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# A Case Study: Learning Disabilities in The Foreign Language Environment, Issues with Decoding

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**ABSTRACT :** This research focuses on examining the issue of learning disabilities in the foreign language environment by elaborating on a case study pertinent to reading fluency, more specifically to decoding. In order to do so, a miscue analysis was conducted and further analysis was carried out. On completion of the miscue analysis, the findings are presented; as well as that, there follows a section with aims for enhancement so as to aid teachers in their effort to provide students with a more student-centered and inclusive environment which focuses on the needs as well as wants of the less able individuals who struggle with reading, ultimately enabling them to be part of a wholesome learning environment.

**Keywords** – learning disability, reading fluency, decoding, miscue analysis, inclusion.

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## 1. INTRODUCTION

The notion of Learning Disabilities has always been a key concept among educators whose aim is to help struggling students acquire language. There have been many attempts to define the term and understand its implications so as to provide a comprehensive analysis on how to better suit the needs of those pupils. One such attempt was made by the National Joint Committee on Learning Disabilities [1] , who defined LD as a set of various innate disorders evident in acquiring and using skills such as listening, speaking, writing and reading, as well as comprehension issues and math use, probably manifesting themselves because of the central nervous system dysfunctioning. Since the 1960s there have been changes in the educational system globally in order to include individuals with learning difficulties in a mixed-abilities school environment [2]. Thus, the need emerged to define and differentiate LD so as to create optimal circumstances for the inclusion of children with special learning needs to the curriculum.

## 2. Language Disabilities in L1 and the Foreign Language Environment

It has been observed that learners with LD and individuals who are taught English as a second language share some common traits. Some may struggle with following directions, others find it hard to grasp rules of phonology, connect words and sounds or even narrate events as well as keep focus and they may also exhibit memory problems, to name a few [3]. However, it should be noted that, in general, difficulties in the foreign language environment stem primarily from poor vocabulary knowledge whereas learning disabilities are linked to issues with memory, information decoding and focusing [2]. Skills in processing one's mother tongue are closely connected with acquiring a foreign language successfully; thus, usually, learners with LD find it hard to handle a second language [2]. According to the *Linguistic Interdependence Hypothesis* and *Threshold*

*Hypothesis*, L1 and L2 are interconnected and any difficulties in the first will manifest themselves in the second [4] [5] in [6]. In languages which are transparent, the learner can associate graphemes directly with phonemes. Other languages such as English are opaque so students often struggle with connecting mentally and verbally grapheme to phoneme; therefore, they seem to develop reading strategies based on how easy it is for them to decode words [7]. When there is *cross-linguistic interference*, the mother tongue is activated so the individual can decide upon how to use L2 but the process occurs erroneously, thus interfering with learning [8].

### 2.1 Teaching Context

The student assessed for LD makes part of a foreign language school class which consists of four individuals, two male twins aged 9 and two female learners aged 8 and 10. They attend primary education and their language level is A1 (CEFR). Students at this level can comprehend simple everyday language to express very specific needs, they can present themselves to others as well as ask and answer questions on basic personal information so long as the speaker interacts in a clear and slow manner and is ready to assist them if asked [9]. It is a homogenous class; all pupils share a common linguistic (Greek) and social background. The teacher is bilingual (Greek-Italian), holds a degree in Teaching English as a Foreign Language and has 19 years of classroom experience. The coursebook used is “Hashtag English 1” by Express Publishing. Along with the coursebook, the teacher is aided by supplementary material (IWB software, grammar book, workbook and companion).

### 2.2 Student profile: issues with accuracy, fluency, prosody

The learner seems to struggle with reading, especially *decoding* and *fluency* although there is no diagnosis. However, this could be the case of a *specific learning disability* [10] as he seems to find it hard to master reading skills such as decoding [11]. However, he exhibits no cognitive issues like poor memory, slow processing or incorrect linguistic use in context [12]. His thinking skills are very high but individuals with some sort of LD tend to compensate for their poor performance by being fast and able to locate specific in-text information [13]. His main struggle is with *accuracy* (grapheme recognition); he seems unable to connect words with how they sound correctly, which in turn affects his *fluency*; as well as that, the fact that he has issues with *prosody* (reading with the correct intonation) may also be proof of problematic decoding skills [2].

### 2.3 Assessment

In that light, it was decided to assess the student on *decoding* so as to attend to his needs and create an optimal learning environment [14]. Diagnostic assessment was chosen to help the tutor identify the specific learning issues of the student as well as locate his strengths and aim at a more individualised learning program [2]. An expository text of 171 words (Table 1) was selected by the educator to support non-standardised testing which is criterion-referenced and focuses on assessing specific academic skills based on one or more criteria set by the tutor [2]. The main logic behind the selection of a non-standardised testing system is that on one hand the learner is assessed in areas which are not covered by standardised methods and, on the other, it offers a more naturalistic approach to skills evaluation [15]. The whole procedure took place during an online session and, with the parents' consent, the student was recorded reading the unknown passage. Upon completion, a miscue analysis followed, which will be thoroughly elaborated upon in the next section.

**Table 1 Expository Text**

| |
|---|
| **SpongeBob and friends** (3)<br>Did you know that SpongeBob and his friends aren't just characters in a cartoon? They're real sea animals. (21)<br>The sea snail has got lots of teeth in his little mouth. It's small but it can kill a fish and eat it for supper! (46)<br>The sea sponge hasn't got a heart or a stomach. It gets ↓ (58) food from the water. The food goes into the tiny holes in its body. It doesn't move. It sits on a rock and just stays there! (84)<br>The plankton are very small but they can clean water. This is very important because so many animals live in |

the oceans. And they don't like dirty water! (112)
The octopus has got three hearts and blue blood. It's very clever. It makes a house with rocks and it can close the door with its arms! (139)
The starfish can be a boy or a girl. It has got two stomachs but it hasn't got a brain! (159)
The crab has got ten legs and it can move very fast. (171)
(text extracted from “Luke & Myla 1”, Burlington Books

## 3. Miscue Analysis

Discrepancies while reading a text out loud may not be simple errors [16] in [17]. In this case, miscue analysis may prove essential in understanding the learner's weak and strong points as well as what strategies he employs to carry out the task of reading; then, the tutor will be able to subsequently base his teaching on enhancing those strengths [17]. The table that follows (Table 2) provides insight on the problems the specific student faces while reading and data analysis will prove useful in helping the learner develop the necessary strategies to successfully comprehend future texts.

**Table 2 Miscue Analysis**

| ACTUAL WORD | MISREAD WORD | TYPE OF ERROR |
|---|---|---|
| 1. SpongeBob | /spangɛbob/ instead of /spʌndʒbob/ | pronunciation |
| 2. friends | friend | morphographemic (omission of plural -s) |
| 3. know | /knɑu/ instead of /noʊ/ | pronunciation |
| 4. SpongeBob | /spongbob/ instead of /spʌndʒbob/ | pronunciation |
| 5. characters | /harakterz/ instead of /ˈkærɪktrz/ | pronunciation |
| 6. a | - | word omission |
| 7. real | really | grapheme addition<br>word substitution |
| 8. sea | sis | grapheme substitution<br>word substitution |
| 9. snail | nail | grapheme omission<br>word substitution |
| 10. lots | lot | morphographemic (omission of -s) |
| 11. little | /liəl/ instead of /ˈlɪtəl/ | pronunciation |
| 12. small | smile | Grapheme substitution<br>word substitution |
| 13. supper | super | grapheme omission<br>word substitution |
| 14. sponge | /spong/ instead of /spʌndʒ/ | pronunciation |
| 15. hasn't got | has a got | Morphographemic<br>grapheme substitution<br>(omission of negative form, addition of indefinite |

| | | |
|---|---|---|
| | | article) |
| 16. heart | hear | grapheme omission<br>word substitution |
| 17. stomach | /stomatʃ/ instead of /ˈstʌmək/ | pronunciation |
| 18. gets | guests | grapheme addition<br>word substitution |
| 19. goes | /gɑoɛz/ instead of /ˈgəʊz/ | pronunciation |
| 20. into | /wɑɪntɔ/ instead of /ˈɪntuː/ | pronunciation<br>grapheme addition |
| 21. tiny | /tantini/ | grapheme addition<br>pronunciation |
| 22. holes | hell | grapheme substitution<br>word substitution |
| 23. small | /smʌl/ instead of /smɔl/ | pronunciation |
| 24. important | importart | grapheme substitution |
| 25. many | /mʌni/ instead of /ˈmɛni/ | pronunciation |
| 26. live (v) (/liv/) | lives (n) (/lɑɪvz/) | Morphographemic<br>grapheme addition<br>word substitution<br>(verb becomes noun) |
| 27. dirty | /dirti/ instead of /ˈdɜ˞ti/ | pronunciation |
| 28. octopus | octopupus | grapheme addition |
| 29. hearts | hurts | grapheme substitution<br>word substitution |
| 30. blood | /blod/ instead of /blʌd/ | pronunciation |
| 31. it | /i/ | grapheme omission |
| 32. its | in | Morphographemic<br>grapheme omission<br>grapheme substitution<br>word substitution<br>(possessive adjective becomes preposition) |
| 33. arms | /armus/ instead of /ɑrmz/ | pronunciation<br>grapheme addition |
| 34. has got | has - | morphographemic<br>(omission of got) |
| 35. stomachs | /stomatʃ/ instead of /ˈstʌməks/ | pronunciation |
| 36. hasn't | isn't | morphographemic<br>word substitution |
| 37. got | /agod/ instead of /gɑt/ | pronunciation |

| | | |
|---|---|---|
| | | grapheme addition |
| 38. brain | /brɑɪn/ instead of /breɪn/ | pronunciation |
| 39. crab | crad | grapheme substitution |
| 40. move | /mov/ instead of /muv/ | pronunciation |

3.1 Data Analysis

The passage consists of a total of 171 words. In the first 60 seconds of the recording, the student managed to read 58 words; 18 miscues were identified in that subtotal [18]. Accuracy percentage was 68,96% (Table 3), which is considered insufficient [19]. Overall miscue analysis produced 40 misread words in 171, which means that almost one third of the text was not decoded properly. Normally, students with LD tend to accurately decode around one third of the words their typical peers are able to [20] in [21]. This poses a problem since issues accessing word meaning may lead to miscomprehension of the intended text [2]. Most errors indicate difficulties with identifying graphemes and thus lack of phonology awareness [2]. In general, the individual does not seem to possess adequate phonological skills and finds it hard to process phonemes, that is, analyse words as a whole or letter by letter, deconstruct the text and use rhyming techniques [2]. Moreover, he tends to change or omit graphemes, which leads to word replacements or even making up inexistent lexical items [22]; this may mean that the student is unable to recognise pre-acquired language [21]. It should be mentioned that, because of the above issues with word decoding, intended text meaning is altered that way disabling overall comprehension. The student commits mostly graphemic/morphographemic errors by adding, substituting or even omitting letters; thus the reading strategy he employs seems to follow the same pattern [17]. The learner does not recognise words with graphophonemic resemblance so he tends to make similar recursive mistakes. Failure to automatically decode words creates communication breakdown between text and the student's perception of it [2]. He also uses invented words which share some graphic similarity so it is indeed rather possible that he may not comprehend what he reads [17]. There are also evident issues with pronunciation; because English is a non-transparent language, discrepancies between letters and how they sound are common [22] so students often resort to an original way of decoding words or even create invented unique linguistic patterns in their attempt to activate language acquisition [24]. Moreover, apart from evident problems with accuracy, the student seems to face difficulties with fluency and prosody, elements which generally enable automatic, quick and smooth reading [25] in [21]. In this case, reading is performed slowly with difficulty, there are hesitations and frequent pauses and lexical items are repeated for the learner to make sense of their meaning; these are all signs of a possible LD [26] in [21]. It is worth noting that there are frequent self-correction attempts, however errors are still graphically similar and seemingly alter the meaning of the passage, proof that the student follows the same path to decode words [17].

**Table 3 Accuracy Percentage Type**

| |
|---|
| Accuracy → words read correctly ÷ total words read x 100 [27] |
| • words read in 60 seconds = 58 |
| • miscues = 18 |
| • words read correctly = 40 |
| Accuracy percentage: 40 ÷ 58 = 0,689 x 100 = 68,96 % |

3.2 Aims for Enhancement

Problems with accuracy often stem from difficulties retaining word symbols and sounds and combining them in order to access meaning; these problems are linked to poor memory strategies and lack of phonological skills [2]. One of the aims of teaching reading skills is to help students build the correct strategies so as to successfully identify phonemes and graphemes in context and subsequently comprehend language; in order to achieve such an aim, emphasis should be placed on teaching vocabulary through repeated patterns that bear

similarities [17]. Therefore, when presenting new lexis it could be done by emphasizing what the meaning of the words is and how they are pronounced [2]. One such activity could include picture to word and sound connection or even a rhyming task so that learners can make the appropriate graphophonemic connections. Words that share common traits in terms of graphophonemic transcription (eg. what, which, when, where etc.) should not be introduced in the same teaching session, along with large chunks of language which are difficult to memorise [2]. Another useful strategy for enhancing memory is to introduce thematic vocabulary in context [2]. For example, a video story on the animal kingdom with rhymes and singing might be easier to retain. Letter-tracing using sand or dough or even alphabet magnets are an interesting way to introduce *multisensory learning* [2] all the while considering the *kinaesthetic* types who use their body as a tool for instruction or the *visual-spatial* students who make mental representations of optical information received [28] in [29]. One way to boost phonic awareness is to introduce cloze texts in order for letters to be used contextually, for instance by using the beginning or ending of the words and allowing students to complete the gaps [17]. In terms of fluency, the focus should be placed on increasing automacity through building word recognition, decoding and graphophonemic correspondence strategies [30]. In time, once students start making sense of words in context, decoding skills and faster-paced reading will become a reality [31] in [30]. In addition, re-reading texts [32] in [30] or introducing passages linked to students' preferences is yet another successful way to increase fluency [33] in [30].

## 4. Conclusion

A diverse learning environment which includes all types of learners in mixed-abilities classrooms is today's reality; thus it is the educators' role to create such an environment not only by selecting suitable material but also by eliminating bias against less able individuals so as to create a sense of respectful community [2]. Educational approaches that incorporate a multitude of disciplines may prove essential in that effort to increase productivity and give students a sense of purpose for learning [34]. In that light, identification of possible learning difficulties and provision of help through adequate material is the only way to curb discrepancies and successfully guide individuals in their journey to knowledge.

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