the phoneme /ae/, which they had pronounced as /e/, corresponded to, the children correctly associated it to "Jack the black cat". On the

contrary, they were assigned zero points if they made mistakes such as failing to recognise the phoneme /h/ at the beginning of a word, adding or deleting one or several phonemes.

General outcomes for each test, as well as for each section included in the test, were investigated. Individual test results, as well as group performance, were examined in order to evaluate the participants' progress. Furthermore, the data interpretation was affected by the dyslexia diagnosis of one of the participants (Participant A), which occurred during the present research study. Percentages for both pre- and post-tests' measures, as well as mean, median, mode, range and standard deviation scores were calculated and reported in order to demonstrate the development of the participants' phonemic and phonological awareness skills. Finally, frequencies of incorrect answers across the different sections of the three tests administered were analysed and compared.

Chapter 3 – Findings

This chapter presents the findings of the current research project. The first section discusses the participants' performances on the three tests, whereas outcomes for each distinct subtest are examined in the following section, alongside an accurate error analysis. Individual and group performances are considered in both sections.

3.1 Pre- and post-tests' general outcomes

Pre- and post-tests' results were calculated and compared in order to assess the development of the participants' phonemic and phonological awareness skills. Test scores were determined and corresponded to the percentages of correct answers for each test, which are reported in Figure 3.1. The highest possible score in each test was 100, which thus coincided with 100% of correct responses. For the sake of clarity, the post-test conducted at the end of the study was denominated "post-test 1", whereas "post-test 2" refers to the test administered three months after its conclusion. Figure 3.1 thus shows the children's overall improvement following the instructional sessions.
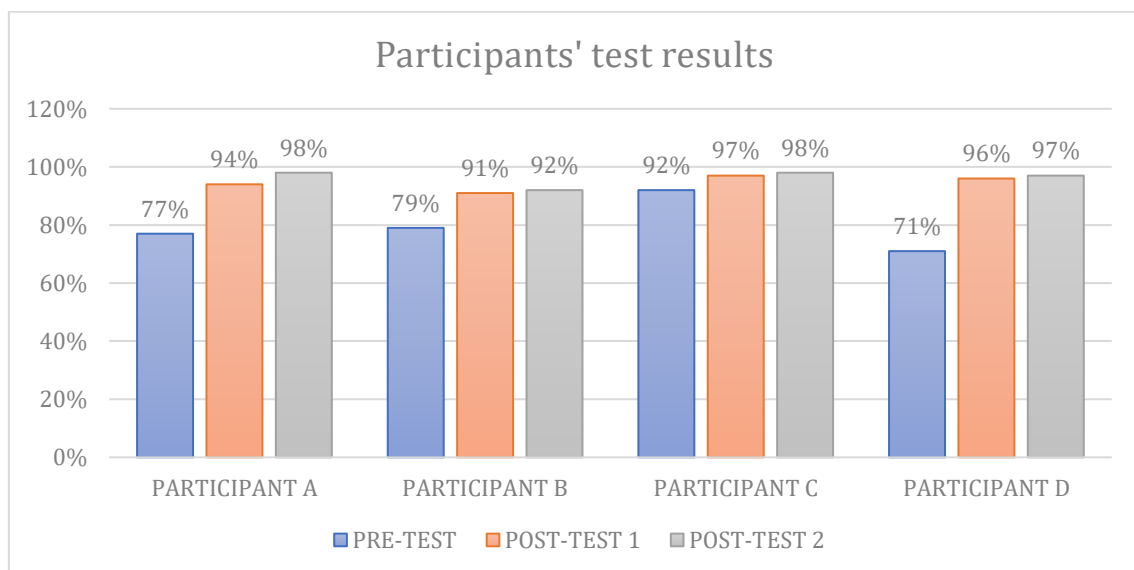

Figure 3.1. Participants' percentages of correct responses in each test

As can be evinced from the chart, the children's initial level of phonemic and phonological awareness differed significantly, with pre-test scores ranging from a minimum of 71 to a maximum of 92. However, it can be observed that, except for Participant C, who scored above average, the other pupils' pre-test results were relatively homogenous, being comprised between 71 and 77. The four eight-year-olds' performances generally improved in both post-tests conducted at the conclusion of the instructional sessions and three months after the study. Participant A, B and D's progress seems to be particularly striking, although the first post-test's scores of all children increased. In fact, whereas the difference in the percentages of correct responses between the first post-test and the pre-test corresponded to 5% for Participant C (pre-test: 92%; post-test 1: 97%), it reached 17%, 12% and 25% for Participant A, B and D, respectively. Participant A and D seemed to have particularly benefited from the instructional sessions. In fact, it should be noted that whereas they obtained the two lowest results in the pre-test, namely 77% and 71%, their scores were among the highest in the last assessment.

Furthermore, the participants' progress seems to be long-lasting. In fact, in the second assessment conducted three months after the conclusion of the study, the children's gains in phonemic and phonological awareness skills seemed to be preserved. As can be noted in Figure 3.1, they also slightly and unexpectedly increased. This minor improvement may be ascribed to the fact that the children needed time to internalise the contents they had been exposed to during the intensive instructional sessions. These findings thus seem to suggest that the original teaching materials presented during the lessons were effective in developing the participants' phonemic and phonological awareness skills.

Central tendency measures seem to corroborate the aforementioned hypothesis. Mean and median scores for each test, along with mode, range and standard deviation scores, are included in Table 3.1. The latter indicates that the participants' average of correct responses increased by 14.75 and 16.5 in the first and second post-tests, respectively, compared to the pre-test. Likewise, the median value increased, reaching 97,5 in the post-test conducted three months after the study. Furthermore, the mode value for the latter reveals that the two children who scored above the median both performed 98% of the test correctly. Compared to the

two highest scores obtained in post-test 1, namely 97% and 96%, and in the pre-test, 92% and 79%, these data seem to confirm the children's progress. The lowest result similarly increased from 71% in the pre-test to 91% and 92% in post-test 1 and 2, respectively.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	79,75	94,5	96,25
MEDIAN	78	95	97,5
MODE	none	none	98
RANGE	21	6	6
STANDARD DEVIATION	7,660777	2,291288	2,487469

Table 3.1. Central tendency, range and standard deviation measures for each test

Furthermore, the findings seem to indicate that the lessons contributed not only to promoting the development of the participants' phonemic and phonological awareness skills, but also to making the group performance more cohesive. In fact, as can be observed in Table 3.1, the difference between the highest and the lowest scores in the pre-test, namely 71 and 92, was 21. This value seems to imply a lack of homogeneity in the group's initial level of phonemic and phonological awareness. This suggestion appears to be validated by the standard deviation value, which indicates a significant scattering of the children's results from the mean. Nonetheless, this dispersion seems to be constrained following the study, thus resulting in a higher conformity of the participants' scores. Table 3.1 shows that the score range decreased from 21 to 6, whereas the standard deviations for both post-tests were comprised between 2.3 and 2.5 points compared to the pre-test value of 7.7. The data thus seem to suggest that the original teaching materials designed were effective in encouraging the children to achieve a similar stage of metalinguistic knowledge.

The efficacy of the lessons in enhancing the participants' phonemic and phonological awareness skills in the foreign language is especially exemplified by the improvement of Participant D. In fact, despite receiving the lowest score in the pre-test, namely 71%, she obtained the second highest results in both post-tests. She

scored slightly below Participant C, who received the highest scores in each test conducted. Although Participant C's performance equally increased, her scope for improvement was limited, having successfully completed 92% of the test before the beginning of the study.

Finally, the individual progress of Participant A should be briefly considered. As stated previously, the aim of the present research project was to assess the impact of original phonemic and phonological awareness activities on four typically developing EFL learners. However, Participant A was diagnosed with dyslexia and dysorthographia towards the end of the period of the research. Despite the diagnosis, the eight-year-old continued to receive the same instruction as the other participants throughout the study. The teaching materials were thus not modified to be adapted to the new situation. Nevertheless, Participant A's performance seems to have considerably improved following the instructional sessions. In fact, she initially completed 77% of the test correctly, thus obtaining the second lowest score in the pre-test among all participants. However, her performance significantly increased in both post-tests, reaching 94% and 98% in the assessments conducted directly after the conclusion of the study and three months later, respectively. In particular, whereas her post-test 1 score classified as the second lowest, she obtained the highest result among the other participants in the second post-test. These data seem to suggest that the new teaching materials employed in the study were successful in developing the phonemic and phonological awareness skills of the dyslexic child. Therefore, the positive results obtained by Participant A seem to imply that the phonological awareness programme designed and tested in the present research project may also be appropriate for children with learning disabilities. However, the real inclusiveness of the material, as well as the possibility of extending its use to a classroom context, need to be further investigated.

3.2 A detailed analysis of the results of each subtest

This section examines the outcomes for each of the ten subtests the test consisted of. Furthermore, the frequency of incorrect responses across the three tests, as well as a comprehensive analysis of the errors, are included. Both individual

and group performances are considered. Following a similar pattern in the data interpretation as in the previous section, percentages of correct answers, as well as mean, median, mode, range and standard deviation were calculated in order to assess the participants' improvement in each task. Despite the values being relatively small, it was decided to calculate the aforementioned measures so that the participants' gains in each task would be more evident. In addition, frequency tables displaying the most recurring incorrect responses across the different subtests, as well as an analysis of the errors, are provided.

Rhyme Recognition Subtest. As reported in Figure 3.2, Participant B and C successfully completed the ten tasks the subtest consisted of. Their performance did not vary across the three tests. On the contrary, Participant A and Participant D's initial ability to identify rhyming units appears to be slightly weaker. Chart 3.1 illustrates the relative frequency of incorrect answers in the pre-test. An analysis of the errors reveals that Participant A failed to recognise the words presented in exercise 4 as rhyming, whereas she incorrectly affirmed that the units in exercises 7 and 8 were rhyming. Likewise, Participant D did not successfully classify "pun" and "gun" in exercise 2 as rhyming words.
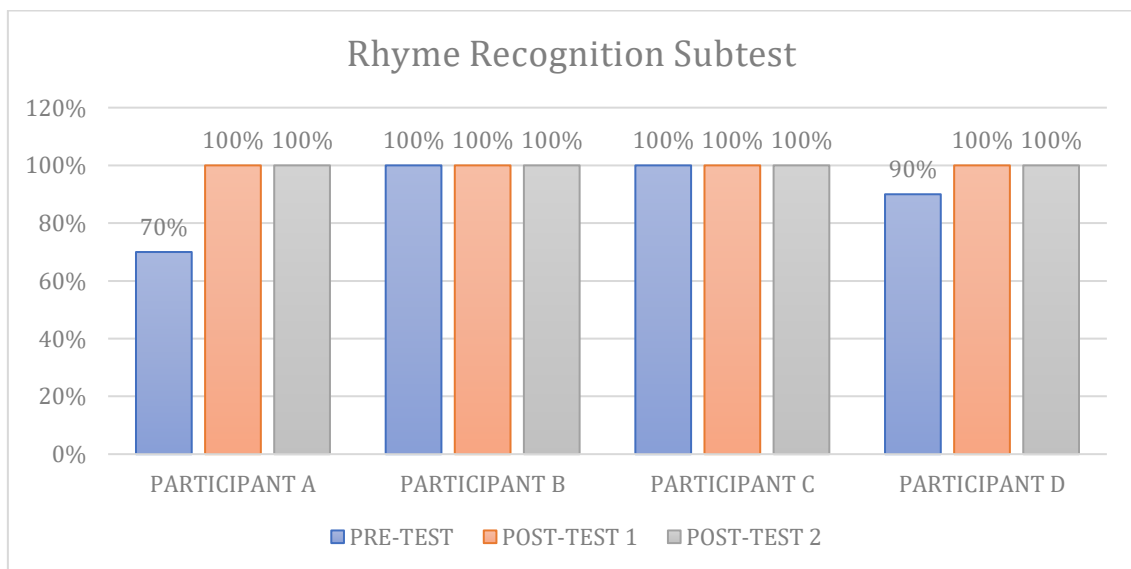

Figure 3.2. Participants' percentages of correct responses in the Rhyme Recognition Subtest
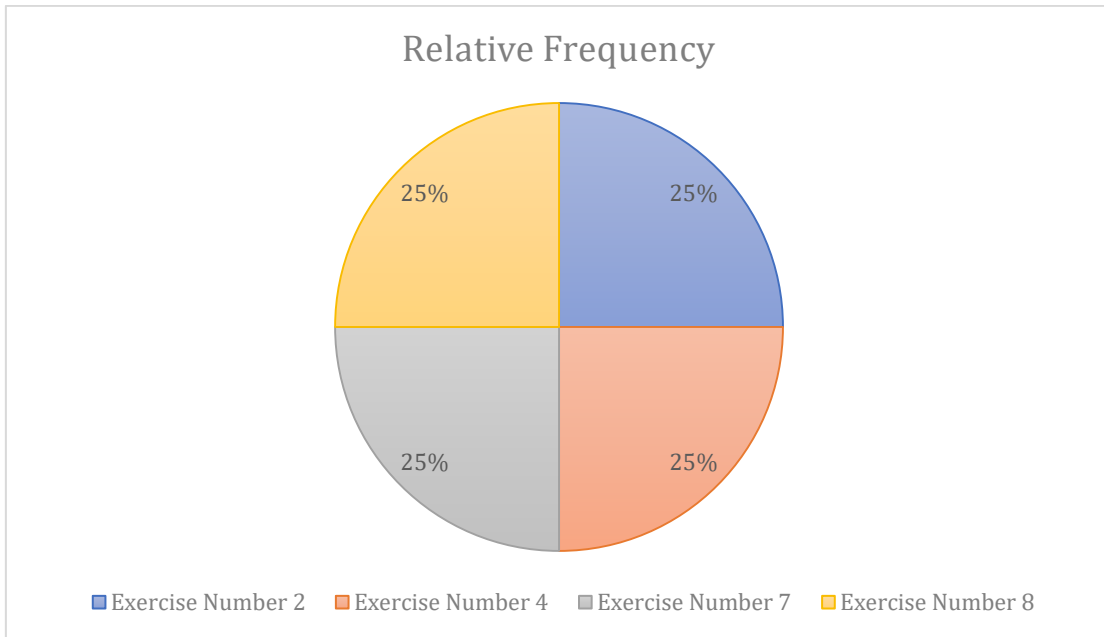
Chart 3.1. The relative frequency of incorrect answers in the Rhyme Recognition Subtest in the pre-test

Nonetheless, their performance improved in both post-tests, obtaining the same score as their peers. Table 3.2 exemplifies the two children's improvement. In fact, although both the mean and the median were already high in the pre-test, they reached the highest possible value in both post-tests. On the other hand, the decrease of the range and standard deviation values in the two post-tests compared to the pre-test exemplifies the participants' achievement of a similar level of rhyme recognition abilities.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	9	10	10
MEDIAN	9,5	10	10
MODE	10	10	10
RANGE	3	0	0
STANDARD DEVIATION	1,224745	0	0

Table 3.2. Central tendency measures, range and standard deviation scores for the Rhyme Recognition Subtest

Syllable Blending Subtest. As shown in Figure 3.3, Participant C successfully completed the ten tasks included in the subtest that consisted in blending the given syllables together in order to form actual words. Her performance was stable across the three tests administered. On the other hand, Participants A, B and D scored slightly below Participant C in the pre-test. Participant A failed to correctly combine the syllables presented in one task, thus obtaining 90% of right answers, whereas both Participants B and D performed two tasks incorrectly. Table 3.3 reveals that the children particularly struggled with three-syllable words. In fact, the most recurring error in the pre-test corresponded to exercise 9, which required the pupils to blend together the syllables constituting the word "different". Whereas Participant B repeated the error in both post-tests, Participants A and D performed all exercises correctly following the instructional sessions.
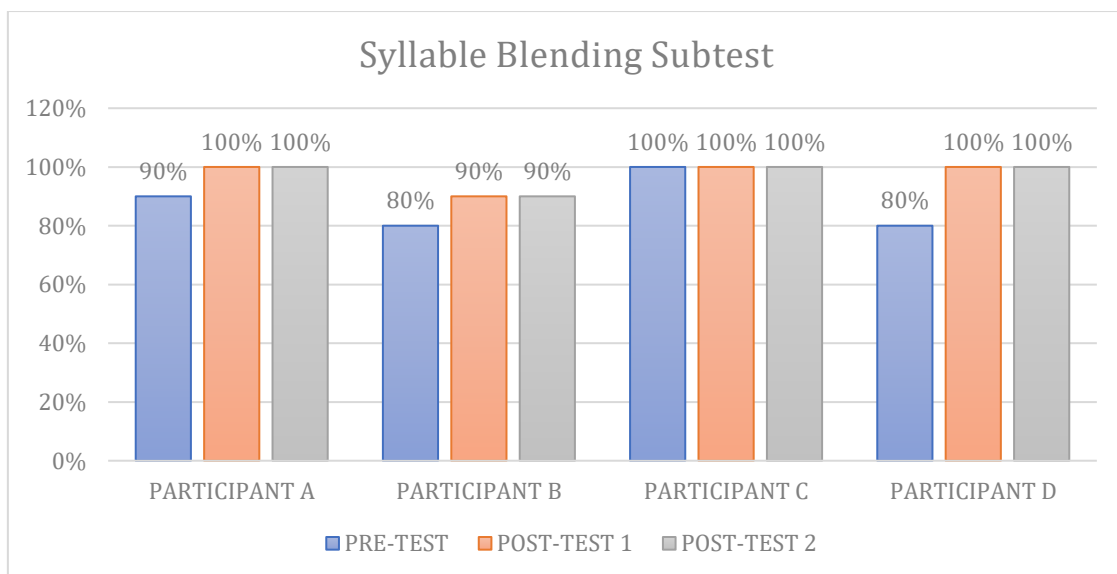

Figure 3.3. Participants' percentages of correct responses in the Syllable Blending Subtest

Exercise Number	PRE-TEST		POST-TEST 1		POST-TEST 2	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
5	1	20%				
6	1	20%				
9	2	40%	1	100%	1	100%
10	1	20%				

Table 3.3. Frequency of incorrect answers in the Syllable Blending Subtest

As can be observed in Figure 3.3 and Table 3.4, the children's ability to combine syllables together to form words overall improved after the study. In fact, both mean and median increased by 1 and 1.5 points, respectively, in the two post-tests. Furthermore, whereas the mode value in the pre-test was 8, meaning that more than one participant successfully completed 80% of the pre-test, the most recurring score in the post-tests corresponded to the highest result attainable, namely 10. However, although all learners' post-test results seemed to have improved compared to the pre-test, Participant B performed slightly below his peers in both post-tests. In fact, the post-tests' range and standard deviation values reported in Table 3.4 indicate that despite drawing closer, the participants' scores never coincided.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	8,75	9,75	9,75
MEDIAN	8,5	10	10
MODE	8	10	10
RANGE	2	1	1
STANDARD DEVIATION	0,829156	0,433013	0,433013

Table 3.4. Central tendency measures, range and standard deviation scores for the Syllable Blending Subtest

Syllable Segmentation Subtest. The participants seem to have experienced greater difficulties in performing the current task compared to the previous subtests. Figure 3.4 shows that none of the learners received the highest possible score in the pre-test nor in the first post-test conducted after the study. Participant

C alone succeeded in correctly completing all subtest tasks in the second post-test, thus demonstrating a complete mastery of syllable segmentation skills.

Furthermore, Figure 3.4 illustrates the inconsistency in the participants' results in each test conducted, which seems to suggest minor improvements, if any, in the children's syllable segmentation abilities. In fact, except for Participant D, whose performance increased in both post-tests compared to the pre-test, the other pupils' scores either remained unaltered or unexpectedly lowered. In particular, in the pre-test, Participants A and B correctly segmented eight and nine words, respectively, out of the ten tasks the subtest consisted of. Despite decreasing of 20% and 10%, respectively, in the first post-test, their results returned to their initial percentages in post-test 2, namely 80% and 90%. Considering the scores obtained by the participants in the pre-test and in the last post-test, it can thus be observed that Participants A and B's syllable segmentation skills did not seem to advance.

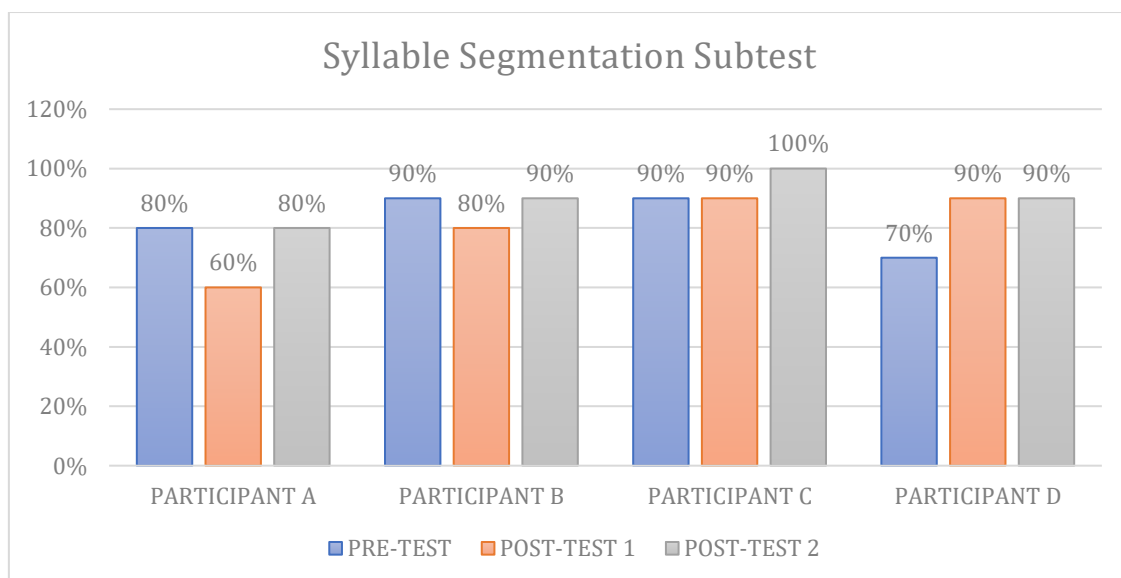*Figure 3.4. Participants' percentages of correct responses in the Syllable Segmentation Subtest*

On the contrary, Participant D's gains seem to be more apparent, increasing from 70% in the pre-test to 90% in post-test 2. Likewise, Participant C improved in the post-test conducted three months after the conclusion of the study, reaching 100% of correct responses. The participants' results, especially in the first post-test,

thus seem to be less homogeneous compared to what was noticed for the previous subtests. The range and standard deviation values reported in Table 3.5 explicitly illustrate the variety and distance of the children's performance, especially in the pre-test and in post-test 1. In fact, whereas the standard deviation in the pre-test was relatively restrained, corresponding to 0.83, it reached its highest value, namely 1.2, in the first post-test. Similarly, the range increased from 2 to 3. In fact, the lowest score in post-test 1 was 60%, compared to 70% in the pre-test, whereas the highest result, namely 90%, coincided in both tests. Syllable segmentation skills thus seemed to be more developed in some participants than in others. However, the central tendency measures, as well as the range and standard deviation values calculated for the second post-test reveal that the children's general performance slightly increased and that the group results were more homogeneous compared to the two previous tests.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	8,25	8	9
MEDIAN	8,5	8,5	9
MODE	9	9	9
RANGE	2	3	2
STANDARD DEVIATION	0,829156	1,224745	0,707107

Table 3.5. Central tendency measures, range and standard deviation scores for the Syllable Segmentation Subtest

As far as the error analysis is concerned, Table 3.6 indicates that in the pre-test most participants wrongly segmented the three-syllable word in exercise 10. In fact, two children, namely Participants A and B, incorrectly divided the word "beautiful" into *be-au-ti-ful* instead of *beau-ti-ful*. However, Participant A alone repeated the error in the first post-test, although not in the following assessment. It seems necessary to underline that the syllable division of the words included in the syllable blending, segmentation and deletion subtests was checked on the Online Cambridge English Dictionary. The syllable segmentation provided by the dictionary was considered as reference when evaluating the children's performance in these

tasks. Therefore, all productions that differed from those given in the dictionary were judged incorrect.

Exercise Number	PRE-TEST		POST-TEST 1		POST-TEST 2	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
1	1	14%	3	37,50%	3	75%
2	1	14%				
4			1	12,50%		
5	1	14%				
8	1	14%	2	25%	1	25%
9	1	14%	1	12,50%		
10	2	30%	1	12,50%		

Table 3.6. Frequency table of incorrect answers in the Syllable Segmentation Subtest

As can be observed in Table 3.6, the first exercise revealed the most mistakes among the participants in both post-tests. In fact, three children incorrectly divided the word "bedroom" into *be-droom*, compared to one in the pre-test. It should be noted that the error recurred in Participant D's performance across the three different tests. As for Participant A and Participant B, it exclusively appeared in the two post-tests.

Furthermore, the learners struggled to successfully segment the word "fantastic" in exercise 8, which was the second most frequent error in both post-tests. As was the case for the errors previously examined, the participants' mistakes highly resembled one another. In fact, all incorrect responses in the present exercise involved the segmentation of the word "fantastic" as *fan-ta-stic* instead of *fan-tas-tic*. It seems important to briefly mention the individual performances in this exercise. The task was incorrectly completed by Participant C in the pre-test and in post-test 1. This result might suggest a possible difficulty in segmenting three-syllable words, although she correctly divided the word "beautiful" in exercise 10. However, she did not repeat the error in the test conducted three months later. Surprisingly, Participant B, who successfully completed the task in the pre-test, responded erroneously in post-test 1. Likewise, Participant A performed the task correctly in both the pre-test and the first post-test, yet she failed to separate the

word syllables correctly in post-test 2. It should be ultimately noted that pupils' syllable segmentation of English words seems to largely resemble that of Italian words, thus suggesting that they may erroneously apply the Italian syllable division that they are taught at school to the FL context. Therefore, their mother-tongue, and specifically the way words are divided into syllables in Italian, seems to negatively influence to a certain extent the participants' performance in the FL.

Finally, pupils predictably seemed to experience more difficulties in performing tasks requiring them to divide words into syllables rather than to blend syllables into words. These findings were consistent with the research conducted thus far on the topic and discussed in the first chapter, which has suggested that segmenting skills develop later compared to blending skills (Schuele and Boudreau, 2008, p. 6; Ukrainetz et al., 2000, p. 332). Among syllable awareness tasks, segmentation exercises are thus generally considered to be more complex than blending ones.

Syllable Deletion Subtest. The children's gains in the syllable deletion subtest seem to be more linear compared to the syllable segmentation subtest. Figure 3.5 shows that all learners, except for Participant B, managed to complete all tasks correctly in the last assessment, regardless of their initial score. Despite performing slightly below the others, Participant B demonstrates to have similarly improved. In fact, his percentage of correct responses increased from 80% in the pre-test and the first post-test to 90% in the second post-test. These data thus seem to suggest that the instructional sessions were effective in developing the children's competences in word manipulation at the syllable level.

The participants' performances thus seem to have overall improved, except for Participant C who reached the highest possible result in each of the three tests. Nevertheless, Figure 3.5 indicates that most children's scores did not increase immediately after the lessons, but only in the assessment conducted three months after the study. In fact, Participants A and B's performance did not vary from the pre-test to the first post-test, whereas it increased of 10% in the last assessment. On the contrary, Participant D made a steady improvement after the instructional sessions, completing all tasks correctly in both post-tests.
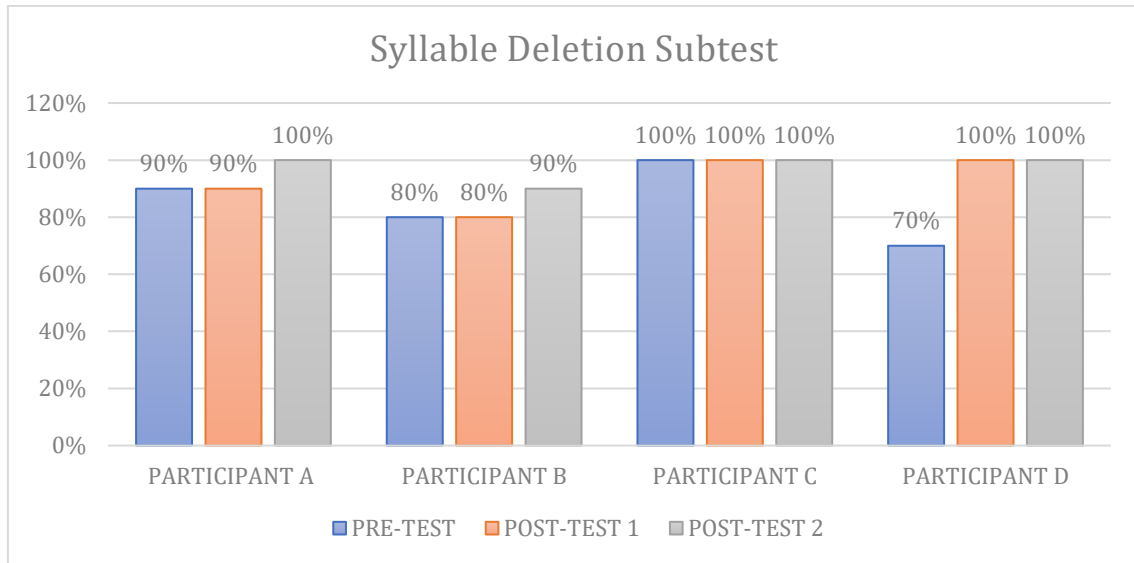
Figure 3.5. Participants' percentages of correct responses in the Syllable Deletion Subtest

The central tendency measures reported in Table 3.7 explicitly demonstrate the development of the children's ability to delete syllables within words. Both the mean and the median, which coincided in the pre-test and corresponded to 8.5, increased by 1.25 and 1.5 points, respectively, in the last post-test conducted. Whereas these values, along with the mode, seem to diverge from those calculated in the previous subtest, they are similar to those obtained in the syllable blending section. Tasks requiring children to divide words into syllables appear to have been more challenging compared to exercises that involved combining and removing syllables from given words. The participants' segmenting skills thus seem to be less solid than blending and deletion ones. This finding seems to diverge from the indications of the research conducted on the topic thus far. In fact, as mentioned in the literature review, studies have suggested that phonological awareness skills proceed along developmental stages. In particular, the complexity of tasks within the syllable awareness level seems to proceed from blending to segmentation and ultimately deletion and manipulation exercises (Schuele and Boudreau, 2008, p. 6; Ukrainetz et al., 2000, p. 332). The latter are thus generally considered to be the most difficult among all syllable awareness tasks. However, in the present study, the participants unexpectedly seemed to experience greater difficulties in syllable

segmentation tasks. On the contrary, they achieved better results in both deletion and segmentation subtests, in which their scores nearly corresponded.

Furthermore, the progressive decrease of the range and standard deviation values in the three tests indicates the achievement of a higher degree of homogeneity in the participants' results following the instructional sessions. In fact, the difference between the highest and the lowest scores in the pre-test gradually reduced by 1 and 2 points in the first and second post-tests, respectively. Likewise, the standard deviation shifted from 1.1 in the pre-test to 0.8 and 0.4 in post-test 1 and 2, respectively. The lessons seemed to be effective in promoting a higher cohesion among the children's performances, which almost coincided in the last post-test. By the end of the study, the four eight-year-olds thus appeared to have acquired similar syllable deletion abilities.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	8,5	9,25	9,75
MEDIAN	8,5	9,5	10
MODE	none	10	10
RANGE	3	2	1
STANDARD DEVIATION	1,118034	0,829156	0,433013

Table 3.7. Central tendency measures, range and standard deviation scores for the Syllable Deletion Subtest

Since Participant C completed all tasks correctly in each assessment, the error analysis will focus exclusively upon the other learners' performances. As can be observed in Table 3.8, errors in the pre-test involved the incorrect deletion of either the first or last syllable in the words presented in exercises 4, 6 and 7. Pupils seemed to experience greater difficulties in removing syllables in word-initial rather than word-final position. In fact, among the tasks that were frequently mistaken, exercise 6 alone required children to delete the last syllable of the word "sunshine". With regard to this exercise, it is interesting to notice that when asked to delete the syllable "shine" from the given word, one participant responded with [saɪn] instead of [sʌn], thus substituting the vowel in the first syllable with the diphthong [aɪ] included in the syllable to be removed. The child's fusion of the two syllables might

be ascribed to the complexity of the task, which, as noted by Yopp (cited in Gillon, 2018, p. 8), places greater demands on working memory compared to blending or segmentation tasks. In fact, children are required to previously identify and remember the syllables within a given word in order to subsequently delete one and ultimately deliver the outcome of this manipulation. In this case, the struggle the eight-year-old faced along the process resulted in an apparent merging of the two syllables.

Exercise Number	PRE-TEST		POST-TEST 1		POST-TEST 2	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
4	2	33%	2	67,00%		
5			1	33,00%	1	100%
6	2	33%				
7	2	33%				

Table 3.8. Frequency table of incorrect answers in the Syllable Deletion Subtest

As far as the errors in the other exercises are concerned, a specific pattern could be observed. In fact, when asked to say the residual part of words such as "basket", "pineapple" and "Christmas" if their first syllable were to be removed, the answers provided were "sket", "neapple" and "stmas". The participants thus seemed to add the last sound of the preceding syllable, which had to be deleted, to the remaining syllable. Furthermore, it was observed that the children were likely to produce the same error in a task. For instance, all three participants responded with "sket" in exercise 4, thus revealing a certain degree of homogeneity among the children's errors. The pupils' difficulties specifically in this task were apparent, since it was the most mistaken exercise in the post-test conducted immediately after the instructional sessions. However, all participants completed it correctly in the last assessment. It should be noted that whereas Participant A responded incorrectly in both the pre-test and the first post-test, Participant D did not repeat the error in the two post-tests. On the other hand, Participant B, who succeeded in performing the exercise in the pre-test and in post-test 2, completed it incorrectly in the first post-test. Nevertheless, the error did not reappear in the post-test administered three

months after the study. Furthermore, the fact that only one error was produced in the latter suggests that the participants' syllable deletion skills improved throughout the research project.

Phoneme Isolation Subtest. As mentioned in the previous chapter, the present test was structured so that rhyming and syllable awareness tasks were tackled first. In fact, according to the literature, the skills concerning the aforementioned levels generally precede the ability to identify and manipulate individual sounds within words (Chard and Dickson, 1999, p. 262; Daloiso, 2017, p. 6-7). The test then zooms in on phonemic awareness tasks, which require the mastery of more complex skills in order to be performed. The Phoneme Isolation Subtest, along with the following sections, thus assess the participants' ability to manipulate single phonemes within words.

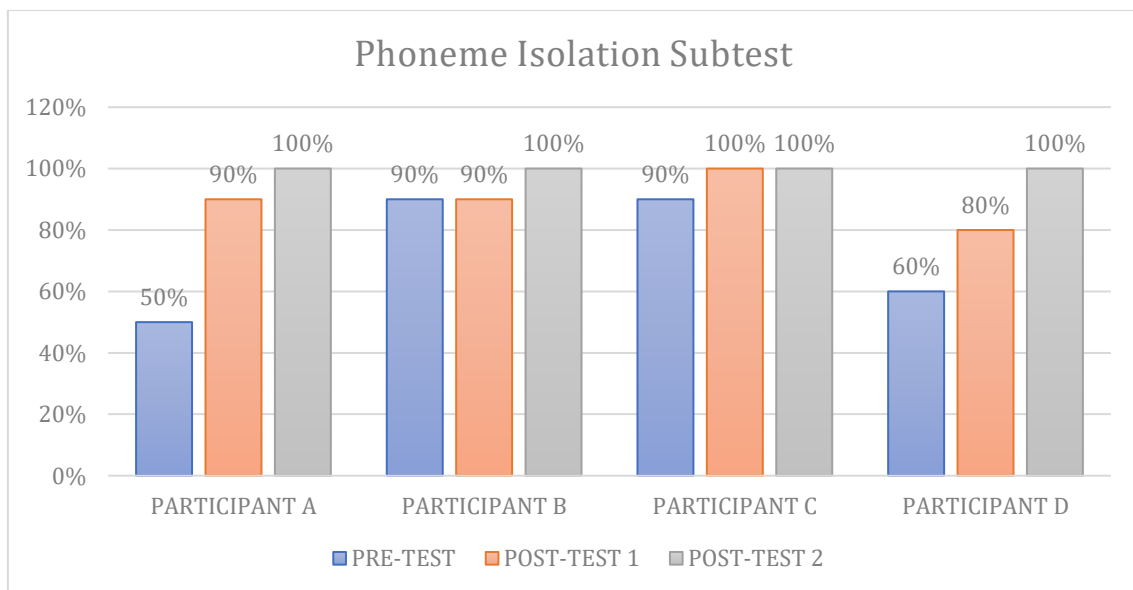*Figure 3.6. Participants' percentages of correct responses in the Phoneme Isolation Subtest*

As can be noted in Figure 3.6, the present subtest was the first among the sections considered thus far in which all participants ultimately completed all tasks correctly. In fact, they all obtained the highest possible score in the last assessment, despite the significant variance among their results in the previous tests.

Participants A and D's progress is particularly striking. Whereas the other learners' performances overall improved of 10%, the difference between the scores obtained by Participant A and Participant D in the last assessment and in the pre-test corresponded to 50% and 40%, respectively. In fact, Participant A's percentage of correct answers increased from 50% in the pre-test to 90% and 100% in post-test 1 and 2, respectively. Likewise, Participant D progressed from 60% in the pre-test to 80% and 100% in the two post-tests. The children's remarkable gains in phoneme identification tasks might be ascribed to the fact that most activities presented during the instructional sessions aimed at enhancing sound recognition skills.

The values represented in Table 3.9 show that participants seem to have encountered greater difficulties in performing phoneme isolation tasks compared to the previous subtests' exercises. In fact, both mean and median calculated for the current section in the pre-test fell one point below the lowest measure determined thus far, namely 8.25 in the syllable segmentation subtest. According to the literature, phonemic awareness skills are more specific and complex to acquire, thus developing later compared to phonological awareness skills. Therefore, the tasks in the present subtest predictably proved to be more challenging for the participants compared to the rhyme recognition and syllable awareness exercises included in the previous sections.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	7,25	9	10
MEDIAN	7,5	9	10
MODE	9	9	10
RANGE	4	2	0
STANDARD DEVIATION	1,785357	0,707107	0

Table 3.9. Central tendency measures, range and standard deviation scores for the Phoneme Isolation Subtest

Nonetheless, the children's gains were particularly visible in the present subtest. In fact, whereas in the pre-test the children's performance was the lowest among all subtests, in the last assessment all participants obtained the highest possible score, thus achieving results comparable to the rhyme recognition section.

Values in Table 3.9 clearly demonstrate the development of the participants' abilities in isolating initial and final sounds within words. In fact, the mean and the median, which corresponded to 7.25 and 7.5 in the pre-test, increased by approximatively 1.5 and 2.5 points in post-test 1 and 2, respectively. The most recurring score similarly grew from 9 to 10, namely the highest possible result achievable.

The fact that the latter was obtained by all participants in the last assessment is underlined by the progressive reduction of the standard deviation and range values in the two post-tests. In fact, as far as the pre-test is concerned, Participant B and C's scores are nearly two times over Participant A's, whose performance corresponded to the lowest one. The standard deviation in the pre-test confirms that the participants' initial levels of phoneme identification skills differed substantially. However, the standard deviation decreased by one point in post-test 1 compared to the previous test, thus suggesting that the instructional sessions contributed to increasing the homogeneity of the participants' performances. The difference between the highest and the lowest scores similarly reduced by two points in post-test 1, and was absent in the last assessment, in which the learners successfully identified all sounds correctly. Analogous results were achieved solely on the first subtest, which was allegedly considered to be the most accessible. The four eight-year-olds thus seem to have ultimately acquired similar phoneme recognition abilities.

Since none of the participants made any mistakes in the last assessment, the error analysis will focus exclusively upon the incorrect responses provided in the pre-test and in post-test 1. As can be noted from Table 3.10, and especially from Chart 3.2, most participants experienced great difficulties in isolating the last sound in the word "halo" in exercise 7 and the first phoneme in "hypnosis" in exercise 10. As far as the latter is concerned, it was observed that the children struggled to recognise the /h/ sound at the beginning of the word. Participants' uncertainty on how to complete the task was evident, especially in the pre-test. They either responded with [i] or they combined the first two sounds that they could perceive in the word, namely /h/ and /ɪ/, thus resulting in [hɪ]. These data are in line with the observations provided in the first chapter concerning the major difficulties that

Italian EFL learners seem to experience in perceiving and producing the /h/ sound (Zuanelli Sonino, 1976, p. 124). The results of the pre-test thus seemed to underline the necessity to explicitly instruct pupils to notice the /h/ phoneme in word-initial position. It should be noted that one participant alone completed the exercise incorrectly in the first post-test. The decision to dedicate one entire chapter of the original narrative to this single phoneme thus seemed to produce positive effects. In fact, the children's ability to recognise the sound at the beginning of words progressively improved, reaching its peak in the last assessment.

On the other hand, all learners, except for Participant C, failed to recognise the last sound in the word "halo" in both the pre-test and the first post-test. The most frequent answers concerning this task appeared to be [u] and [o]. Children's recurrent substitution of the American English /o/ in word-final position with the Italian [u] and [o] thus seems to indicate that they perceived the /o/ sound as two separate phonemes. These data are consistent with the considerations on the /oʊ/ phoneme (indicated as /o/ in the present study), which have been provided in the literature review. In fact, according to Wheeloc (2016, p. 49), since /ʊ/ is not included in the Italian phonological inventory, Italian native-speakers tend to remove it from the American English /o/ phoneme, thus replacing the new sound with the Italian /o/.

Exercise Number	PRE-TEST		POST-TEST 1	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
5	1	9%		
6	2	19%		
7	3	27%	3	75%
8	1	9%		
9	3	27%	1	25%
10	1	9%		

Table 3.10. Frequency table of incorrect answers in the Phoneme Isolation Subtest

Furthermore, as previously mentioned, the three participants repeated the error in post-test 1. This result might depend upon the fact that the chapter introducing the /o/ phoneme was placed nearly at the end of the story. The activities

concerning the target sound were thus presented towards the end of the teaching sessions. Therefore, the participants might not have had enough time to process the information presented during the final lessons. In fact, revision activities were periodically provided in order to practice the phonemes previously encountered. They thus had several occasions to revise the sounds introduced in the first chapters of the story, whereas they were exposed to the last phonemes for a shorter period of time. However, the fact that all participants correctly completed the exercise in the final assessment seems to suggest that they ultimately assimilated even the last phonemes conveyed.

As illustrated in Chart 3.2, the second most recurring error in the pre-test concerned the correct identification of the first sound of the word "shame" in exercise 6. It was observed that errors in this task, as well as in the other exercises included in Chart 3.2, involved the participants' apparent inability to distance themselves from the orthographic representations of the target sounds. For instance, when asked to isolate the last phoneme in the word "such" in exercise 5, one participant was unsure whether to respond /k/ or /h/, thus suggesting a basic knowledge of letter-sound correspondences. Likewise, the children who completed exercise 6 incorrectly, both identified the /s/ sound as the initial phoneme in the word "shame".
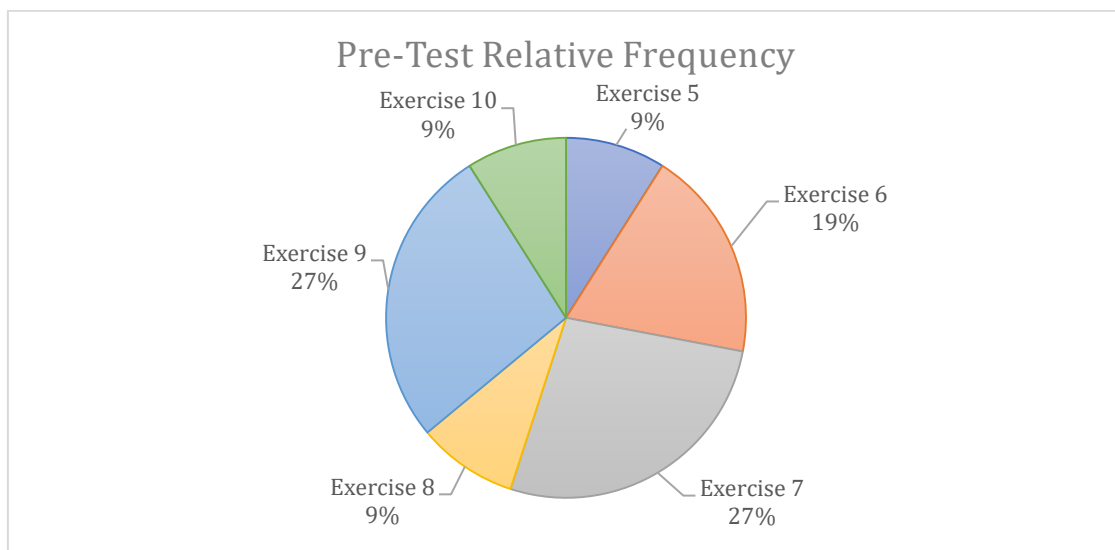

Chart 3.2. The relative frequency of incorrect answers in the Phoneme Isolation Subtest in the pre-test

The struggle the pupils faced in focusing on the sounds they heard instead of their corresponding graphemes was noticed throughout all phonemic awareness subtests. This difficulty might be related to the age of the participants, who were all attending the third year of primary school and were thus developing their literacy skills in both L1 and FL. Having already engaged in English spelling activities at school, they may thus encounter greater difficulties in separating phonemes from their written representations, compared to pre-school children who have not been introduced to the alphabetic system yet. These findings are consistent with the indications from the research conducted on the topic, which has suggested that phoneme recognition and discrimination tasks should precede sound-letter association activities (Daloiso, 2017, p. 112; Costenaro et al., 2014, p. 212-213). Nonetheless, the participants' improvement after the study seems to indicate that children possessing phonics knowledge can be led to focus upon the individual sounds of the English language through explicit instruction.

Phoneme Blending Subtest. As can be observed in Figure 3.7, the children's gains in the present section are apparent. In fact, although their performances in the pre-test considerably differed, all participants reached the highest possible score in the test administered immediately after the conclusion of the instructional sessions. The data thus seem to suggest that the lessons were effective in enhancing the learners' abilities to blend phonemes into words. The aforementioned skills seem to have reached a similar level among the participants in the first post-test conducted. However, whereas the other children's results did not vary across the two post-tests, Participant B completed one task incorrectly in the last assessment, thus scoring slightly below his peers.

Considering the data in Figure 3.7, as well as in Table 3.11, it can be observed that Participant A alone scored below average in the pre-test. Her improvement is particularly visible, as her results increased from 60% in the pre-test to 100% in both post-tests. The activities presented thus appear to have been especially successful in developing the phoneme blending skills of the dyslexic child, who achieved the same results as her typically developing peers.
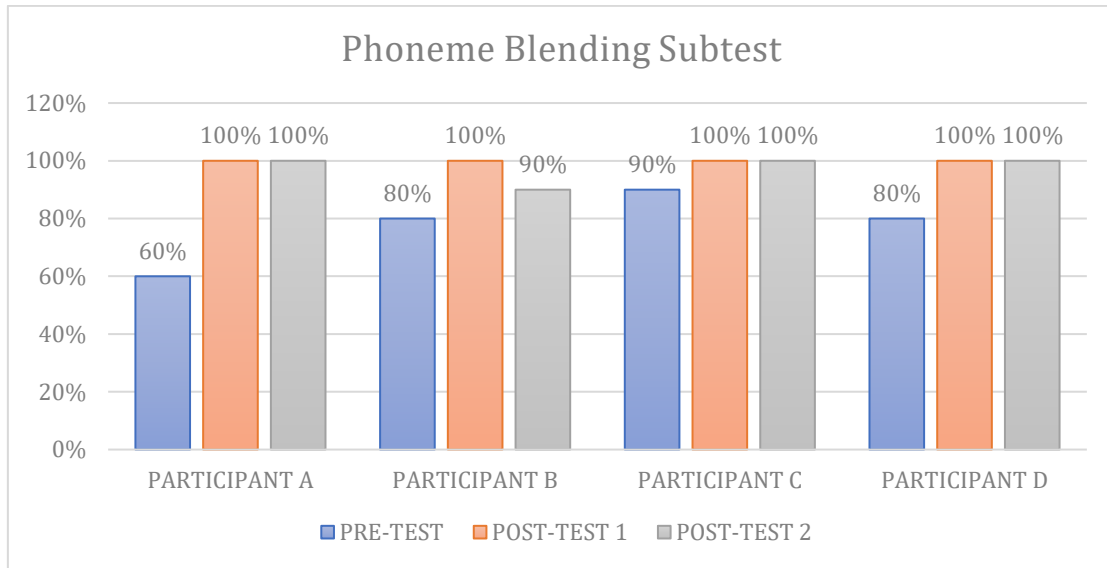
Figure 3.7. Participants' percentages of correct responses in the Phoneme Blending Subtest

As previously mentioned, Table 3.11 indicates that central tendency measures raised of approximately 2 points from the pre-test to the following test, whereas they slightly decreased in the last assessment. However, the reduction was minor and it affected solely the average. Furthermore, the variance in the pre-test data set diminished in the following tests. As illustrated in Figure 3.7, pre-test scores ranged from 60% to 90%. The difference disappeared in post-test 1, in which all participants obtained the same result, yet it re-emerged in the last assessment, although it corresponded to 10%. The distance between the highest and lowest scores thus shortened in the two post-tests. Moreover, the standard deviation of the pre-test was almost over three times the standard deviation of the last assessment, thus suggesting that the participants' performances became more homogeneous after the instructional sessions.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	7,75	10	9,75
MEDIAN	8	10	10
MODE	8	10	10
RANGE	3	0	1
STANDARD DEVIATION	1,089725	0	0,433013

Table 3.11. Central tendency measures, range and standard deviation scores for the Phoneme Blending Subtest

As illustrated in Table 3.12, the most recurring error among the participants involved correctly blending together the individual phonemes of the word "hat" in exercise 10. In fact, the four eight-year-olds all failed to recognise the /h/ sound in word-initial position. This finding is consistent with the data obtained in the previous subtest, as well as in the following sections, which highlighted the need to explicitly teach children to notice the target sound at the beginning of words. In fact, manipulation exercises involving the /h/ phoneme were among the most mistaken tasks in the pre-test. It was observed that they knew that words such as "hat" or "hand" started with the letter "h", since they had learned to write them at school. However, they did not seem to be aware of the fact that the corresponding phoneme /h/, unlike in Italian, is aspirated at the beginning of English words. Therefore, their initial inability to discern the phoneme in word-initial position led to responses such as [aet] in the present exercise. However, all participants succeeded in correctly blending together the distinct phonemes of the word "hat" in both post-tests, thus suggesting that the chapter and the activities designed to specifically work on the /h/ phoneme were effective.

Exercise Number	PRE-TEST		POST-TEST 1		POST-TEST 2	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
3	3	33%			1	100%
7	1	11%				
9	1	11%				
10	4	44%				

Table 3.12. Frequency table of incorrect answers in the Phoneme Blending Subtest

Errors in the pre-test frequently involved the deletion or addition of one phoneme, as well as the production of a similar sounding word. For instance, in exercise 3, which was the only error that reoccurred in the last assessment, when asked to combine the given phonemes together in order to form the word "both", participants either produced a similar sounding word such as "boat" or confused the phoneme /θ/ with the /f/ or /s/ sounds. Similarly, in exercise 7 one participant responded with "stop" instead of "shop", thus substituting the phoneme /ʃ/ with /s/

and adding the /t/ sound. On the contrary, one student did not perceive all four phonemes in exercise 9, thus producing [fek] instead of "fake". However, the substantial improvements displayed by all participants after the instructional sessions seem to imply that the new teaching materials efficiently enhanced the children's abilities to correctly blend phonemes into words.

Phoneme Segmentation Subtest. Pre-test scores for the present section seem to follow a similar pattern as in the phoneme isolation subtest. In fact, Figure 3.8 indicates that two participants scored almost two times their peers, thus suggesting that their initial phoneme segmentation skills were particularly developed. On the contrary, Participant B and Participant D correctly completed solely half of the subtest. Likewise, considering the results in the phoneme isolation subtest, two children almost achieved the highest possible score in the pre-test, whereas the other participants successfully performed only 50% and 60% of the tasks.

It should be noted that whereas Participant D performed poorly on both subtests, Participant A surprisingly received the second highest score in the phoneme segmentation subtest, despite having completed only 50% of the phoneme identification tasks correctly. Considering her learning disability, she would have been expected to display weaker phonemic awareness skills compared to her typically developing peers. However, her abilities to divide words into their individual phonemes appeared to equal or exceed the other participants' in each of the three tests conducted.

The similarity of the participants' results in the two aforementioned subtests at the beginning of the study can also be evinced from Table 3.13. In fact, the means of the two sections coincide in the pre-test, whereas the median differs of solely 0.5 points, corresponding to 7 and 7.5 in the phoneme segmentation and identification sections, respectively. However, the children's results in the two post-tests seem to follow a different pattern, which resembles the one displayed in the phoneme blending subtest. The central tendency measures for all subtests considered thus far, except for the phoneme blending and segmentation sections, indicates a gradual increase of both mean and median across the three tests, thus suggesting a progressive development of the children's skills. On the contrary, the means of the

last two subtests seem to considerably increase immediately after the instructional lessons, but slightly decline in the last assessment. In both cases, the children's improvement and mastery of the skills required to successfully perform the mentioned tasks thus appear to be not as strong as in the other subtests.
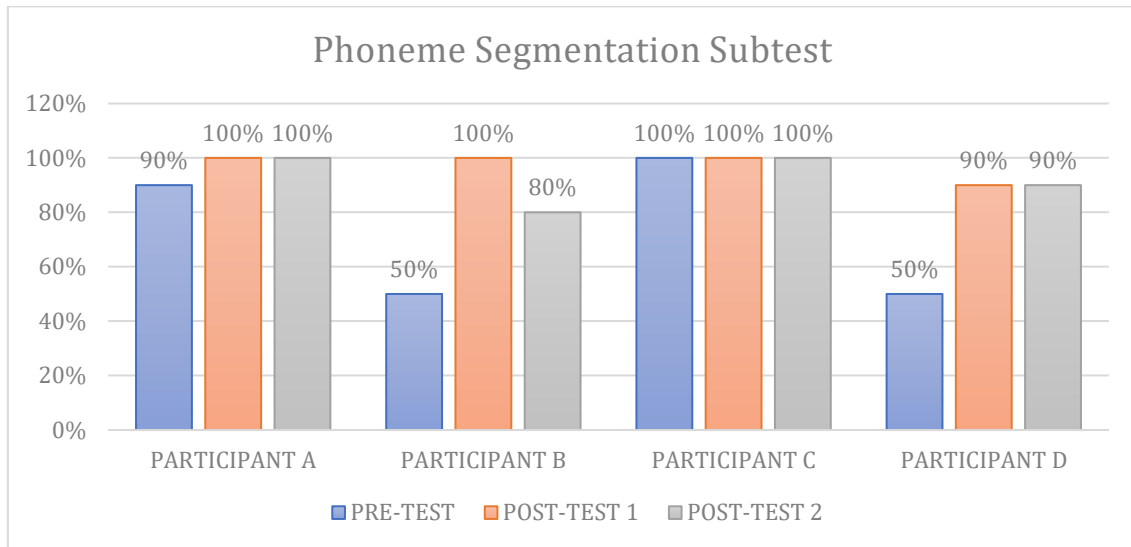
Figure 3.8. Participants' percentages of correct responses in the Phoneme Segmentation Subtest

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	7,25	9,75	9,25
MEDIAN	7	10	9,5
MODE	5	10	10
RANGE	5	1	2
STANDARD DEVIATION	2,277608	0,433013	0,829156

Table 3.13. Central tendency measures, range and standard deviation scores for the Phoneme Segmentation Subtest

Nonetheless, as illustrated in Figure 3.8 and Table 3.13, the children's gains in phoneme segmentation are apparent. In fact, all pupils, except for Participant D, completed all tasks correctly in the first post-test conducted. Their progress is confirmed by the mean value, which increased by 2.5 points from the pre-test to the first post-test. Participants B and D's improvements were particularly striking, since they scored almost twice as much compared to the pre-test, thus reaching or approaching their peers' level. The higher homogeneity among the participants'

performances in post-test 1 is also revealed by the reduction of the range and standard deviation values. Both measures were the highest registered among all the pre-test sections observed thus far. The dispersion of the children results thus seemed to reach its peak in the present section. In fact, the standard deviation in the pre-test was 2.3, thus indicating that the scores were considerably scattered from the mean. The fact that the participant who obtained the highest result scored two times those who received the lowest particularly demonstrates the diversity of the children's initial phoneme segmentation skills. However, both standard deviation and range values significantly decreased in the assessment conducted directly after the instructional sessions. The range reduced by 4 points and the standard deviation shifted from 2.3 to 0.4, thus confirming the achievement of a greater degree of uniformity among the participants' performances.

All learners, except for Participant B, seemed to retain the progress achieved in the test conducted three months after the study. On the contrary, Participant B's gains in phoneme segmentation skills appeared to be short-term. In fact, despite reaching 100% in post-test 1, he scored slightly below the average in post-test 2, completing 80% of the subtest correctly. Following a similar trend as in the previous subtest, the mean and median thus decreased in the last assessment. Nonetheless, although the children's performance did not seem to attain the same level as in post-test 1, it considerably improved compared to the pre-test. The difference of the mode values is particularly striking, since it doubled in the two post-tests. In fact, whereas the mode value in the pre-test was among the lowest registered among all subtests, corresponding to 5, it reached 10 in the two post-tests, meaning that most participants scored 100% after the instructional sessions. This finding seems to corroborate the hypothesis that the new teaching materials presented were to some extent effective in enhancing the children's abilities to divide words into their constituent phonemes.

Errors in the present subtest mainly involved the substitution, addition or deletion of one phoneme, as well as the combination of two sounds together. As shown in Table 3.14, exercise 8 was the most mistaken in the pre-test. The children's frequent segmentation of the word "shell" as /s/, /e/, /l/ instead of /ʃ/, /e/, /l/ reveals the struggle they initially faced in distancing themselves from the

orthographic representations of the sounds they heard. In fact, as also observed in the phoneme isolation and blending subtests, the participants seemed to repeatedly substitute the /ʃ/ sound with /s/, thus confusing the target phoneme with the first grapheme associated to it. The error committed by one participant in exercise 10 in both post-tests seems to particularly confirm this assumption. When asked to divide the word "boom" into its constituent phonemes, the eight-year-old confused the unknown word with a similar sounding word, namely "bomb". Being probably familiar with the written representation of this word, the child's focus shifted from sounds to spelling, thus producing /b/, /u/, /m/, /b/. It seems important to notice that the participant appeared to blend the two words together, as she added the last phoneme /b/ contained in "bomb" to the preceding correct segmentation of the word "boom".

Exercise Number	PRE-TEST		POST-TEST 1		POST-TEST 2	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
4	2	18%			1	33%
5	2	18%			1	33%
6	2	18%				
8	3	27%				
9	2	18%				
10			1	100%	1	33%

Table 3.14. Frequency table of incorrect answers in the Phoneme Segmentation Subtest

Likewise, the word "chin" in exercise 5 was frequently segmented as /k/, /ɪ/, /n/ instead of /ʧ/, /ɪ/, /n/. As was the case for the /ʃ/ phoneme, the children appeared to struggle in differentiating the sounds from their corresponding graphemes. However, another possible explanation may be related to the written representation of the /ʧ/ sound in the Italian language. In fact, the target phoneme is included in the Italian phonology and orthographically corresponds to the letter "c" followed either by the "e" or the "i" vowel. The participants may thus have transferred their knowledge of sound-letter correspondences in L1 to FL. Overall, their performance, specifically in phonemic awareness activities, appears to be

affected by their previous phonics knowledge in L1 and FL. However, the fact that errors in exercise 8 were not repeated in the two post-tests and that one participant alone incorrectly responded to exercise 5, seems to suggest that the new teaching materials presented during the instructional sessions were effective in shifting the children's focus exclusively towards the English sounds.

Errors in both exercises 4 and 6 included either the substitution of one phoneme for another or the combination of two distinct sounds. As far as the pre-test is concerned, one participant failed to separate all phonemes in the word "plant" and "tooth", thus counting /nt/ and /tu/ as one phoneme. The error, however, was not repeated in the post-tests. On the other hand, one eight-year old replaced the /θ/ phoneme in "tooth" and the /t/ sound in "plant" with /f/ and /d/, respectively. Whereas he correctly segmented both words in the first post-test, in the last assessment he committed the same error in exercise 4 as in the pre-test.

Finally, Table 3.14 shows that two children failed to divide the word "hand" presented in exercise 9 into its constituent phonemes. In fact, both participants did not recognise the /h/ phoneme in word-initial position, thus producing /ae/, /n/, /d/. The fact that the error did not reappear in any of the post-tests conducted seems to imply that the activities presented during the instructional sessions were effective in enhancing the children's noticing of the target phoneme.

Phoneme Deletion Subtest. As shown in Figure 3.9, Participants A and C's progress across the three tests seems to be more straightforward compared to the other age-matched participants. In fact, both children obtained the highest scores in each test and their performance never dropped below 90%. On the contrary, it gradually increased, ultimately reaching 100%. On the other hand, Participants B and D's results seem to go in a different direction. Whereas they both received the lowest scores in the pre-test, they managed to achieve a similar level as their peers in the first post-test, completing 90% and 100% of the subtest correctly. However, their scores decreased of 10% in the last assessment, thus suggesting that their phoneme deletion skills were not as developed as the other pupils.
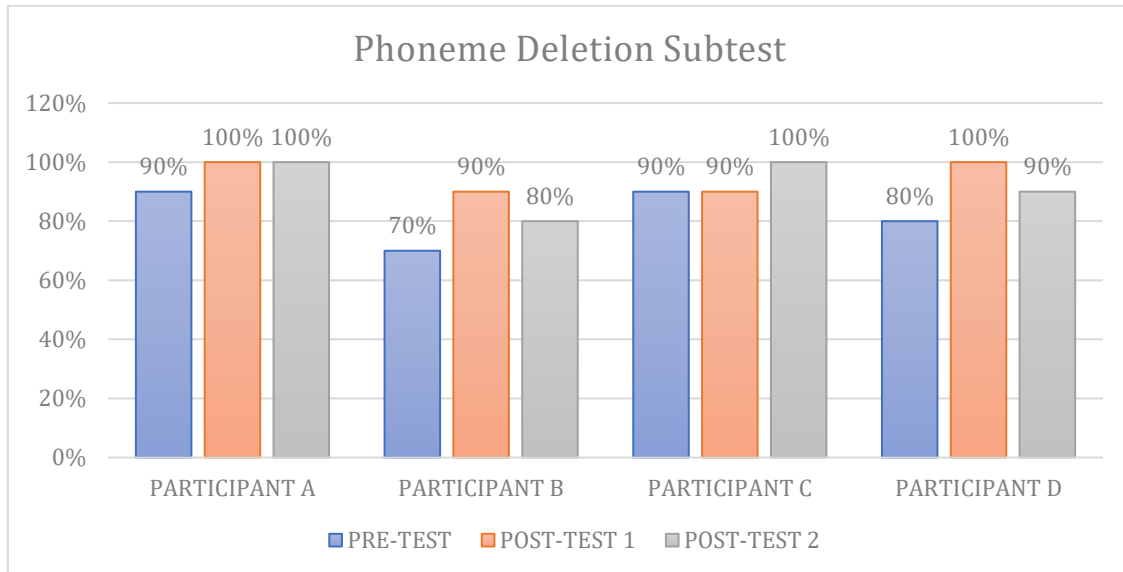
Figure 3.9. Participants' percentages of correct responses in the Phoneme Deletion Subtest

It seems particularly important to notice that Participant A's results were among the highest in each of the three tests conducted. As was the case for the previous subtest, she either matched or scored above her typically developing peers, whereas she surprisingly seemed to encounter greater difficulties in phoneme isolation and blending tasks. In fact, she obtained the lowest scores in both sections in the pre-test, correctly completing approximately half of the exercises the subtests consisted of. These findings seem to contradict the suggestions advanced by the studies conducted on the topic thus far. As mentioned in the previous chapter, research has suggested that phonemic awareness tasks could be classified according to their level of difficulty. Phoneme identification tasks are thus generally considered to be easier to perform compared to phoneme blending, segmentation and manipulation tasks, which implicate an increasing degree of complexity (Schuele and Boudreau, 2008, p. 6; Chard and Dickson, 1999, p. 262). However, phoneme isolation and blending tasks proved to be more challenging for Participant A prior to the beginning of the study compared to segmentation and deletion tasks. Nonetheless, in the last assessment she managed to achieve the highest possible score in each of the four phoneme awareness subtests considered thus far.

Unexpectedly, in the pre-test, the group's performance in the phoneme deletion subtest was the highest among all phonemic awareness subtests considered thus far. Table 3.15 indicates that the mean of the section presently considered was 8.25, whereas it was one point lower in the isolation and segmentation subtests and 0.5 in the phoneme blending subtest. Therefore, although more complex skills are generally required in order to successfully complete phoneme deletion exercises, the participants encountered greater difficulties in performing more accessible tasks such as isolating individual sounds or segmenting given words into phonemes.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	8,25	9,5	9,25
MEDIAN	8,5	9,5	9,5
MODE	9	9 and 10	10
RANGE	2	1	2
STANDARD DEVIATION	0,829156	0,5	0,829156

Table 3.15. Central tendency measures, range and standard deviation scores for the Phoneme Deletion Subtest

Table 3.15 shows that the children's improvement in the phoneme deletion subtest seems to follow a similar pattern as in the phoneme blending and segmentation sections. In fact, whereas the mean of the first five subtests gradually increased across the three tests, the mean of the last three sections grew immediately after the instructional sessions but slightly decreased in the last assessment conducted. Nonetheless, the participants' progress in the phoneme deletion subtest is apparent, since the difference between the mean of the pre-test and of the second post-test is one point.

Furthermore, it should be noted that the children's skills in phoneme deletion tasks did not significantly differ. In fact, the range and standard deviation values coincided in the pre-test and in the last assessment, thus indicating that the group performance was fairly homogeneous. However, it can be observed that both range and standard deviation reduced in post-test 1, which suggests that the participants achieved a higher degree of cohesion compared to the other tests.

Exercise Number	PRE-TEST		POST-TEST 1		POST-TEST 2	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
3	1	14%				
4	1	14%				
5	1	14%				
6			1	50%		
8					1	33%
10	4	57%	1	50%	2	67%

Table 3.16. Frequency table of incorrect answers in the Phoneme Deletion Subtest

As can be evinced from Table 3.16, children experienced major difficulties in performing exercise 10 correctly, which required them to remove the /h/ phoneme from the word "hate". In fact, none of the participants successfully completed it in the pre-test, whereas one and two pupils responded incorrectly in post-test 1 and 2, respectively. These data are consistent with the findings of the preceding phonemic manipulation tasks, which revealed the necessity to explicitly instruct children to notice the /h/ sound in word-initial position. This lack of awareness of the target phoneme may depend upon the fact that the letter "h" does not correspond to a specific phoneme in Italian, whereas it is aspirated at the beginning of English words. Children struggled to recognise the phoneme, thus frequently deleting the first two sounds they perceived and producing [ɪt] instead of [eɪt]. Moreover, the fact that the error reappeared in both post-tests seems to suggests the need for further instruction aimed specifically at fostering the children's recognition of the target phoneme.

Errors in the other tasks mainly involved the addition and/or deletion of one or multiple phonemes. For instance, when asked to remove the last sound in "inch", one participant produced [eɪ] instead of [ɪn], thus simultaneously adding the /e/ phoneme and not including the /n/ phoneme. Another learner responded to exercises 4 and 5, which required children to delete the last phoneme from the words "rose" and "shape", respectively, with [ro] instead of [roʊ] and [ʃe] instead of [ʃeɪ]. The eight-year-old thus partially deleted the /o/ phoneme, along with the last sound, in exercise 4, whereas he removed the target sound, as well as the /ɪ/

phoneme that immediately preceded it, in exercise 5. It should be noted that the child's answer in exercise 4 seems to imply that he perceived the /o/ phoneme as two separate sounds, namely as the Italian /o/ and /u/. This consideration seems to be confirmed by the results observed in the phoneme isolation subtest, in which most participants responded with the Italian [u] and [o], when asked to identify the last phoneme of the word "halo".

Phoneme Substitution Subtest. Figure 3.10 outlines a similar trend in the children's performance as in the previous phonemic awareness subtests, except for the phoneme isolation subtest. In fact, whereas most children's results gradually improved across the three tests, one participant's slightly lowered after the instructional sessions. Participant C scored the highest result in the pre-test, completing all tasks included in the subtest correctly. However, the percentage of correct responses decreased in the two post-tests, ultimately reaching 80% in the last assessment. These data thus seem to suggest that the instructional sessions did not have the same positive impact on her phoneme substitution skills as for the other participants.
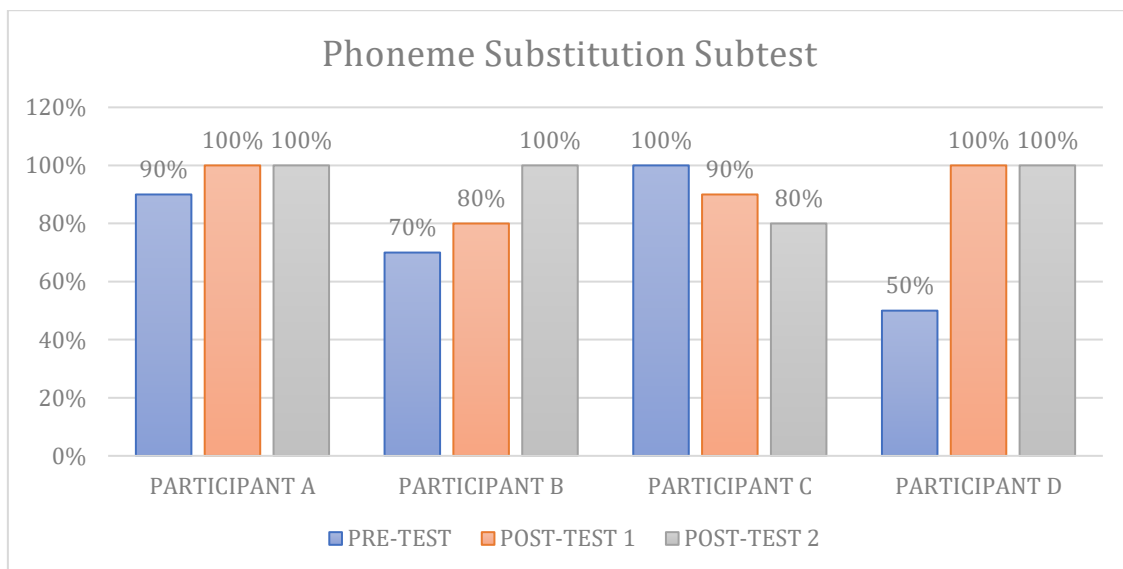

Figure 3.10. Participants' percentages of correct responses in the Phoneme Substitution Subtest

Nonetheless, the children's performances in the pre-test generally seem to follow a similar pattern as in the phoneme segmentation and deletion subtests, with Participants A and C obtaining the highest scores and Participants B and D the lowest. Once again, Participant A reached or outperformed her typically developing peers, her results being among the highest in each of the three tests conducted. This finding thus seems to suggest that her phoneme substitution skills were relatively developed before the beginning of the study and that they ultimately refined after the lessons. In fact, unlike Participant C, her performance increased by 10% after the instructional sessions and did not vary among the two post-tests.

On the other hand, Participants B and D's progress seems to be particularly noteworthy, since they finally reached their peer's level in the last assessment, despite obtaining the lowest results in the pre-test. Participant D' gains in the present subtest are particularly striking, since her performance improved of 50% after the study. In fact, whereas she scored significantly below the mean in the pre-test, completing solely half subtest correctly, she managed to achieve the highest possible result in both post-tests. She thus seems to have particularly benefited from the instructional sessions, which enhanced and solidified her phoneme substitution skills. Her improvement, along with the other pupils', Participant C excluded, seemed to be long-lasting, since their performances did not decrease in the second post-test. On the contrary, the three eight-year-olds completed all tasks correctly, thus ultimately obtaining the highest possible score.

Values in Table 3.17 exemplify the initial variance of the participants' levels of phoneme substitution skills. As previously observed, two children successfully completed most, if not all, tasks included in the subtest correctly, whereas the other two participants scored below the mean. In particular, the difference between the highest and the lowest results in the pre-test was 50%, as Participant C scored two times Participant D, who completed only half subtest correctly. The lack of homogeneity among the learners' abilities in substituting phonemes in order to form new words can also be evinced by the standard deviation value reported in Table 3.17. The latter is the highest that can be observed among all subtests, corresponding to almost 2 points. However, the consistent reduction of both standard deviation and range values in the two post-tests indicates the increasing

cohesion of the children's results. In fact, the standard deviation and the range decreased by 1 and 3 points, respectively, after the instructional sessions, thus suggesting the participants' attainment of a similar stage of phoneme substitution skills.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	7,75	9,25	9,5
MEDIAN	8	9,5	10
MODE	none	10	10
RANGE	5	2	2
STANDARD DEVIATION	1,920286	0,829156	0,866025

Table 3.17. Central tendency measures, range and standard deviation scores for the Phoneme Substitution Subtest

Furthermore, despite the minor decrease of Participant C's performance in the two post-tests, the mean did not lower, unlike in the previous subtests. Instead, it progressively increased by 1.5 points from the pre-test to the first post-test and of 0.25 points from the latter to the final assessment. Surprisingly, the mean in the last post-test was among the highest that could be observed in the phoneme awareness tasks, ranking slightly below those in the phoneme isolation and blending subtests. The improvement of the other pupils, who ultimately achieved the highest possible score in the last assessment, thus seemed to compensate for Participant C's slightly poorer performance.

A close examination of the incorrect responses in the phoneme substitution subtest reveals that most errors in the pre-test, which frequently recurred in the two post-tests, concerned the /w/ phoneme. Table 3.18 shows that participants encountered great difficulties in correctly substituting the /w/ sound in word-initial position in exercises 3, 4 and 9. Most participants completed exercises 3 and 4 incorrectly in the pre-test. When asked to replace the first phonemes of the words "well" and "walk" with /f/ and /t/, respectively, the children responded with [twell] and [twalk]. Likewise, one learner's substitution of the first sound in "wet" with /p/ in exercise 9 resulted in [pwet]. Whereas errors in exercise 3 did not reoccur in any of the two post-tests, the frequency of incorrect responses for exercise 4 was the highest in each test conducted. On the other hand, exercise 9 was completed

erroneously only once in both the pre-test and the last assessment. It should be noted that the learner who responded incorrectly to exercise 9 in post-test 2 differed from the one in the pre-test. However, both children made the same error on the task, answering [pwet] instead of "pet". The fact that all children, except for Student A, made one or several errors involving the substitution of the /w/ phoneme in minimum one test indicates a widespread difficulty in recognising the target sound. The latter was not included in the new teaching materials for the present research project. Since the children did not have the possibility to work on the /w/ phoneme during the instructional sessions, it seemed highly unlikely that the errors would not reappear in any post-tests. The narrative and the activities designed for the present study might thus be further adapted so as to incorporate the /w/ phoneme with the aim of enhancing the children's recognition skills of the target sound.

Exercise Number	PRE-TEST		POST-TEST 1		POST-TEST 2	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
1	1	11%				
2	1	11%				
3	2	22%				
4	2	22%	2	67%	1	50%
7	1	11%				
9	1	11%			1	50%
10	1	11%	1	33%		

Table 3.18. Frequency table of incorrect answers in the Phoneme Substitution Subtest

Minimal Pairs Discrimination Subtest. The children's improvement in the present subtest was one of the most significant and visible among all subtests. In fact, by comparing the central tendency values in Table 3.19 with those of the previous sections, it can be observed that the mean and the median of the present subtest ranked as the lowest in the pre-test, closely followed by those in the phoneme isolation and segmentation tasks. Figure 3.11 indicates that half of the sample completed 60% of the tasks correctly in the first assessment, whereas the two participants who obtained the highest results scored 80%. The difference

between the children's performances corresponded to 20%, thus suggesting a minor discrepancy in the learners' initial minimal pairs discrimination skills.

It seems important to briefly examine the children's individual performances on the present subtest. In particular, it can be noted that Participant C's initial abilities in discerning minimal pairs seemed to be slightly less developed compared to her peers, as well as to the other skills assessed in the test. In fact, considering the results she obtained in the pre-test, she did not only score below the mean on the present subtest, but her performance was the lowest recorded among all subtests she completed. Whereas she never scored below 90% in the previous sections, she successfully recognised only 60% of the minimal pairs included in the present subtest. On the other hand, Participant B and Participant D, who struggled with most phonemic awareness tasks in the pre-test, correctly completed 80% of the subtest, thus scoring 20% higher compared to their peers.
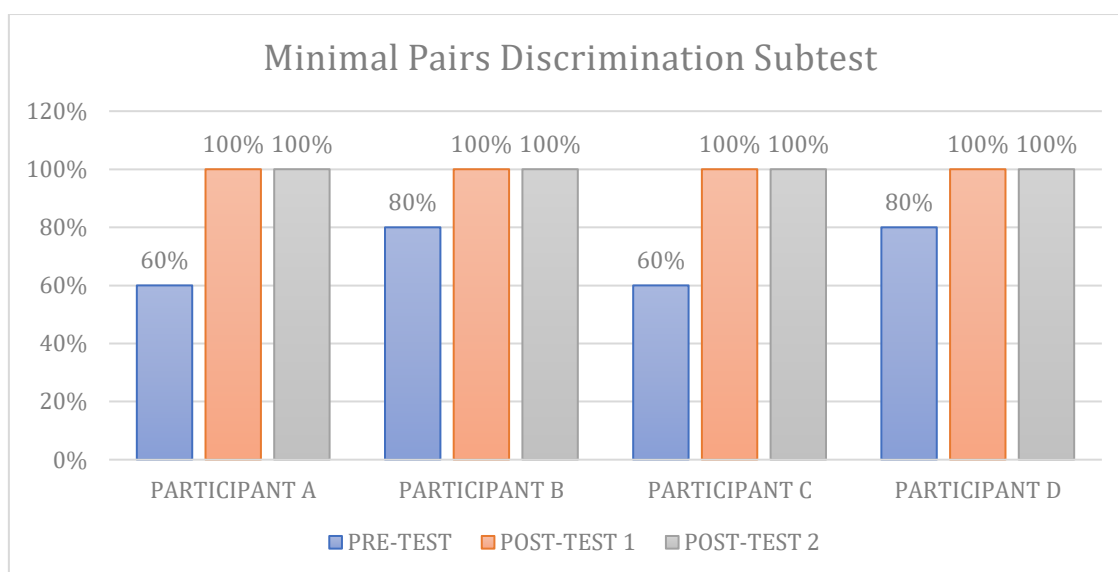
Figure 3.11. Participants' percentages of correct responses in the Minimal Pairs Discrimination Subtest

Nonetheless, all participants significantly improved after the teaching sessions, achieving the highest possible score in both post-tests. As previously discussed, the original short narrative, alongside the activities designed for the study, aimed at specifically enhancing children's phoneme discrimination skills. Pairs of sounds frequently confused by Italian EFL learners or absent in the Italian

phonology were tackled in the materials. Most minimal pairs selected for the present subtest thus included the phonemes the new teaching materials focused upon. The participants' explicit and possibly long-term gains in this section seem to suggest that the instructional sessions particularly contributed to developing the children's perception of the difference between the target sound pairs. Furthermore, the fact that all learners completed the entire subtest correctly in both post-tests, thus discriminating all minimal pairs presented, indicates that the lessons were also effective in promoting the attainment of a similar level of phoneme discrimination skills among the pupils.

The abrupt reduction of both range and standard deviation values reported in Table 3.19 immediately after the study confirms the aforementioned assumption. The range and the standard deviation in the first assessment corresponded to 2 and 1, respectively, thus indicating a minor discrepancy among the children's results. In fact, Participants B and D' initial discrimination skills seemed to be slightly more developed than their peers. However, the decline of the range and standard deviation values, which reached 0 points in both post-tests, displays the achievement of a greater degree of homogeneity among the learners' performances, which coincided.

	PRE-TEST	POST-TEST 1	POST-TEST 2
MEAN	7	10	10
MEDIAN	7	10	10
MODE	6 and 8	10	10
RANGE	2	0	0
STANDARD DEVIATION	1	0	0

Table 3.19. Central tendency measures, range and standard deviation scores for the Minimal Pairs Discrimination Subtest

Since the four participants successfully completed all tasks included in the subtest in both post-tests, the following analysis will focus exclusively upon the errors detected in the first assessment. Table 3.20 shows that all learners failed to discern the minimal pairs *hot-hut* and *three-free* in exercises 2 and 7, respectively. In fact, they indicated that they perceived the two words as identical. Likewise, two participants did not succeed in recognising the difference between *bat* and *bet* in

exercise 4 and between *chew* and *two* in exercise 5. These results were not unexpected but were consistent with the considerations provided in the first chapter of the present dissertation. In fact, researchers have suggested that Italian speakers particularly struggle to discriminate the /ɑ/-/ʌ/, /θ/-/f/ and /ae/-/ɛ/ sound pairs (Busà, 1995, p. 115/120; Zuanelli Sonino, 1976, p. 110-11/125-128). It has been further observed that the /t/ phoneme, especially when followed by /r/ or /w/, is likely to be replaced with /ʧ/ (Hawkins, 2018).

It was thus predictable that children would experience difficulties in discerning these word pairs prior the beginning of the study, as they included specific phonemes whose discrimination has been considered to be particularly problematic for Italian EFL learners. Italian native-speakers' tendency to confuse specific English sounds was the underlying reason for the creation of the original teaching materials presented in the current research project and aimed precisely at enhancing pupils' recognition of the target phonemes. The four sound pairs here analysed were thus included in both the narrative and the activities introduced during the instructional sessions. The fact that all participants successfully completed the aforementioned exercises in both post-tests seems to indicate that the materials were effective in encouraging children to notice the difference between the sound pairs presented.

Exercise Number	PRE-TEST	
	Absolute Frequency	Relative Frequency
2	4	33%
4	2	17%
5	2	17%
7	4	33%

Table 3.20. Frequency table of incorrect answers in the Minimal Pairs Discrimination Subtest

Surprisingly, none of the participants seemed to encounter any difficulties in identifying *ship* and *sheep* in exercise 6 as two separate words, thus detecting the vowel-length difference of the two units in each test administered. Likewise, the four eight-year-olds discerned *pull* and *pool* in exercise 9 in all assessments conducted.

Although the recognition of these vowel pairs did not seem to represent a particular obstacle for the sample considered, it was decided not to remove the chapters and the activities that focused upon them from the study. In fact, the materials were originally designed in order to be potentially extended to a classroom context and specifically included in Italian primary three EFL curricula. Therefore, the set of phonemes selected to be inserted in the new teaching materials comprised sounds that, as discussed in the first chapter of the present dissertation, are generally perceived as difficult to recognise and produce by Italian EFL learners. Nonetheless, teachers may decide to integrate and/or adapt the materials depending on the pupils' age and proficiency level. The complexity of the activities, as well as the phonemes to be addressed, could thus be adjusted. Practical suggestions on ways the original teaching materials could be modified to suit different audiences will be provided in the following chapter.

3.3 Final considerations

The data analysed in this chapter reveal that the four participants experienced greater difficulties in performing phoneme awareness rather than syllable and onset-rime awareness tasks prior to the beginning of the study. In fact, Table 3.21 indicates that the means of the first four subtests requiring children to recognise rhyming words, as well as to blend, segment and manipulate syllables within given words, were among the highest in the pre-test. In particular, the mean ranged from 8.25 in the syllable segmentation subtest to 9 in the rhyme recognition subtest. These results are consistent with the indications from the research, which has suggested that "an awareness of larger units in words develops prior to awareness of smaller units" (Gillon, 2018, p. 36). Therefore, phonological awareness skills at the syllable and onset-rime levels precede the acquisition of phonemic awareness skills, considered to be more specific.

MEAN			
	PRE-TEST	POST-TEST 1	POST-TEST 2
Rhyme Recognition Subtest	9	10	10
Syllable Blending Subtest	8,75	9,75	9,75
Syllable Segmentation Subtest	8,25	8	9
Syllable Deletion Subtest	8,5	9,25	9,75
Phoneme Isolation Subtest	7,25	9	10
Phoneme Blending Subtest	7,75	10	9,75
Phoneme Segmentation Subtest	7,25	9,75	9,25
Phoneme Deletion Subtest	8,25	9,5	9,25
Phoneme Substitution Subtest	7,75	9,25	9,5
Minimal Pairs Discrimination Subtest	7	10	10

Table 3.21. The mean of each subtest

The findings of the current research project seem to corroborate this hypothesis. In fact, whereas the mean of the first four subtests never fell below 8.25, it was comprised between 7 and 8.25 in the remaining sections. It should be noted that except for the phoneme deletion subtest, in which the mean was 8.25, the latter ranged from 7 to 7.75 in all the subtests presently considered. The difficulty displayed by the participants in correctly performing tasks at the phoneme level thus seems to validate the assumption of a hierarchical progression in the acquisition of phonological awareness skills. Furthermore, the variance of the participants' results in the phonemic awareness subtests seems to suggest that some skills were initially more developed than others. In fact, children seemed to particularly struggle with phoneme isolation and segmentation tasks, along with minimal pairs discrimination tasks, in which they initially obtained the lowest results among all subtests. On the contrary, the group seemed to particularly master phoneme deletion skills, since the pre-test mean of the subtest was the highest among all phonemic awareness sections.

A detailed analysis of each subtest's mean across the three tests seems to indicate that the participants' gains in the phonemic awareness sections of the test following the instructional sessions were more considerable compared to the other subtests. In fact, as it can be evinced from Table 3.21, although the learners obtained the lowest results prior the beginning of the study, their performance on these sections in both post-tests seemed to be stronger compared to the four preceding

subtests. The means in the latter were among the highest in the pre-test, being comprised between 8.25 and 9. Therefore, the scope for improvement was relatively limited compared to the following subtests. Nonetheless, except for the rhyme recognition subtest, the mean never reached the highest possible value, namely 10, in any of the syllable awareness sections. Furthermore, the mean value of the syllable segmentation subtest was unexpectedly the lowest among all subtests in both post-tests.

On the other hand, the instructional sessions seemed to have especially influenced the children's phoneme awareness skills. In fact, whereas the mean of the previous sections rose approximately one point after the lessons, it considerably increased in the phonemic awareness subtests. The difference between the average results prior to and after the beginning of the study particularly reached its peak in the phoneme isolation and minimal pairs discrimination subtests. As previously mentioned, these sections appeared to be the most challenging for the participants in the pre-test. However, the means attained the highest possible value in the last assessment, thus increasing of 2.75 and 3 points, respectively. As can be noted from Table 3.21, these were the only subtests, along with the rhyme recognition section, in which all participants ultimately scored 100%, closely followed by the phoneme blending subtest. As far as the latter is concerned, the mean value reached 10 in the first post-test, yet slightly decreased in the final assessment conducted. Similarly, the means of the phoneme segmentation and deletion subtests improved of 2.5 and 1.25, respectively, in the first post-test, although they lowered in post-test 2.

Overall, by calculating the average of the means of the first four subtests, it can be noted that it corresponded to 8.6 in the pre-test and reached 9.6 in the last assessment. On the contrary, the average result in the phonemic awareness subtests, which was 7.5 in the pre-test, increased by 2.1 points in post-test 2, thus coinciding with the value obtained for the syllable awareness subtests. These data thus seem to suggest that the instructional sessions had a positive impact specifically on the children's phonemic awareness skills, which seemed to be less developed prior to the beginning of the study compared to syllable and onset-rime awareness skills. In fact, as mentioned in the previous chapter, although phonological awareness tasks

were sporadically suggested, the objective of most games the children were engaged in was to develop phonemic awareness skills.

Chapter 4 – Discussion

The purpose of the current research project was twofold. It primarily consisted in designing original phonological awareness, especially phonemic awareness, activities embedded in a narrative context that could be included in Italian primary three EFL curricula. Secondly, the effectiveness of the original teaching materials in enhancing Italian typically developing EFL learners' phonological awareness skills was evaluated. Four eight-year-olds were seen three times a week for seven weeks. The innovative teaching resources were presented during both small group and individual instructional sessions. A phonological awareness test was specifically developed in order to assess the impact of the activities on the participants' phonemic and phonological awareness skills. The test was administered three times, namely prior to and immediately after the teaching sessions, as well as three months after the conclusion of the training. Findings indicate that the pupils' phonological awareness skills, especially at the phoneme level, improved after the study. Furthermore, their gains seem to be long-lasting. This chapter thus summarises the most important findings of the present study, making particularly explicit their connection with the theoretical background examined in the first chapter. A discussion on the didactic implications of the current research project, as well as its limitation, follows. Suggestions for further research are finally provided.

As observed in the previous chapter, the children's pre-test scores were considerably heterogeneous, thus suggesting that the pupils' initial levels of phonological awareness largely differed. Nonetheless, the participants' results in both post-tests seem to indicate that the instructional sessions contributed not only to improving the children's phonological, and especially phonemic, awareness skills, but also to promoting the attainment of a similar stage of meta-phonological abilities. In fact, the standard deviation decreased from 7.7 in the pre-test to 2.3 and 2.5 in post-test 1 and 2, respectively, implying the achievement of a higher degree of cohesion among the participants' performances. Furthermore, the mean value, which corresponded to 79.75 in the pre-test, reached 94.5 in post-test 1 and, ultimately, 96.25 in post-test 2. These data thus reveal that the new teaching

materials were effective in enhancing the participants' phonemic and phonological awareness skills. The children's progress further seems to be long-term, as their results did not lower in the second assessment conducted three months after the conclusion of the study. On the contrary, they slightly and unexpectedly improved, which might be due to the fact that participants needed time to assimilate the contents presented during the intensive instructional sessions.

As previously discussed, Participant A and Participant D seem to have benefited the most from the phonological awareness training. In fact, whereas their results were the lowest in the pre-test, they classified among the highest in the last assessment conducted. In particular, it is important to mention that Participant A, who was diagnosed with dyslexia and dysorthographia towards the end of the period of the research, received the second lowest score in the pre-test, yet she ultimately obtained the highest result among all children in post-test 2. Although the innovative teaching materials were originally intended for use with typically developing pupils at primary school level, the positive results obtained by Participant A seem to suggest that they may also be appropriate for children with learning disabilities. However, the real inclusiveness of the phonological awareness programme needs to be further investigated.

It should be noted that the outcomes for each distinct subtest, which have been analysed in the previous chapter, reveal that the participants particularly struggled with phonemic awareness rather than syllable and onset-rime awareness tasks in the pre-test. The pattern emerging from the examination of each subtest's results thus seems to be consistent with the suggestions from the research that "an awareness of larger units in words develop prior to awareness of smaller units" (Gillon, 2018, p. 36). In fact, as discussed in the first chapter, it has been suggested that phonological awareness skills at the syllable level are typically developed earlier compared to onset-rime and phoneme awareness skills. In particular, the latter have been considered the most specific and difficult to acquire and are generally the last to be mastered (Chard and Dickson, 1999, p. 262; Daloiso, 2017, p. 6-7). Therefore, it is not surprising that the participants' phonemic awareness skills seemed to be less developed before the beginning of the training compared to syllable and onset-rime awareness skills. In fact, the children's average performance

in the first four subtests, corresponding to phonological awareness tasks at the syllable and onset-rime levels, in the pre-test was 1.1 points higher than the average results obtained in the phonemic awareness subtests. Nonetheless, it seems important to mention that the children's average performance in both sections increased after the training and ultimately coincided in the last assessment conducted. This finding thus seems to indicate that the instructional sessions were particularly effective in enhancing the pupils' phonological awareness at the phoneme level. In fact, as mentioned in the second chapter, most activities included in the phonological awareness programme designed for the current research project focused on developing children's phonemic awareness skills.

Finally, it should be noted that the participants' improvement was particularly apparent in the phoneme isolation and segmentation, as well as minimal pairs discrimination, subtests. In fact, the aforementioned tasks seemed to be the most challenging for the participants prior to the beginning of the training. However, their performance, especially in the phoneme isolation and minimal pairs discrimination sections, ranked as the highest among all subtests in the last assessment conducted. Furthermore, it seems relevant to briefly consider the difficulties that the participants experienced in performing the subtests, as the findings seem, on some occasions, to be inconsistent with the suggestions from the research that have been provided in the first chapter. The children's average performances in each subtest across the three different tests administered are classified from the strongest to the poorest in Table 4.1. As discussed in the first chapter, phonological awareness tasks at the syllable, onset-rime and phoneme levels have been frequently ranked depending on their level of difficulty. At this point, it may be useful to envisage the "skills that represent children's phonological awareness" as laying "on a continuum of complexity" (Chard and Dickson, 1999, p. 262), with syllable awareness and phoneme awareness tasks being situated at the less and more complex ends of the spectrum, respectively. Researchers have further suggested that deletion and manipulation tasks at different stages of phonological awareness are typically more challenging to perform compared to segmentation and blending activities, considered to be progressively more accessible (Schuele and Boudreau, 2008, p. 6; Chard and Dickson, 1999, p. 262).

PRE-TEST		POST-TEST 1		POST-TEST 2	
SUBTEST	MEAN	SUBTEST	MEAN	SUBTEST	MEAN
Rhyme Recognition	9	Rhyme Recognition; Phoneme Blending; Minimal Pairs Discrimination	10	Rhyme Recognition; Phoneme Isolation; Minimal Pairs Discrimination	10
Syllable Blending	8,75	Syllable Blending; Phoneme Segmentation	9,75	Syllable Blending; Syllable Deletion; Phoneme Blending	9,75
Syllable Deletion	8,5	Phoneme Deletion	9,5	Phoneme Substitution	9,5
Syllable Segmentation; Phoneme Deletion	8,25	Syllable Deletion; Phoneme Substitution	9,25	Phoneme Segmentation; Phoneme Deletion	9,25
Phoneme Blending; Phoneme Substitution	7,75	Phoneme Isolation	9	Syllable Segmentation	9
Phoneme Isolation; Phoneme Segmentation	7,25	Syllable Segmentation	8		
Minimal Pairs Discrimination	7				

Table 4.1 A classification of the participants' average performances in each separate subtest from the strongest to the poorest

As can be evinced from Table 4.1, the pattern emerging from the pre-test results seem to conform to a great extent to the indications from the research concerning the sequential development of phonological awareness skills, as well as the complexity of the different tasks. In fact, the means of the syllable awareness tasks, which have been generally considered to be the easiest to perform, were among the highest before the beginning of the study. Furthermore, among all syllable awareness tasks, children seemed to predictably experience less difficulties in blending distinct syllables together, whereas they seemed to mostly struggle with

phoneme segmentation and substitution tasks. However, the means of the deletion tasks at both the syllable and the phoneme levels were among the highest, thus allegedly contradicting the indications from the research.

Results in both post-tests seem to particular diverge from the sequence of task complexity identified by the research. In fact, the results reported in Table 4.1 indicate that in both tests conducted after the training, the participants' performances in some phonemic awareness tasks coincided, and in some cases exceeded, those in syllable awareness activities, which have been generally considered to be the most accessible. In particular, it should be noted that dividing words into syllables surprisingly appeared to be the most challenging task in both assessments. Nonetheless, these inconsistencies may be due to the analysis procedures. In fact, since the research project mainly focused on perception rather than production, when evaluating the participants' performances in subtests such as the phoneme blending, segmentation and deletion ones, it was decided not to consider incorrect any responses containing production errors. Therefore, since this choice might have affected the final outcomes, it is not possible to assuredly affirm to what extent the findings are consistent with the research indications that have been previously presented.

Finally, the participants' errors in each subtest, which have been examined in the preceding chapter, seem to be largely consistent with the considerations on language transfer, as well as on the English sounds that Italian native-speakers frequently struggle to correctly perceive and produce, which have been provided in the third and fourth sections of the literature review, respectively. In fact, it has been observed that the children's performance in the syllable segmentation subtest may be negatively affected by their L1. The participants seemed to transfer their knowledge of syllable segmentation in their mother-tongue to the foreign language, thus applying the Italian syllable division rules to English words. Words such as "bedroom" and "fantastic" were hence incorrectly segmented as *be-droom* and *fan-ta-stic* instead of *bed-room* and *fan-tas-tic*.

Furthermore, the learners' responses in the phonemic awareness tasks seem to indicate that the pupils' discrimination of specific English sounds may be negatively influenced by their mother-tongue. In particular, considering Weinreich's

sound transfer classification (Major, 2001, p. 32-33; Major in Edwards and Zampini, 2008, p. 67), the participants seemed to frequently make "sound substitution" and "underdifferentiation" errors. With regard to the latter, children seemed to experience major difficulties in discerning English sound contrasts that do not occur in Italian. In fact, prior to the beginning of the study, most participants failed to perceive the difference between word pairs such as *hot-hut* and *bat-bet* included in the Minimal Pairs Discrimination Subtest. These results are consistent with Zuanelli Sonino's (1976, p. 110) and Busà's assertions (1995, p. 120) concerning the struggle faced by Italian EFL learners in discriminating the /ɑ/-/ʌ/ and /ae/-/ɛ/ sound pairs. The fact that all participants correctly discerned the aforementioned minimal pairs in both post-tests conducted seems to suggest that the original teaching materials were effective in enhancing the pupils' perception of the difference between the vowel pairs presented. It should be ultimately noted that, contrary to Zuanelli Sonino's considerations provided in the first chapter (1976, p. 109/115), all participants surprisingly perceived the difference between the word "ship" and "sheep", as well as "pull" and "pool", thus correctly discriminating the /i/-/ɪ/ and /u/-/ʊ/ vowel pairs.

As far as the "sound substitution" errors are concerned, it was observed that children frequently replaced American English sounds that are absent from the Italian phonological inventory with the closest L1 equivalent. In line with Zuanelli Sonino's (1976, p. 125-128) and Wheeloc's (2016, p. 49) conclusions, which have been discussed in the literature review, substitutions of /θ/ with /f/ and of the English /o/ (also represented as /oʊ/) phoneme with the Italian /o/ or /u/ repeatedly occurred in various subtests, especially before the beginning of the study. With regard to the American English /o/, it seems important to mention that children's incorrect responses in the phoneme isolation subtest seem to suggest that the sound was perceived as two distinct phonemes, namely /o/ and /u/. This result is particularly consistent with Wheeloc's research findings (2016, p. 49), which indicate that Italian speakers tend to remove [ʊ] from the English /o/ sound, thus frequently substituting the new phoneme with the Italian /o/.

Furthermore, the error analysis revealed that, as expected, children struggled to perceive the /h/ phoneme in word-initial position in multiple subtests,

especially before the beginning of the training. This result, which seems to largely conform to Zuanelli Sonino's examination of the difficulties frequently experienced by Italian speakers in perceiving and producing English sounds (1976, p. 124), underlies the necessity to explicitly lead children to notice the /h/ phoneme at the beginning of English words. Including the target phoneme in the teaching materials designed for the present research project seemed to produce positive effects, as the participants' ability to identify the new sound overall improved after the instructional sessions. Finally, other errors that seem worth mentioning include the substitution of the /ʃ/ sound with /s/, the unsuccessful discrimination of the /t/ and /tʃ/ phonemes in the *chew-two* minimal pair, along with the widespread difficulty in recognising the /w/ sound in the Phoneme Substitution Subtest.

Didactic implications and limitations of the present study and suggestions for future research

Considering the results previously described, it could be hypothesised that the teaching materials specifically designed for the present research project were effective in improving the participants' abilities to discriminate and identify specific English sounds. The programme was developed with the aim of introducing phonological, and especially phonemic, awareness instruction in Italian primary three EFL lessons. Since phonological awareness skills, particularly at the phoneme level, have been strongly correlated with literacy development, it seems necessary that learners be involved in explicit phonological work from a very young age (Gillon, 2018, p. 38-53 and Goswami, 2006, p. 492-494). Nonetheless, phonology is frequently neglected in EFL teaching at Italian primary schools (Costenaro et al., 2014, p. 209). Integrating phonological awareness activities in EFL programmes seems to be particularly challenging due to the limited availability of appropriate teaching resources (Costenaro and Pesce, 2012, p. 588; Daloiso, 2017, p. 103). The programme proposed in the present study aimed at bridging this gap, providing Italian teachers with innovative materials that could be used as a starting point for phonological work in primary three EFL classes. It seems important to mention that since the materials proposed were tested on a small sample size, it was not possible

to determine whether their use could be effectively extended to a classroom context. Further research on this area thus seems to be needed. Nonetheless, some suggestions on how the innovative resources could be adopted and adjusted to be potentially included in EFL lessons in Italian primary schools will be provided.

First of all, teachers could decide to dedicate one lesson per week or a specific period of time during each EFL lesson to carrying out the programme. In fact, as seen in the first chapter, scholars such as Huo and Wang have suggested that phonological awareness instruction appears to be "most effective when delivered regularly and discretely" (2017, p. 11) As described in the second chapter, the teaching units were generally divided into three phases: a "warm up-revision phase" (presented at the beginning and at the end of each teaching unit), which preceded a "presenting sounds phase", ultimately followed by a "recognising sounds phase". This structure facilitates the inclusion of phonological work in the EFL lessons, as each phase could be addressed in separate lessons. Furthermore, the purpose of the new teaching materials was to enhance learners' abilities to discern and recognise specific English sounds. Therefore, since the focus of the study was mainly on perception, production and/or letter-sound matching activities were not included in the programme. However, the possibility of developing such activities was considered. Each chapter of the narrative thus comprised original tongue-twisters or songs, as well as drawings of the protagonists that include the orthographic representations frequently associated with the sounds assigned to them. Nonetheless, it is important that, as suggested by Daloiso (2017, p. 112), phonological work progress from perception tasks to production exercises and ultimately focus on sound-letter correspondences activities.

Teachers could further decide to adopt the original story as a starting point for teaching new vocabulary to young learners. However, it is important that this stage follows an accurate work on sound perception and recognition. Vocabulary instruction could thus be introduced at the end of each teaching unit, whose structure has been described in detail in the second chapter. In fact, the original story included words that were not familiar to the participants. The reason underlying this choice was that the narrative was particularly created so as to facilitate children's noticing of the target phonemes. Pupils were thus initially

encouraged to focus on form rather than on meaning. Before being introduced to a new chapter of the story, they were constantly repeated not to concentrate on trying to understand the meaning of the words they heard but on the sounds they perceived. Once the phonemes addressed in the chapter had been identified, the events occurring in the narrative were explained to the pupils in Italian in order to stimulate their attention and motivation throughout the lesson and the entire research project. If these materials were to be adopted in EFL classes, it might be useful to develop a comic book or an animated short film of the original narrative, which may not only help children understand the plot of the story but also be an effective tool for promoting the pupil's engagement in the phonological awareness activities, as well as for introducing vocabulary teaching. In particular, the animated short film would have an additional advantage, as children would be exposed to the pronunciation of English native-speakers.

It should be noted that the original teaching materials designed for the present study focused on a limited set of sounds whose discrimination and recognition have been suggested to be particularly challenging for Italian EFL learners. However, teachers may decide to integrate and/or adapt the materials to work on different phonemes and sound pairs, depending on the specific perception and production difficulties experienced by their learners. Considering the indications from the research, which have been provided in the literature review, different combinations of consonant and vowel pairs could be selected. For instance, according to Zuanelli Sonino (1976, p. 125-128), Italian learners may not only confuse and substitute /θ/ with /f/ but also with /s/. Likewise, in addition to /d/, the /ð/ phoneme is frequently perceived and produced as /v/ or /z/. Therefore, sound pairs such as /θ/-/s/, /ð/-/v/ or /ð/-/z/ may be included in the phonological awareness programme. It may also be decided to tackle the English /θ/ and /ð/ consonant contrast, since its discrimination may be particularly problematic for Italian speakers, as none of the phonemes is present in the Italian sound system. Furthermore, the findings of the present research project have suggested that participants struggled to identify the /w/ sound on multiple occasions and that they frequently replaced /ʃ/ with /s/. Teaching units tackling the aforementioned phonemes may thus be incorporated in the phonological awareness programme

presented. Based on the literature reviewed in the first chapter, other sound pairs that may be addressed could be /ŋ/-/n/, /ɪ/-/ɛ/ and /ɑ/- /ɔ/. It is important that when integrating new teaching units, the original narrative is modified accordingly.

It seems relevant to further mention that the level of difficulty, as well as the objective, of the engaging, multi-sensory and playful activities included in the programme could be adjusted to suit different audiences. Suggestions on how the complexity and the aim of each phonological awareness game could be modified have been presented in the second chapter. For instance, several versions of the phonetic memory game have been proposed depending on the aspects that the teachers may want to focus upon. The game could thus be used to work on one or multiple phonemes, which may differ from the ones selected in the present study. Teachers may also decide whether to concentrate on initial-, middle-, or final-sound recognition, with middle-sound identification being the most difficult task. In particular, when working with one sound, words containing the target phoneme in initial, middle, and final position may be selected. Children may thus be asked to match the pictures according to the position of the target phoneme within the given words. For instance, if focusing on the /ʃ/ sound in word-final position, a word such as "dish" could be paired with "fish" but not with "shop". Although the activities, as well as the narrative, were intended for pupils attending the third year of primary school, if appropriately modified, they could be used with younger or older children with different levels of proficiency in the foreign language. Moreover, as previously discussed, the positive results obtained by Participant A in the present study seem to suggest that the innovative teaching materials may also be suitable for young learners with dyslexia.

In order to evaluate the real inclusiveness of the materials, a further study could be conducted involving dyslexic children. Participants could be assigned to either a control group or an experimental group and phonological awareness assessments could be conducted prior to and after the study in order to evaluate the effects of the training. A similar procedure could be adopted with typically developing learners. In fact, in the present research project, the innovative teaching resources were tested exclusively on four children. A larger sample could thus be selected and the participants could be divided into a control group receiving no

treatment and an experimental group. Pupils' phonological awareness skills could be assessed before and after the study. Results could thus be compared in order to determine the impact of the activities presented on the children's discrimination and identification abilities. Furthermore, the effect of the phonological awareness training on the participants' literacy skills could be evaluated. The duration of the study could be modified as well. Children could be seen for a longer period of time (e.g. six months) and the instructional sessions could be less condensed. As was the case for the present research project, a third post assessment could be conducted several months after the study in order to assess whether the effects of the training were long-lasting. These investigations would provide a crucial insight into the effectiveness of the original teaching materials in enhancing children's phonological awareness skills, particularly at the phoneme level.

Conclusion

The present research project aimed at developing and evaluating the effectiveness of new teaching materials that Italian EFL teachers could adopt to work on phonological awareness, especially at the phoneme level, with children attending the third year of primary school. Original activities were designed and embedded in a narrative context. Their impact on typically developing pupils' phonological awareness skills was then determined. Four Italian eight-year-olds learning English as a foreign language were seen three times a week for seven weeks. A test was administered three times in order to assess the participants' phonological awareness skills prior to, immediately after and three months after the instructional sessions. Findings indicate that the pupils' initial levels of phonological awareness considerably differed and that they particularly struggled with phonemic rather than syllable and onset-rime awareness tasks before the beginning of the training. Nonetheless, results in the two post assessments suggest that the instructional sessions contributed not only to enhancing the children's phonological, especially phonemic, awareness skills, but also to promoting the achievement of a similar stage of meta-phonological abilities. The original teaching resources thus seemed to be effective in improving the participants' phonological awareness skills, particularly at the phoneme level. Furthermore, the pupils seemed to retain the progress made immediately after the conclusion of the training. In fact, their performance in the last assessment slightly and unexpectedly increased compared to the first post-test, thus suggesting that the children's gains may be long-lasting.

Participant A's improvement seems to be particularly relevant. In fact, although she was diagnosed with dyslexia and dysorthographia during the research project, she continued to receive the same instruction as her typically developing peers. Her positive performance, which ranked as the highest in the last assessment conducted, seems to indicate that children with learning disabilities, alongside typically developing pupils, could benefit from the phonological awareness training presented. However, further research concerning the real inclusiveness of the original teaching materials is needed.

It should be further noted that the materials were originally designed in order to be potentially extended to a classroom context and specifically included in Italian primary three EFL curricula. In particular, they aimed at improving children's abilities to discriminate and recognise specific English sounds that Italian EFL learners tend to incorrectly perceive and produce. Nonetheless, teachers could decide to adjust the set of sounds included in the phonological awareness programme, as well as the difficulty and the objective of most activities presented, so as to suit learners of different ages and English language proficiency levels.

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Appendix A – The Consent Form

CONSENSO INFORMATO

Gentile partecipante,

chiediamo la sua disponibilità a partecipare a un progetto di ricerca, in

collaborazione con l'Università Ca' Foscari di Venezia, Dipartimento di

Studi Linguistici e Culturali Comparati.

Obiettivi della Ricerca

Lo scopo della ricerca è di esaminare l'efficacia di attività volte al

potenziamento della consapevolezza fonetica e fonologica in inglese

per bambini di terza elementare. La sua partecipazione ci aiuterà a

valutare l'adeguatezza di attività riguardanti la consapevolezza fonetica

e fonologica in inglese sviluppate a partire da una breve storia.

Procedura e Durata

All'inizio e alla fine della sperimentazione è prevista la somministrazione di

un test di valutazione delle competenze fonetiche e fonologiche in inglese

della durata di 30-40 minuti. Il test verrà riproposto tre mesi dopo la
sperimentazione.

Le lezioni individuali avranno una durata di circa 45 minuti ciascuna e si terranno

a partire da due volte a settimana fino ad un massimo di quattro volte a settimana,

a seconda della disponibilità dei partecipanti, per sette settimane di
sperimentazione.

Partecipazione volontaria

La sua partecipazione è assolutamente volontaria. Può decidere di interrompere la sperimentazione in qualsiasi momento.

Anonimato e confidenzialità

Le garantiamo la tutela dei dati e le informazioni identificative non saranno collegate alle sue informazioni personali.

Trattamento dei dati

I dati raccolti saranno registrati, elaborati e archiviati in forma cartacea e informatizzata per le esclusive finalità connesse con la ricerca, in forma assolutamente anonima. I dati, collettivamente raccolti, saranno soggetti ad elaborazione statistica e in questa forma, sempre assolutamente anonima, inseriti in pubblicazioni e/o congressi, convegni e seminari scientifici.

Grazie per la partecipazione!

Firma _____

Appendix B – The Test

1. Rhyme Recognition Subtest

The participants were required to discern whether the word pairs presented were rhyming words or not. Two examples: "Do *sit* and *bit* rhyme? (YES) Do *chair* and *boy* rhyme? (NO)"

	Yes	No
1- Net – pet (yes)	[ ]	[ ]
2- Pun – gun (yes)	[ ]	[ ]
3- Star – soap (no)	[ ]	[ ]
4- Strength – length (yes)	[ ]	[ ]
5- Rush – flush (yes)	[ ]	[ ]
6- Fly – cake (no)	[ ]	[ ]
7- Hard – humble (no)	[ ]	[ ]
8- Door – dark (no)	[ ]	[ ]
9- Hat – sat (yes)	[ ]	[ ]
10- Fill – pill (yes)	[ ]	[ ]

2. Syllable Blending Subtest

The researcher separated the given words into syllables. She said the distinct syllables aloud. The participants were asked to blend the syllables together and say the words they formed.

Two examples: *di – no –saur*; *side – walk*.

	Yes	No
1- Pen – cil	[ ]	[ ]
2- Pop – corn	[ ]	[ ]
3- Pa –per	[ ]	[ ]
4- Win – dow	[ ]	[ ]
5- Ru – ler	[ ]	[ ]
6- Chap –ter	[ ]	[ ]
7- Rain –bow	[ ]	[ ]
8- Ham – ster	[ ]	[ ]
9- Dif – fer – ent	[ ]	[ ]
10- Peo –ple	[ ]	[ ]

3. Syllable Segmentation Subtest

The researcher asked the participants to pretend to be robots and try to divide the given words into syllables.

Two examples: *picture*; *nature*

		Yes	No
1- Bedroom	(bed-room)	[ ]	[ ]
2- Football	(foot-ball)	[ ]	[ ]
3- Maybe	(may-be)	[ ]	[ ]
4- Table	(ta-ble)	[ ]	[ ]
5- Shoulder	(shoul-der)	[ ]	[ ]
6- Blackboard	(black-board)	[ ]	[ ]
7- Toilet	(toi-let)	[ ]	[ ]
8- Fantastic	(fan-tas-tic)	[ ]	[ ]
9- Purple	(pur-ple)	[ ]	[ ]
10- Beautiful	(beau-ti-ful)	[ ]	[ ]

4. Syllable Deletion Subtest

The participants were asked to say the remaining part of ten given words from which a syllable had been deleted.

Two examples: "What is *downtown* without *down*? (*town*)"; "What is *after* without *ter*? (*af*)"

	Yes	No
1- *Inside* without *in*	[ ]	[ ]
2- *Forget* without *get*	[ ]	[ ]
3- *Skateboard* without *board*	[ ]	[ ]
4- *Basket* without *bas*	[ ]	[ ]
5- *Pineapple* without *pine*	[ ]	[ ]
6- *Sunshine* without *shine*	[ ]	[ ]
7- *Christmas* without *christ*	[ ]	[ ]
8- *Homemade* without *made*	[ ]	[ ]
9- *Bookshelf* without *shelf*	[ ]	[ ]
10- *Password* without *word*	[ ]	[ ]

5. Phoneme Isolation Subtest

Participants were asked to identify the first or the last sound in ten given words. Two examples: "What is the first sound in the word *top*? /t/"; "What is the last sound in the word *same*? /m/"

			Yes	No
1-	First sound in the word "full"	/f/	[ ]	[ ]
2-	Last sound in the word "land"	/d/	[ ]	[ ]
3-	First sound in the word "each"	/i/	[ ]	[ ]
4-	First sound in the word "tooth"	/t/	[ ]	[ ]
5-	Last sound in the word "such"	/ʧ/	[ ]	[ ]
6-	First sound in the word "shame"	/ʃ/	[ ]	[ ]
7-	Last sound in the word "halo"	/o/	[ ]	[ ]
8-	Last sound in the word "youth"	/θ/	[ ]	[ ]
9-	First sound in the word "hypnosis"	/h/	[ ]	[ ]
10-	Last sound in the word "taboo"	/u/	[ ]	[ ]

6. Phoneme Blending Subtest

The researcher divided the given words into phonemes. She said the individual phonemes aloud and asked the participants to blend them together and say the words they formed.

Two examples: /s/-/i/-/t/ (*sit*); /s/ /t/ /o/ /p/: (*stop*).

			Yes	No
1-	/t/-/ae/-/p/	tap	[ ]	[ ]
2-	/p/-/ɪ/-/n/	pin	[ ]	[ ]
3-	/b/-/oʊ/-/θ/	both	[ ]	[ ]
4-	/m/-/ʌ/-/s/-/t/	must	[ ]	[ ]
5-	/ɑ/-/r/-/tʃ/	arch	[ ]	[ ]
6-	/s/-/e/-/n/-/t/	sent	[ ]	[ ]
7-	/ʃ/-/ɑ/-/p/	shop	[ ]	[ ]
8-	/d/-/i/-/p/	deep	[ ]	[ ]
9-	/f/-/e/-/ɪ/-/k/	fake	[ ]	[ ]
10-	/h/-/æ/-/t/	hat	[ ]	[ ]

7. Phoneme Segmentation Subtest

The researcher asked the participants to pretend to be robots and try to divide the ten given words into phonemes.

Two examples: *cat* (/k/-/ae/-/t/); *tea* (/t/-/i/)

	Yes	No
1- Pet (/p/-/e/-/t/)	[ ]	[ ]
2- Jump (/dʒ/-/ʌ/-/m/-/p/)	[ ]	[ ]
3- Step (/s/-/t/-/e/-/p/)	[ ]	[ ]
4- Plant (/p/-/l/-/æ/-/n/-/t/)	[ ]	[ ]
5- Chin (/tʃ/-/ɪ/-/n/)	[ ]	[ ]
6- Tooth (/t/-/u/-/θ/)	[ ]	[ ]
7- Dot (/d/-/ɑ/-/t/)	[ ]	[ ]
8- Shell (/ʃ/-/e/-/l/)	[ ]	[ ]
9- Hand (/h/-/æ/-/n/-/d/)	[ ]	[ ]
10- Boom (/b/-/u/-/m/)	[ ]	[ ]

8. <u>**Phoneme Deletion Subtest**</u>

The participants were asked to say the remaining part of ten given words from which a phoneme had been deleted.
Two examples: "What is *bed* without /b/? (*ed*)"; "What is *meat* without /t/ (*me*)"

	Yes	No
1- *Sun* without /s/	[ ]	[ ]
2- *Cup* without /k/	[ ]	[ ]
3- *Fork* without /k/	[ ]	[ ]
4- *Rose* without /z/	[ ]	[ ]
5- *Shape* without /p/	[ ]	[ ]
6- *Inch* without /tʃ/	[ ]	[ ]
7- *Bat* without /b/	[ ]	[ ]
8- *Food* without /d/	[ ]	[ ]
9- *Path* without /θ/	[ ]	[ ]
10- *Hate* without /h/	[ ]	[ ]

9. <u>**Phoneme Substitution Subtest**</u>

Participants were asked to replace the first sound in ten given words with another phoneme in order to form a new word.
Two examples: "Substitute the first sound in *pail* with /m/ (*mail*)"; "Replace the first sound in *top* with /h/ (*hop*)"

	Yes	No
1- Replace the first sound in "man" with /k/ (*can*)	[ ]	[ ]
2- Replace the first sound in "pin" with /b/ (*bin*)	[ ]	[ ]
3- Replace the first sound in "well" with /f/ (*fell*)	[ ]	[ ]
4- Replace the first sound in "walk" with /t/ (*talk*)	[ ]	[ ]

5- Replace the first sound in "shop" with /tʃ/ (*chop*)[   ]   [   ]
6- Replace the first sound in "sip" with /ʃ/ (*ship*)   [   ]   [   ]
7- Replace the first sound in "cook" with /b/ (*book*)[   ]   [   ]
8- Replace the first sound in "sad" with /d/ (*dad*)   [   ]   [   ]
9- Replace the first sound in "wet" with /p/ (*pet*)   [   ]   [   ]
10- Replace the first sound in "pin" with /θ/ (*thin*)   [   ]   [   ]

10. <u>Minimal pairs Subtest</u>

Participants were asked to indicate whether they perceived the words read aloud by the researcher as identical or different.

	Same	Different
1- Pin / bin (different)	[ ]	[ ]
2- Hot / hut (different)	[ ]	[ ]
3- Sip / sip (same)	[ ]	[ ]
4- Bat / bet (different)	[ ]	[ ]
5- Chew/two (different)	[ ]	[ ]
6- Ship / sheep (different)	[ ]	[ ]
7- Three / free (different)	[ ]	[ ]
8- Cat / cat (same)	[ ]	[ ]
9- Pull / pool (different)	[ ]	[ ]
10- Tip / dip (different)	[ ]	[ ]

Appendix C – The Original Narrative

Chapter 1: Richard the Chatty Teacher and the Children Meet Tom the Fast Tiger – / ʧ /-/ t / (e.g. **ch**ew-**t**wo)

Richard is a teacher. He likes talking to people. He is very chatty. One day, on Halloween, he decides to take his twenty students to the zoo. The twenty children are very happy to see all the animals. When they arrive at the zoo, Richard says: "Welcome to the zoo, **ch**ildren! Remember: you can **ch**at with the animals but you can't tou**ch** them. They are dangerous. Now, **ch**oose the first animal you want to **ch**at with. Then, we will have lun**ch** at a restaurant near the **ch**ur**ch**."
The first animal they see is Tom the fast tiger. "Good morning, s**t**uden**t**s! It is nice **t**o mee**t** you. I am new, I arrived **t**wo days ago, on **T**uesday. I **t**ravelled with **t**wo friends: a **t**urtle and an elephan**t**. The **t**urtle is an ac**t**or and the elephan**t** is a doc**t**or. We me**t** in the fores**t** and we wen**t** **t**o the airpor**t** **t**ogether. We **t**ook the plane. Then, we **t**ook a **t**rain and a **t**axi. I am fas**t**er than the **t**urtle and the elephan**t**. I was the firs**t** **t**o arrive a**t** the zoo. The **t**rip was long and I am very **t**ired. I like your **t**a**tt**oo Richard!"
Richard the chatty teacher: "Thank you. I love playing **ch**ess! I am a **ch**ess **ch**ampion. I won the world **ch**ess **ch**ampionship in Long Bea**ch** in Mar**ch**. Then I went to **Ch**ina because I wanted to learn **Ch**inese. Now I can speak **Ch**inese and Fren**ch**. Hey Mit**ch**! Stop pun**ch**ing **Ch**ad on the **ch**in! Ou**ch**! **Ch**ildren, be nice to ea**ch** other! Mit**ch** tell **Ch**ad that you are sorry and kiss him on the **ch**eek. Good! I am hungry. Let's have lun**ch**! Tom, would you like to come with us?"
Tom the fast tiger: "Thank you but I can'**t**. I need **t**o go **t**o the **t**oilet now. Then, I will play **t**ennis with the **t**urtle. Wha**t** do you wan**t** **t**o eat? I wen**t** **t**o the res**t**aurant yes**t**erday and I **t**ried the mea**t**, the **t**una and the **t**ea. Everything was grea**t**!"
Richard the chatty teacher: "I will eat a sandwi**ch**. **Ch**ildren, you can eat some **ch**eese, some pea**ch**es, some **ch**erries, some **ch**icken or some spina**ch**."
Tom the fast tiger: "It's Halloween! You should go **t**rick-or-**t**reating!"
Richard the chatty teacher: "Yes, good idea! But **ch**ildren, don't eat too mu**ch** **ch**ocolate, **ch**ips and **ch**ocolate **ch**ip cookies or you will become **ch**ubby! I **ch**atted with a wit**ch** who was sitting on a **ch**air with a tor**ch** in her hand. She told me that there is a **ch**est hidden near the **ch**urch. If we find it, we will become ri**ch**!"
Tom the fast tiger: "Yes, there is a **t**reasure hun**t** every year for Halloween. You will find the firs**t** clue inside the restauran**t** on **t**op of the **t**elevision. Good luck!"
Richard the chatty teacher: "The television is near the cou**ch** inside the kit**ch**en of the restaurant. **Ch**ildren, let's go! Thank you, Tom. Bye!"
Tom the fast tiger: "Yes, go s**t**raigh**t**, then **t**urn lef**t**. You will see the res**t**aurant in fron**t** of you. Have a grea**t** **t**our of the zoo. Bye!"

SONG:
One sandwi**ch**, some **ch**ocolate, some **ch**eese and one pea**ch**, let's have lun**ch**!
One **t**omato, some **t**una, some **t**ea and some mea**t**, let's go ea**t**!
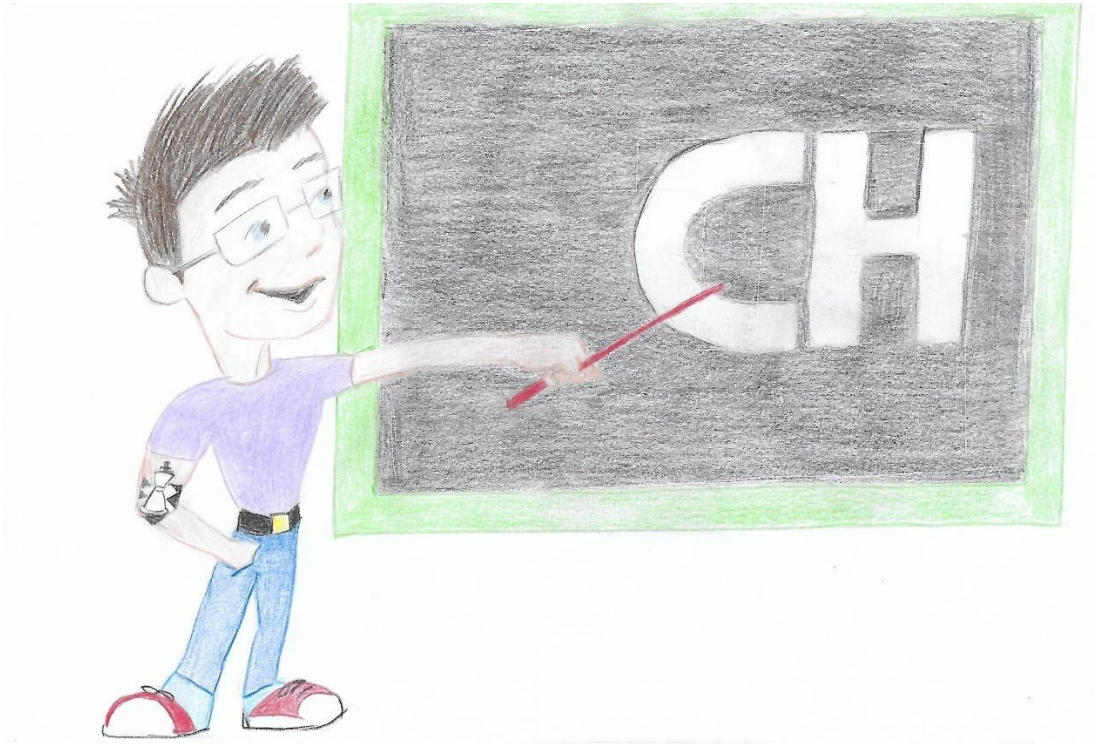
Chapter 3 : Richard the Chatty Teacher and the Children Meet Hannah the Horse in High Heels and Harry the Hungry Hippo – /h/

Richard the chatty teacher and the twenty children see Hannah the horse in high heels and Harry the hungry hippo.

Hannah the horse in high heels: "**H**ello, children! My name is **H**annah the **h**orse in **h**igh **h**eels. I am very **h**appy that you are **h**ere. This is my **h**usband **H**arry the **h**ungry **h**ippo. **H**e is always **h**ungry."

Harry the hungry hippo: "**H**i, children! **H**ow are you? I am **h**ungry. So, I **h**ave a **h**amburger in my **h**and."

Hannah the horse in high heels: "We are **h**ere at the zoo on our **h**oneymoon. Do you want to **h**ear our story? Come inside our **h**ouse! It is be**h**ind that **h**ill."

Richard the chatty teacher and the twenty children follow Hannah the horse in high heels and Harry the hungry hippo. They arrive at their house.

Harry the hungry hippo: "**H**annah and I, we live in **H**ollywood. We live in a **h**otel. We are very **h**appy. I play ice **h**ockey so I always **h**ave to wear a **h**elmet. The **h**elmet is very **h**eavy."

Hannah the horse in high heels: "One day, **h**e came back **h**ome. **H**e **h**ad a **h**eadache."

Harry the hungry hippo: "The **h**elmet was **h**eavy and my **h**ead **h**urt. **H**annah tried to **h**elp me take off the **h**elmet. We couldn't take off the **h**elmet."

Hannah the horse in high heels: "So I took a **h**ammer. We broke the **h**elmet with the **h**ammer."

Harry the hungry hippo: "She was a **h**ero. My **h**ead was **h**uge. I **h**ad to go to the **h**ospital. It was **h**orrible! I **h**ad to wear a **h**at for one week! Then, we took a **h**elicopter. The **h**elicopter took us to the zoo and **h**ere we are."

Hannah the horse in high heels: "**H**urry up **H**arry! It is **H**alloween! The children want to **h**ear the clue to find the treasure!"

Harry the hungry hippo: "You are right! Outside our **h**ouse there is a **h**ammock. On the **h**ammock you will find some **h**oney. Take it. You **h**ave to give it to our friends Theodore the thirsty python and Fred the friendly frog. They **h**ave the next clue. I talked too much. I am **h**ungry now. I will eat some **h**am. Goodbye and good luck!"

Hannah the horse in high heels: "Give us a **h**ug before you go! Bye, children!"

TONGUE-TWISTER:
The **h**ippo with a **h**at on **h**is **h**ead and a **h**amburger in **h**is **h**and is **h**appy.

Chapter 4: Richard the Chatty Teacher and the Children Meet Theodore the Thirsty Python and Fred the Friendly Frog – /θ/-/f/ (e.g. **th**ree-**f**ree)

Richard the chatty teacher and the twenty children see Theodore the thirsty python and Fred the friendly frog. They give the honey to Theodore.

Theodore the thirsty python: "**Th**ank you for the honey, children! My **th**roat hurts and I am very **th**irsty. Can you put bo**th** the honey and the chicken bro**th** in my mou**th**, please? I am **Th**eodore the **th**irsty py**th**on. I am an a**th**lete. I ran a mara**th**on this morning. Now I am very **th**irsty. I need to drink some**th**ing. Can I have more bro**th**, please?"

Fred the friendly frog: "O**f** course, my **f**riend. How do you **f**eel? You don't look **f**ine. Do you have a **f**ever? The **f**ridge is **f**ull of **f**resh **f**ruit and mu**ff**ins. **F**eel **f**ree to take them. Do you want a **f**ork and a kni**f**e?"

Theodore the thirsty python: "No, **th**ank you Fred. I can't eat **f**ood; I don't have any tee**th**! I am very **th**irsty. I need more bro**th**, please. I need to be **th**in and heal**th**y for the next mara**th**on."

Fred the friendly frog: "**F**ine. But take the scar**f** in **f**ront of you. It is **f**oggy and windy. And **f**inish your co**ff**ee!"

Theodore the thirsty python: "Okay, **th**ank you. What mon**th** is it?"

Fred the friendly frog: "I **f**orgot. Is it **F**ebruary? No, it is October!"

Theodore the thirsty python: "I **th**ink it is my bir**th**day today! I am **th**ree years old. I need to go to the ba**th**room now. Then, I will go to the **th**eater. Bye!"

Fred the friendly frog: "Bye Theodore. Children, I am sorry. I **f**orgot to introduce myself. I am **F**red the **f**riendly **f**rog. I have a lot of **f**riends and I live in a **f**arm with my **f**amily. I am a **f**amous **f**ootball player. You want to **f**ind the treasure, right?" The twenty children: "yeeeeesss!!"
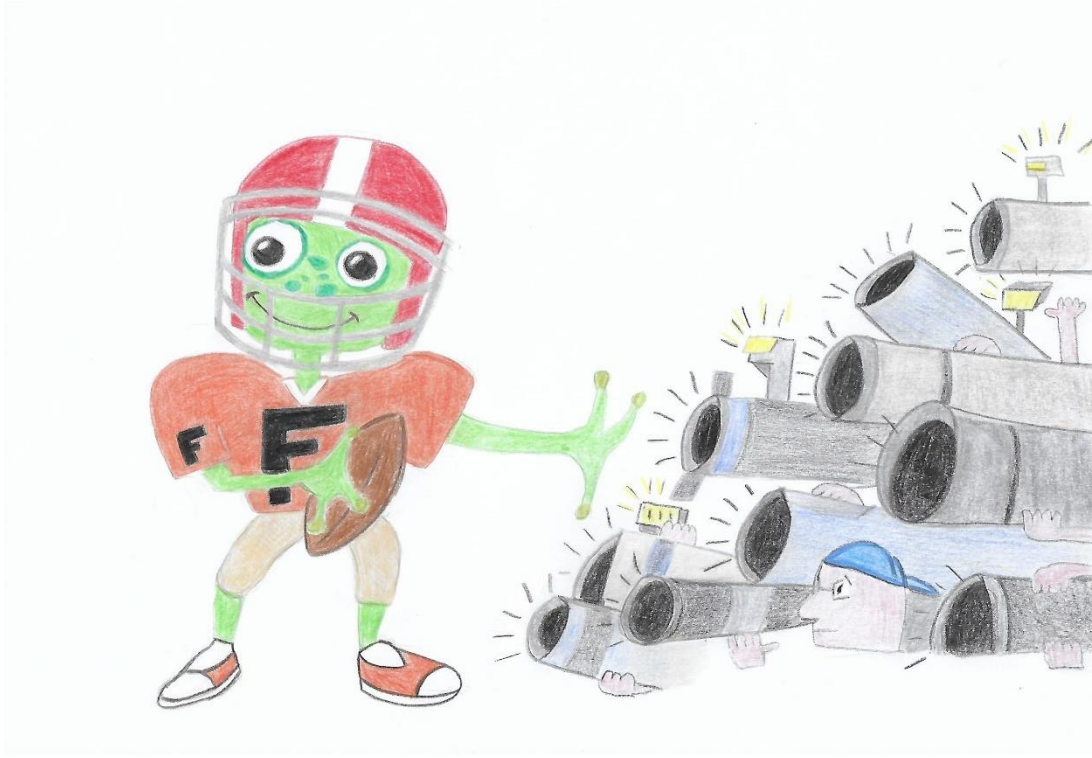
Fred the friendly frog: "Children, you are **f**unny. There are **f**ive **f**lowers near the **f**ountain. Take the **f**lowers. Give the **f**lowers to Theodore's mother. She is dea**f** but she will help you **f**ind the treasure. Now, I will go sur**f** in the **f**ountain. Good luck, children. Bye!"

SONG:
I am an a**th**lete, I am **th**ree, happy bir**th**day to me!
I play **f**ootball, I am **f**ree, nothing can stop me!

Chapter 7: Richard the Chatty Teacher and the Children Meet Jack the Black Cat and Jess the Red Hen – /ae/-/ɛ/ (e.g. b**a**t-b**e**t)

Richard the chatty teacher and the twenty children see Jack the black cat and Jess the red hen. The children give the umbrella to Jack the black cat.

Jack the black cat: "Hi, I am J**a**ck the bl**a**ck c**a**t. Th**a**nk you for the umbrella, children. D**a**d, c**a**n you put it in my b**a**ckp**a**ck? I am going to cl**a**ss. I h**a**ve an ex**a**m today. If I p**a**ss the ex**a**m, I will become a d**a**ncer. I am very h**a**ppy!"

Jess the red hen: "H**e**llo, I am J**e**ss the r**e**d h**e**n. Do not str**e**ss, my fr**ie**nd. I b**e**t the t**e**st will go w**e**ll. Are you r**ea**dy? Before you go to l**e**sson, show us some st**e**ps! R**ea**dy, st**ea**dy, go!"

Jack the black cat shows some dance moves to Jess the red hen, to Richard the chatty teacher and to the twenty children.

Jess the red hen: "y**e**s!! I have n**e**ver s**ai**d it: you are the b**e**st! Now r**e**st, you are sw**ea**ting. There is a y**e**llow b**e**nch on your l**e**ft. Do you need h**e**lp? Do not forg**e**t to eat t**e**n f**e**nnels, t**e**n **e**ggs and t**e**n l**e**mons before the t**e**st!"

Jack the black cat: "No, th**a**nk you. I h**a**ve an **a**pple, some j**a**m and a h**a**m in my b**a**ckp**a**ck. I will take a n**a**p on the gr**a**ss **a**fter the ex**a**m. Are you s**a**d?"

Jess the red hen: "Y**e**s, I don't feel w**e**ll. I will go to b**e**d and r**e**st. I am going to **E**dinburgh tomorrow with my fr**ie**nd the p**e**nguin. Bye, children!"

Jack the black cat: "I will be f**a**st, children. I h**a**ve a m**a**p in my b**a**ckp**a**ck. Take it. It is a m**a**gical m**a**p. Cl**a**p. Then, t**a**p on the m**a**p. A path will appear. Follow the m**a**p. The m**a**p will take you to a c**a**stle. In the c**a**stle, you will find the next clue for the treasure hunt. Do you underst**a**nd? Good luck!"

SONG:
Cl**a**p and t**a**p on the m**a**p of J**a**ck the bl**a**ck c**a**t
Go to b**e**d and r**e**st with J**e**ss the r**e**d h**e**n

Chapter 8: Richard the Chatty Teacher and the Children Meet Nick the Big Pig and Colleen the Green Sheep – / ɪ /-/ i / (e.g. sh**i**p-sh**ee**p/ch**ea**p)

Richard the chatty teacher and the twenty children arrive at the castle. The castle is on a ship.

Nick the big pig: "Hi, k**i**ds! I am N**i**ck the b**i**g p**i**g. I l**i**ve in the castle. I am the k**i**ng. I am r**i**ch. Cross the br**i**dge and come **i**n, qu**i**ck! I w**i**ll g**i**ve you a g**i**ft."

Richard the chatty teacher and the twenty children cross the bridge and enter the castle.

Colleen the green sheep: "Are you talking to m**e**, sw**ee**tie?"

Nick the big pig: "No, I am w**i**th the k**i**ds, darl**i**ng."

Colleen the green sheep: "I can s**ee** them with their t**ea**cher! Hi, it is nice to m**ee**t you. I am Coll**ee**n the gr**ee**n sh**ee**p. I am the qu**ee**n of the castle. How do you f**ee**l? It is Hallow**ee**n! Do you want a tr**ea**t? W**e** have ice cr**ea**m and ch**ee**se. Have a s**ea**t and **ea**t something, pl**ea**se."

Nick the big pig: "Th**i**s **i**s the fr**i**dge. I n**ee**d to dr**i**nk. I w**i**ll s**i**p some m**i**lk. S**i**t down, k**i**ds. L**i**sten, th**i**s morn**i**ng I h**i**d s**i**x p**i**nk r**i**ngs **i**n the g**y**m."

Colleen the green sheep: "The zook**ee**per has the k**ey** of the g**y**m. She k**ee**ps the k**ey**s in her sl**ee**ve. She is sl**ee**ping in the str**ee**t near the tr**ee**. Take the k**ey**s, pl**ea**se"

Nick the big pig: "Yes, then go to the g**y**m and find the s**i**x p**i**nk r**i**ngs, qu**i**ck!"

Richard the chatty teacher and the twenty children go to the zookeeper. She is sleeping. They take the keys and they go to the gym. They find the six ping rings and they go back to Nick the big pig and Colleen the green sheep.

Nick the big pig: "You d**i**d **i**t, k**i**ds! You can k**ee**p the s**i**x p**i**nk r**i**ngs. But g**i**ve th**i**s br**i**ck to my s**i**ster Rose the old flamingo. She w**i**ll g**i**ve you the next h**i**nt for the treasure hunt. I w**i**sh you luck. G**i**ve m**e** a k**i**ss. Bye, k**i**ds!"

Colleen the green sheep: "Take th**i**s p**ie**ce of ch**ee**se before you l**ea**ve. Bye!"

TONGUE-TWISTERS:
N**i**ck the b**i**g p**i**g s**i**ps some m**i**lk on a sh**i**p.
Coll**ee**n the gr**ee**n sh**ee**p is a sw**ee**t qu**ee**n.

Chapter 10: Richard the Chatty Teacher and the Children Meet Cooper the Kangaroo in Boots and Brooke the Book made of Wood – /u/-/ʊ/ (e.g. b**oo**t-b**oo**k)

Richard the chatty teacher and the twenty children open the envelope. Inside the envelope, they find a photo of a boot. The twenty children don't understand what they need to do.

Richard the chatty teacher: "**Ch**ildren, **ch**eer up! We need to **ch**at with Cooper the kangaroo in boots, let's go!"

Richard the chatty teacher and the twenty children see Cooper the kangaroo in boots.

Cooper the kangaroo in boots: "G**oo**d aftern**oo**n! Wh**o** are y**ou**? I am C**oo**per the kangar**oo** in b**oo**ts."

Richard the chatty teacher: "I am Ri**ch**ard the **ch**atty tea**ch**er. I tea**ch** to these twenty **ch**ildren"

Cooper the kangaroo in boots: "You are c**oo**l! G**oo**d aftern**oo**n, st**u**dents! D**o** y**ou** like the z**oo**? I live in this igl**oo**. Come inside! Do you need to go to the bathr**oo**m? D**o** y**ou** want some f**oo**d? Take the sp**oo**ns and eat some s**ou**p. Let's watch a m**o**vie! Take off your sh**oe**s."

Brooke the book made of wood: "Can I have a c**oo**kie? L**oo**k up, I'm on the b**oo**kshelf. G**oo**d aftern**oo**n, I am Br**oo**ke the b**oo**k made of w**oo**d. I tell the story of Little Red Riding H**oo**d and the w**o**lf."

Cooper the kangaroo in boots: "Hello! There is some s**ou**p and tw**o** mushr**oo**ms. You can ch**oo**se. The st**u**dents are not in a g**oo**d m**oo**d. They want to find the treasure. Is it on the r**oo**f of my igl**oo**? Or is it near the swimming p**oo**l?"

Brooke the book made of wood: "No... Children, l**oo**k behind the b**u**sh near the b**oo**kshop. There is a door. P**u**sh the door. G**oo**d luck"

Cooper the kangaroo in boots: "Take these bl**ue** ball**oo**ns. You can put the bl**ue** ball**oo**ns in your classr**oo**m. See you s**oo**n, st**u**dents!"

Richard the chatty teacher and the twenty children **push** the door behind the **bush**.
The last **clue** ends this wonderful adventure at the **zoo**.
They finally find the **treasure**! What a great **pleasure**!
They find candies, chocolate and **gold**, exactly as they have been **told**!
But the most precious things they **found** in those **grounds** were all the English **sounds**.
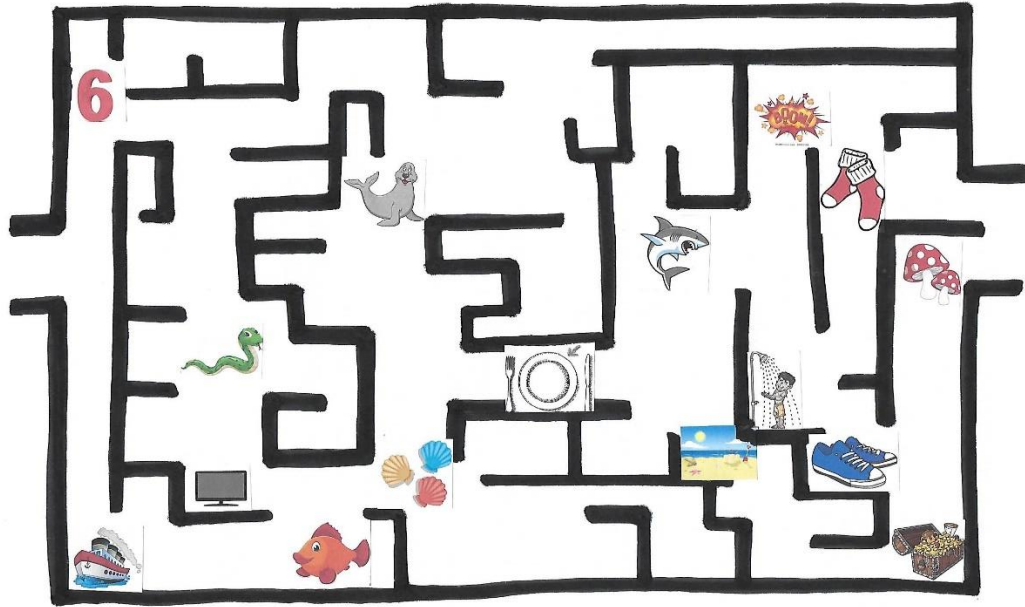They are not afraid of learning **English**, now that all its sounds they can **distinguish**!

SONG:

Here's C**oo**per, the kangar**oo** wh**o** lives in an igl**oo** at the z**oo**.
L**oo**k, there's Br**oo**ke the b**oo**k! Hey Br**oo**ke, can you c**oo**k?
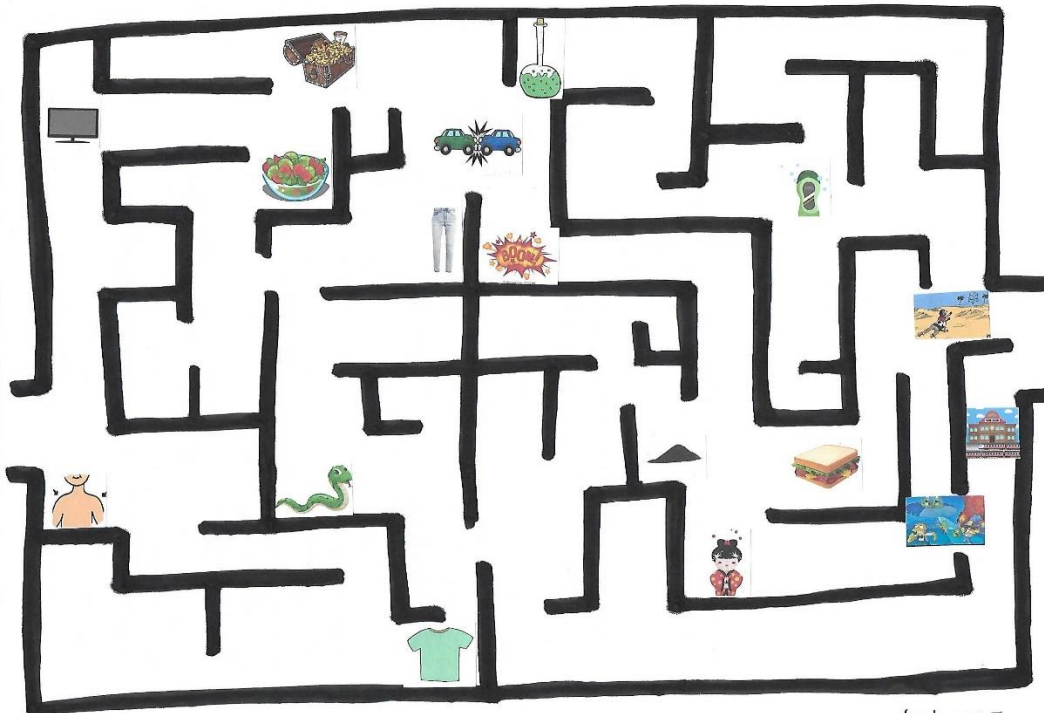
Appendix D – The Activities

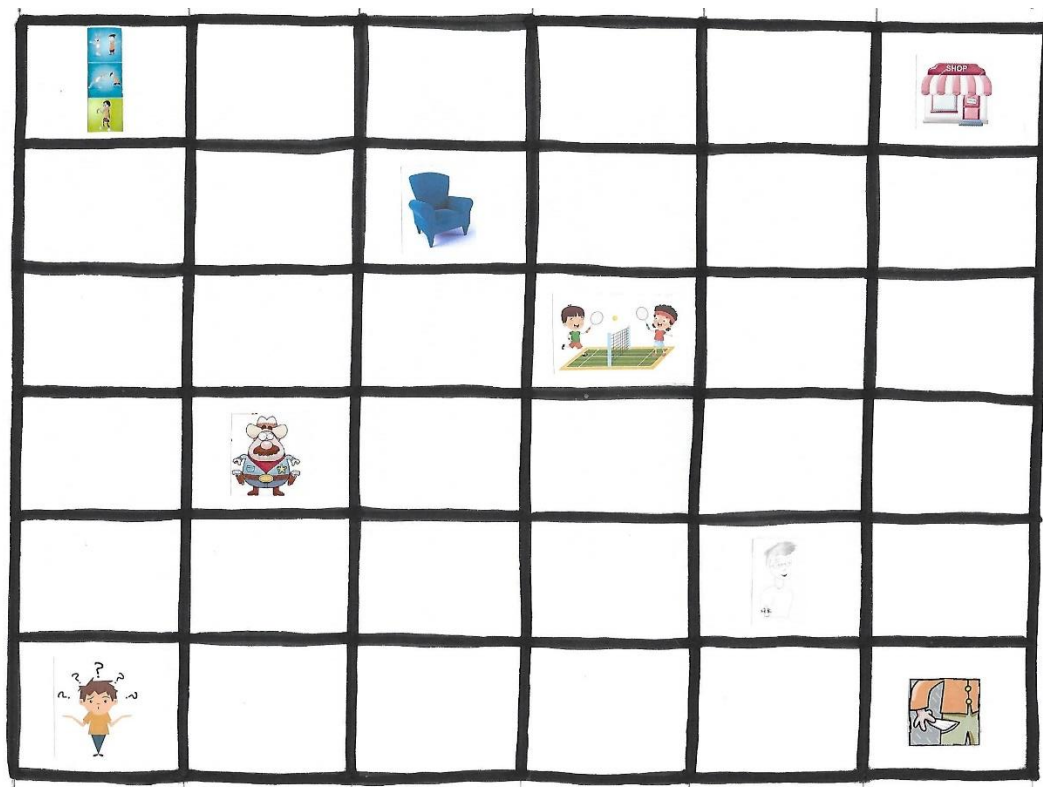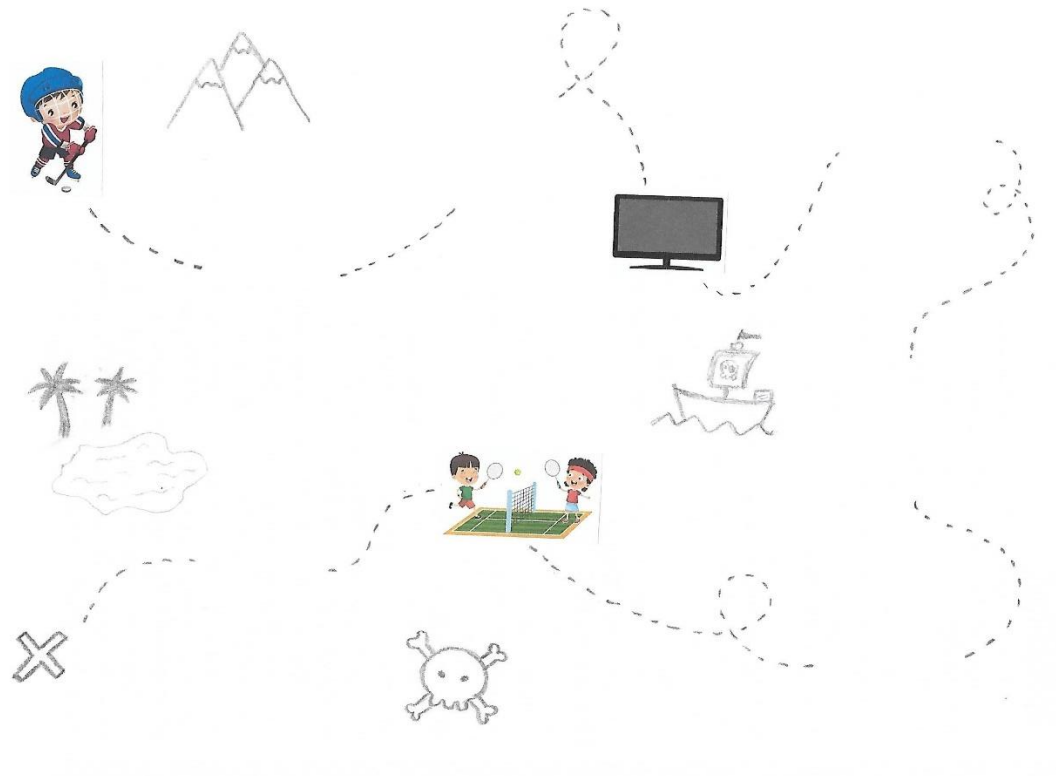## 1 – Phonetic Mazes

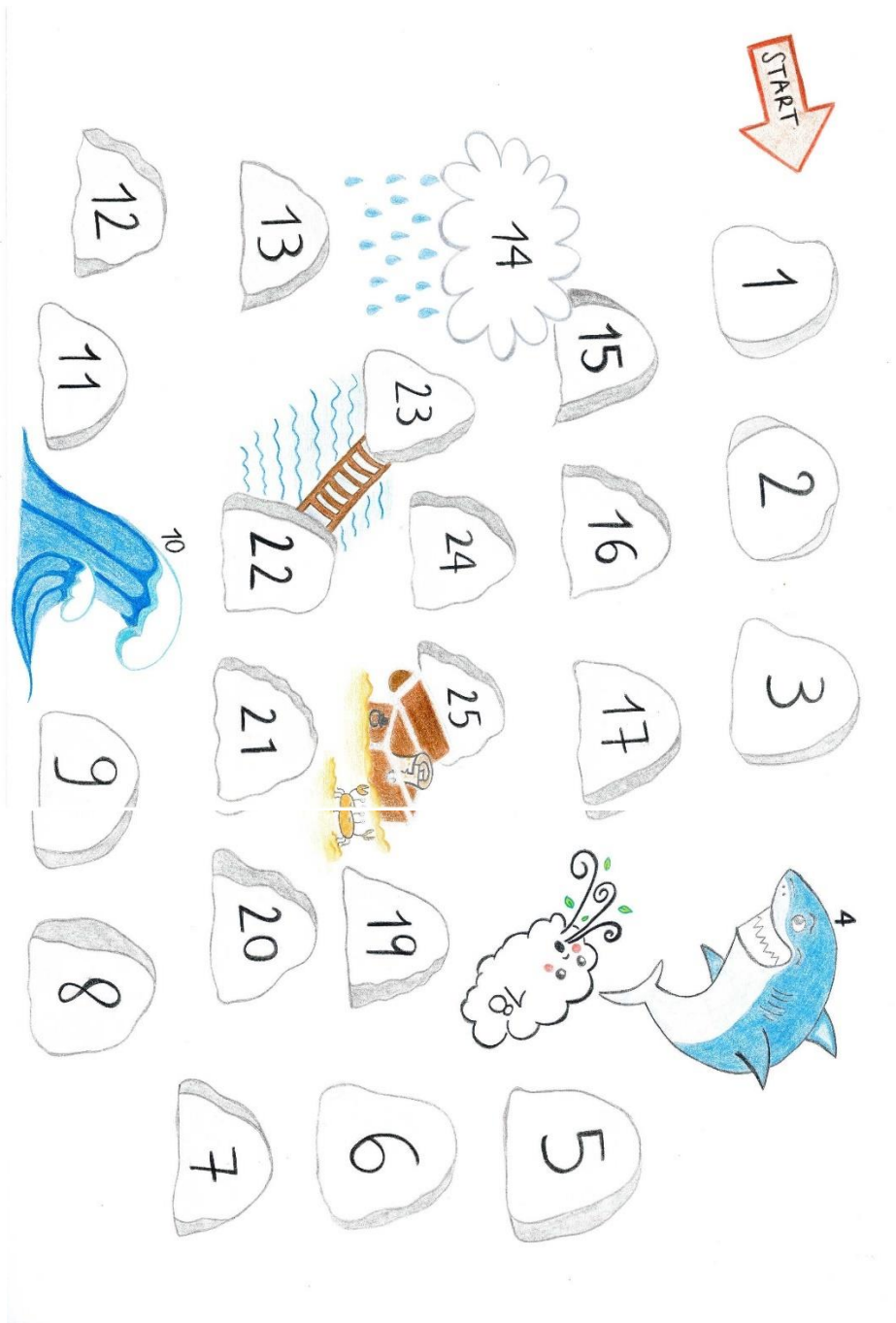/ʃ/ MAZE

/ʒ/ MAZE

2- Phonetic Noughts and Crosses

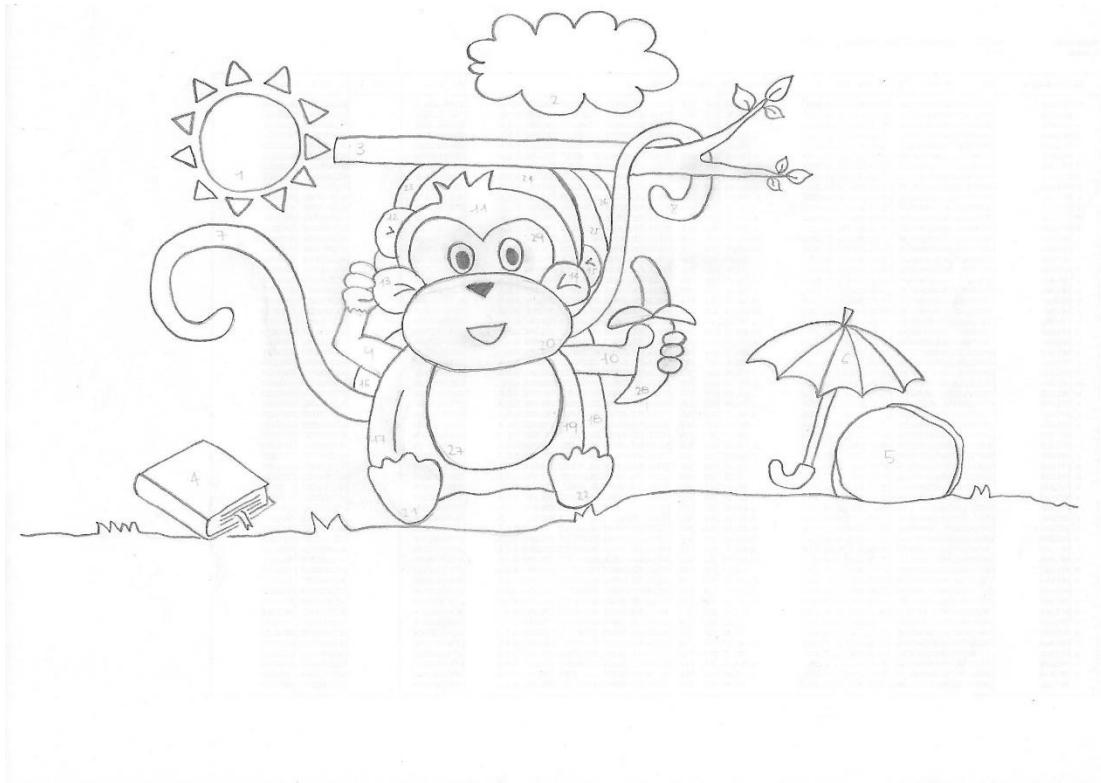## 3- Rhyme Recognition Game

4- Phonetic Treasure Map

5- Phonetic Game of the Goose

6- Phonetic Chart

7- Complete the drawings

8- Phonetic "One" Game