FOR TEACHING ENGLISH TO DYSLEXIC STUDENTS

USING UNIVERSAL DESIGN FOR LEARNING GUIDELINES

www.dislegi.eus







© Carmen Anderson, 2023

Publicado por Dislegi, Asociación Dislexia Gipuzkoa, en 2023

Colección: Dislegi Edita n.2

DISLEGI, Asociación de Dislexia de Gipuzkoa

Paseo de Zarategi 100, Edif. Txara I, Gizagune, sótano 1

Donostia-San Sebastián 20015, Gipuzkoa.

Nº de Registro: AS/G/19048/2015

ISBN 978-84-09-48159-0

Introduction	5
A note about nomenclature	7
Acknowledgements	8
Credits	8
	9
PART 1: As an English Teacher, what do I need to understand about dyslexia?	9
a. What is Dyslexia?	10
b. Genetics, gender, language and culture	14
c. How can I recognise a dyslexic student?	15
d. Barriers to learning	15
e. "Secondary effects" of dyslexia	16
f. What do dyslexic students need for success?	17
g. Why do dyslexic students have problems learning English?	18
h. What guidelines exist to help me as a teacher?	18
Introducing Universal Design for Learning (UDL)	19
Summary	22
	22
Part 2: What can English teachers do to help our dyslexic students succeed?	23
1. Methodology	24
Multisensory Structured Learning (MSL)	25
2. Carefully Structured and Paced	26
3. Opportunities for "overlearning" through repetition and revision	28
4. Explicit explanation of linguistic structures	29
Metacognitive or learning strategy training	29
2. Materials	32
3. Assessment	34
Summary	35
Part 3 Ideas to incorporate in the classroom	36
Ideas using the visual pathway	36
Multisensory vocabulary ideas for young learners	37
Ideas for learning vocabulary for older students	40
Use sound clues to help memorise and recall pronunciation patterns and vocabulary	42
Pronunciation	42
Crazy stories	43
Picture clues	43
Acronyms	44
Use of songs and sounds	45
Use of tactile materials	45
Teaching specifics: First steps to reading - Phonological awareness and Sound/letter relationship	47
Teaching specifics: Reading	49
Teaching specifics: Reading comprehension	51
Teaching specifics: Spelling	55

Teaching specifics: Writing	57
Use writing frames	57
Scaffolded writing	58
News at Ten approach	59
Self-scaffolding	59
Teaching specifics: Speaking	60
Teaching specifics: Listening	62
Assessment accommodations	63
Summary	64
Part 4 Put guidelines and ideas into practice: ideas for developing inclusive lesson plans	65
The UDL Design Cycle	65
Case studies	68
Summary	71
References	72
Appendix A - Legal framework for Inclusion In the Basque Country	75
Appendix B Indicators of Dyslexia	76
Appendix C Useful Resources	80
Guides from other Autonomous Communities and tips for teachers and families:	80
Digital Resources	80
Other Resources	86
Other Materials	87
Annendix D. Advice for families	88

Introduction

Why do we need a Manual of Ideas for Teaching English to Students with Dyslexia? Surely our sons or daughters, or the students with dyslexia in our English classes, do the best they can and if they fail, well, there is not much more we can do for them, right?

False! As time passes our knowledge about dyslexia grows, as does the expectation placed on us as teachers (and parents for that matter) to do our very best to attend to the needs of the young people in our class or family. Let's take a look at Ane, our first "case" study, and her academic experience with English as a school subject:

Case Study: Ane

Ane is now 17 years old and has started her final year of school. She hopes to study nursing at University. She speaks Basque at home and at school, Spanish with friends and other family and has been learning English since she was 4 years old.

Ane's story starts in the first years of Primary School. Despite her parents and teachers noticing that she struggled to learn to read and write, she was not actually assessed for dyslexia until she was 10 years old. By this time her reading was still slow and full of mistakes so she was taken to a speech and language specialist and was found to have dyslexia. While her IQ was above average, her main weaknesses were poor working memory, phonological awareness and reading comprehension. Her parents paid for two years of reading intervention with a specialist and by the time she finished Primary School, her reading speed and comprehension had improved but were still below average for her age. She did well at school in Maths and Science but her marks were low in Basque, Spanish Language and English.

At Secondary School, with a higher workload, Ane found that she had to dedicate a lot more time to studying than her friends to be able to pass, and even then it was not enough for some subjects. Basque, Spanish and English were still subjects that she struggled with, often having to take the resit exams at the end of the school year to be able to pass the course. Her teachers were somewhat perplexed that such a bright, hardworking student struggled to pass in some subjects. In parent-teacher meetings, Ane's parents explained what Ane's dyslexia meant for her and told the teachers about the effort she made and the support she had at home and with private tutors. At school, she was given extra time in the exams but no other adaptations were made for her.

She passed her Secondary School exams and decided to continue on to try to get into University. She put in an immense effort in her first year and managed to pass all subjects except English. Ane asked to do an intensive course over the summer in an academy to try to improve her level and came out with high marks and more confidence. At school, however, her average mark was low and her parents were worried that her health was suffering. They came to speak to the Orientation team in DISLEGI, expressing their profound concern for their daughter and that it appeared that her whole future depended on passing English. They felt that little was done in school to help her in her learning and that the personal cost to Ane was too high. Ane stated that she was often frustrated with herself because she spends a long time learning the material but could not express clearly what she had learnt in the exam. "The exams don't test my knowledge, they test my dyslexia on that day" she said.

"Ane" does not exist, or rather, she is an imaginary student compiled from the experiences of families that come to the Dyslexia Association of Gipuzkoa (DISLEGI) for advice, many of whom have similar stories and worries. Teachers, too, complain that they feel under-equipped to help the students with dyslexia in their classes, students who struggle to



keep up with the rest of the class. We will use Ane's "Case Study" to illustrate several reasons why this Manual may help both students with dyslexia and teachers, alike.

First, English is a weak point for Ane and as the curriculum requires her to learn at least one foreign language, this weakness puts her at a severe disadvantage, even though her strengths suggest that she will make a very capable nurse someday. As her parents pointed out, it seems her whole future depends on her marks in English, requiring a superhuman effort to pass. Our responsibility as teachers **to maximise** Ane's **learning** is clear. Her future may depend on it.

Second, not passing exams is not the same as not learning. Ane's difficulty with passing exams **does not mean** that she is not learning English, just that she needs more time to reach the same stage as her classmates. It is more useful to consider her **own progress** through the course than to compare her with the rest of the class.

Third, Ane did well in an intensive course in an English academy but she scraped by at school, evidence that she benefited from a **different approach to learning**. Academies tend to have smaller groups, more personalised attention, more diverse types of activities and a greater opportunity for speaking than school classrooms and Ane progressed well there. (The pros and cons of academy support are given in Appendix D).

In summary, Ane would benefit from more time, a different approach to learning and a greater understanding of her challenges on behalf of the teacher. This Manual has been written to provide ideas, in theory and practice, which address these issues related to students like Ane and to answer the two common questions we are asked in DISLEGI:

"Why does my son / daughter / student struggle so much with English?"

"What can I do?"

It has been compiled from published sources and the personal experience of English teachers and other education professionals, in line with DISLEGI's key objective: to ensure that the people involved in the life of a student with dyslexia first understand the strengths and weaknesses of the student and second, are able to fulfil their particular responsibilities towards that student. In other words, our goal is for students, parents and teachers to understand what dyslexia is and how it might affect the English language learning process and then, using that information, find the adequate tools to help them learn and be successful with English.

Part 1 of the Manual is dedicated to understanding various issues surrounding dyslexia in the English classroom.

Part 2 gives an outline of preferred approaches to teaching dyslexic students English.



Part 3 is a compendium of ideas which are given as practical examples of the preferred approaches described in Part 2.

Part 4 gives some ideas about how to develop inclusive lesson plans.

Universal Design for Learning (UDL) is mentioned throughout the Manual, for two main reasons. Firstly, it is an approach to education which maximises inclusion. It is recommended by UNESCO (UNESCO 2020) and is being implemented in the Basque Autonomous Community. Secondly, the recommendations for teaching English (or any other foreign language, for that matter) to dyslexic students, mesh nicely with the UDL framework, so by helping teachers to make that link though this Manual, we hope to give them a head start in applying UDL in their classrooms. Providing in-depth training on UDL is beyond the scope of this Manual but for those who are interested in learning more, a brief introduction and links to other UDL explanations and resources are provided.

Although there are thousands of ways in which students' learning experiences can be enhanced, and far too many to fit into one Manual, the idea is to guide the teacher towards finding their own solutions to hurdles they may encounter with students in the classroom. Teachers' experience shows that all students may benefit when these ideas are used in class (which is, in fact, a basic principle of UDL).

The guide has been written for all teachers of English as a Foreign Language (EFL), whether in schools or academies, and as far as possible is compliant with the legal framework for education in the Basque Autonomous Community (Appendix A). It has not been possible to include specific instructions for public and private examinations; it would be the academy or teacher's responsibility to find out which requirements and accommodations apply.

A note about nomenclature

Throughout this Manual we will refer to the native language or language of instruction in school as L1 (in our case Basque or Spanish) and English as a Foreign Language (EFL) as L2, although, here in the Basque Country, often it is the third language that our students speak.

Dyslexia is classed as a Specific Learning Difficulty/ Difference (SpLD: Dificultad Específica de Aprendizaje DEA) within the group of students with Specific Needs for Educational Support (SEN: Necesidades Específicas de Apoyo Educativo NEAE).

Acknowledgements

This Manual has been prepared by the Dyslexic Association of Gipuzkoa DISLEGI with assistance from the following people. We are extremely grateful for their input in various versions of the Manual!

Phil Ball, Diana Lindsay, Ana Valdes, Lisa Page, Naroa Sacristan.

We also extend our heartfelt thanks to the families and teachers who are involved in some way with DISLEGI and the Federación Plataforma de Dislexia, for their continued support and encouragement. Mila esker ekipo!

Credits

All images used were prepared by DISLEGI volunteers by hand (thanks Alba!) or using Canva and other drawing programs.



PART 1: As an English Teacher, what do I need to understand about dyslexia?

First, as EFL teachers, we need to **understand the difficulties** that dyslexia causes and for that, there are certain fundamental ideas that need to be assimilated, as summarised in Figure 1.1, below:



Figure 1.1 As a teacher, what do I need to know?

a. What is Dyslexia?

"Finding a definition of dyslexia is simple. Finding one we can all agree on is challenging." (*Dyslexia Scotland*).

While it is not the intention of this Manual to provide a crash course in neurobiology, we consider that a certain background knowledge is helpful in understanding the issue. So, what exactly do we mean by "dyslexia"? Dyslexia is the name given to a continuum of specific learning difficulties which impedes the acquisition of reading, writing, spelling and organisational skills (Dyslexia Scotland).

Research is continuing into the causes and mechanisms of dyslexia and our knowledge has advanced greatly thanks to neuroimaging techniques (Norton et al., 2015) and at the risk of oversimplifying decades of scientific research, it can be explained as follows:

Children learn language through a series of steps which involve detecting sound, visual and motor information (Goswami, 2020). Small infants, for example, detect the stressed syllables in words and sentences. These are often naturally exaggerated by their parents when speaking to infants, for example, when singing lullabies or nursery rhymes:

"Baa, baa, black sheep, have you any wool?" is sung as

"BAA, baa, BLACK sheep, HAVE you any WOOL?"

"Mary had a little lamb" is sung as

"MAry HAD a LITtle LAMB".

(Incidentally, this typical habit of parents to exaggerate language rhythm for babies is essential in the linguistic development of children; Goswami, 2020).

The next step is being able to separate syllables. (*To avoid confusion, in the following example the International Phonetic Alphabet symbols are given for each of the sounds in the example).

```
Ma ry
=*
meə ri:
```

The third step is being able to detect the onset rime. This is the consonant (called the linguistic onset) and vowel (called the linguistic rime) in a syllable:

```
Mary
=*
m eə ri:
```

The final step is to identify separate phonemes (the smallest unit of sound that can change a word's meaning). This skill is often refined when the child starts reading.

/m/ /eə/ /r/ /i:/

Summary of levels of language acquisition in children

Adapted from Goswami (2020)

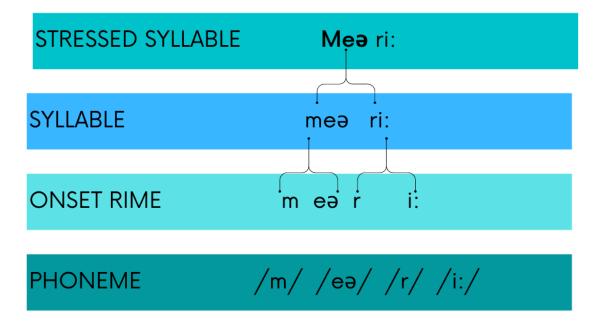


Figure 1.2 Summary of the hierarchy of phonological awareness (Goswami, 2020).

This hierarchy represents different levels of awareness of sounds of language, also called phonological awareness. Children with dyslexia have impairments in all of the above stages of linguistic development (ibid).

For this reason, small children at risk of dyslexia may mispronounce or jumble words ("fofa" for "sofa", "tebby dare" for "teddy bear", for example), and may be slow in learning to speak clearly. The real difficulty arises, however, when they reach reading age. Learning to read involves thinking about sound patterns in words to be able to assign them a written character (identifying the phonemes \mu/\epsilon/\mu/\epsilon/\rm /i:/\ in the example used previously and knowing that they are represented by the letters/graphemes m, a, r and y respectively\(^1\)), a complicated task when sounds are not perceived as efficiently as other children in the class. Logically, other associated

¹ Reading is a complex skill that combines linguistic, visual, cognitive and attention-related abilities (Norton et al., 2015) of which letter knowledge, rapid automatized naming (RAN), and phonological awareness are considered the pre literacy skills necessary for successful reading (Zugarramurdi et al., 2022). As this Manual is directed towards teaching English as a foreign language, further explanation of the acquisition of reading skills in children with dyslexia is not included. The reader is encouraged to read the above cited papers and Shaywitz (2003) and Ziegler and Goswami (2005) for more details about the reading process and dyslexia.

skills such as learning to spell are also impeded and can have a detrimental effect on the literacy development of that person (Stackhouse and Wells, 1997).

Why do people with dyslexia have this weakness? Studies have shown some key differences between non-dyslexic and dyslexic brains.

Using imaging studies we now know that people who do not have dyslexia use several parts of the brain while they are reading. The temporal lobe is where sounds are decoded and processed (phonological awareness), the occipital lobe is where words are recognized, and the frontal lobe are activated when deciding how to pronounce a word. In the brains of people with dyslexia, the frontal lobe may be more active, while the parietal lobe (used when analysing words and decoding) and the occipital lobe are less active. There are also differences in the structure of the brain (white and grey matter) of people with dyslexia (Norton et al., 2014).

Research is still ongoing into the various parts of the brain involved in dyslexia and the causal mechanisms (Goswami, 2014) but there are several interesting findings to take into account:

- 1. First, some people with dyslexia report other sensory dysfunctions, such as visual deficits, where words "dance" on the page or make it difficult to follow the words of a sentence. They occur, can be improved through ophthalmological treatment, but they are not the cause of dyslexia and such should not be considered treatment for dyslexia (Sociedad Española de Oftalmopediatría, undated report in Spanish; Handler and Fierson, 2011). Effective interventions for dyslexia work on improving weaknesses in phonological awareness.
- 2. Like a muscle that becomes more developed the more it is used, the brain, once it learns to read, develops more in certain areas. People with dyslexia automatically have a **reduced reading experience**, meaning that the reading "muscle" does not develop as much as in non-dyslexic readers. Separating possible sensory deficits from the effects of a reduced reading experience is a useful focus of investigation (Goswami, 2014) but is also a useful point for teachers to keep in mind, especially regarding what is expected of students in class.
- 3. There is no relationship between dyslexia and intelligence (Yang et al., 2022). If one way of doing a task is slow and inefficient, the brain employs other methods. People with dyslexia often find their own ways of getting around the problems they are experiencing which may mask the underlying difficulty (A. Elgezabal, pers. comm.).
- 4. Dyslexia is one part of the **neurodiversity** that teachers observe every day in their classes. Dyslexia can co-occur with other SpLDs such as Attention

Deficit with or without Hyperactivity (ADHD), dyscalculia (a difficulty with mathematics) and dyspraxia (difficulty with coordination) and Developmental Language Disorder (DLD, in Spanish TEL - Trastorno Específico de Lenguaje). This idea is nicely summarised in the booklet produced by the British Dyslexia Association and others (undated report), *Understanding Neurodiversity: A Guide to Specific Learning Differences:*

"Specific learning differences – or difficulties (SpLD) – is an overarching term for a number of associated learning differences. They affect the way information is learned and processed, and can affect literacy, memory, coordination, and the manipulation of letters and numbers. These differences can appear across all ranges of ability and with varying degrees of severity or significance. They are often hidden (i.e. many pupils with SpLD will look and behave just like their peers and may even demonstrate no immediate learning differences) and a pupil may have more than one co-occurring difference. SpLD are lifelong conditions that can have a significant impact on a person's life".

b. Genetics, gender, language and culture

Apart from neurobiology, there are other factors that English teachers should be aware of regarding dyslexia:

- 1. It is accepted that there is a **genetic element** to dyslexia as dyslexia often appears more than once in families and research is ongoing to identify the genes involved and their influence on brain structure and function (Gialluisi et al., 2021).
- **2.** Dyslexia is **persistent**, meaning that there is no "cure". A recent study has shown that it is significantly higher in boys than girls, but the reasons for this were not clear (Yang et al., 2022).
- **3.** It is not linked to **maturity**, **intelligence** or **socioeconomic** status and has been found in all cultures and languages, at approximately the same level throughout (ibid).
- **4.** The areas and degrees of difficulty experienced by dyslexic students vary widely and **no two people with dyslexia are alike** (Schneider and Crombie, 2003).
- **5.** Dyslexia affects approximately **7.10% of the population** (Yang et al., 2022), and is the most common of the SpLDs, which means that in every school classroom a teacher can expect to have one or two students on the dyslexia continuum, whether they are diagnosed or not.
- **6.** The phonological weaknesses described above in people with dyslexia have been detected in **many languages**, and developmental dyslexia is considered **universal** (Goswami et al., 2010).

c. How can I recognise a dyslexic student?

In the majority of schools in the Basque Autonomous Community, children learn to read first in Basque or Spanish. These are *transparent* languages in that they are spoken more or less in the way that they are written (unlike English which is *opaque*). It may be unlikely, therefore, that the English teaching staff will observe potentially dyslexic 5 or 6 year olds as they struggle to learn. We do think, however, that it is useful to include here some of the common signs of a learning difficulty in this age group as they give clues as to where these students may have difficulty in English classes. We have included two sources of information in the table of indicators, from the Guía de Buenas Prácticas (see Part 2 below) and the British Dyslexia Association. These are found in Appendix B.

d. Barriers to learning

Dyslexia can be considered a barrier to learning when learning takes place in a traditional school system. That is, the differences that a person with dyslexia has when it comes to reading and understanding texts, for example, slow that person down in their learning, the same as a hurdle slows runners in a running race. There is no question that the person with dyslexia is capable of learning, however they will need to find ways to get over the barriers to make their learning more efficient. Clearly, this is where teachers can help.

It should be noted that their barrier to learning is just one of many that a student with dyslexia may face at school. Others may include:

- Attitudinal barriers, for example when the student is considered a special case to be dealt with by the special needs teacher only.
- Methodological barriers, for example, those caused by a rigid curriculum, or methods which do not adapt to the learning style of the students.
- Organisational barriers, for example, in grouping students and in coordinating between educational stages
- Social barriers, for example, prejudices, ignorance and discrimination.

(Howladar, 2018; UNESCO, 2009).

Interestingly, the idea of "barrier" is inverted by David H Rose, one of the founders of UDL. His perspective is that the barrier is not in the student but in the curriculum

itself. That is, there is nothing wrong with the students, they are just not being taught in the way that they can learn (Torres and Rao, 2020). This idea is supported regarding language learning, specifically, by Sparks (2006) in whose opinion "the focus of native and foreign language educators and researchers should be on developing effective methods for teaching foreign languages to low-achieving students...". (Although research into effective methods is ongoing, the ideas presented in this Manual are based on recommendations that have arisen from investigations carried out to date).

e. "Secondary effects" of dyslexia

The characteristics of dyslexic students shown above often mean that:

- They need to spend far longer on school tasks and homework than their classmates, but
- the marks obtained do not reflect this level of effort, and what is more, in tests
 or exams, the results may not even reflect the students' level of knowledge,
 simply because they cannot show in writing, under test conditions, all that
 they have learned, and
- their performance in class can seem to be haphazard or random in that the same types of tasks can produce completely different results, for example, "put these words in the correct gap" in a text can be all correct whereas "put the verbs in the correct tense" can be all wrong, even when testing the same structure or part of grammar or vocabulary (A. Valdes, pers. comm.).

The daily difficulty and effort required to make their way through the school day unfortunately comes at a price and emotional difficulties such as a low self-worth, low self-esteem, depression and anxiety are common among students with SpLds, (Alemany, 2019) and can lead to dropping out of school and social exclusion (ibid).

In terms of our dyslexic students learning English, affective factors involved in the documented "Foreign Language Learning Anxiety" can have a direct influence, not surprisingly, on their motivation to keep studying that language. As Kormos (2017) states at the end of the entire chapter of her book which deals with this theme:

"A recurring theme throughout this chapter has been the important role played by peers' and teachers' classroom behaviour and attitudes to SpLDs and accommodations. Although these need to be considered within a wider context of educational policy and practices, when it comes to individual learners with SpLDs the most immediate barriers they face are present in the classroom and at the school level. These barriers significantly impact on the learners as individuals in terms of their emotional reactions, self-concept and motivation. They also

have important consequences for them at the social level, including the investment they make in language learning and the agency they can exercise over their learning".

f. What do dyslexic students need for success?

In other words, what do we have to do, as teachers, to avoid the situations described above? Studies have shown that "learners with dyslexia benefit from early identification, appropriate intervention and targeted, effective teaching" (Dyslexia Scotland). But what do these terms mean?

- "Early identification" means that a child who has been struggling to learn to read, write and organise, and is suspected of being dyslexic, is tested by a trained professional using standardised tests in their first language L1. "Early identification" ideally takes place aged 8 or before.
- "Appropriate intervention" usually means a process of re-education which
 takes advantage of the brain's plasticity to forge new neural pathways and
 automate the reading and writing processes. The objective is to increase the
 child's reading and writing skills and comprehension such that they do not
 impede learning capacity and in almost all cases the child's response is
 marked and rapid. (There are some children who do not respond to reeducation).
- "Targeted, effective teaching" is, in simple terms, teaching which takes into account the problems which dyslexic students experience in that subject.
 Teaching is targeted to respond to students' specific difficulties and effective because it allows the students to learn.

Although EFL teachers are not involved in identification and intervention for dyslexic students, they should nevertheless notice that a student is having particular difficulty with English, in which case an appropriate action would be to discuss their observations with the student's tutor and other teachers in case a learning difficulty is present. This Manual is aimed at providing ideas for the third requirement, that of targeted, effective teaching.

g. Why do dyslexic students have problems learning English?

There are three basic reasons why English is often a difficult language for dyslexic students to learn.

- 1. Dyslexic students have **weak language skills in L1**, as noted above, and these weaknesses are also present when learning L2. These weaknesses present multiple barriers to learning, according to Schneider and Crombie (2003), including:
 - a. poor phonological processing skills
 - b. weak short term and working memory
 - c. word-finding difficulties
 - d. slower speed of processing
 - e. difficulties with auditory perception, discrimination, sequencing, and
 - f. difficulties with automaticity and syntax and grammar.
- Compared with Basque or Spanish, English is challenging for dyslexics because it is opaque (not pronounced the way it is written) and has many more vowel sounds. It also has many exceptions to rules of spelling and grammar, has many homophones, homographs and homonyms that need to be learnt, among other reasons.
- 3. As the students' experience in the English classroom suffers, motivation decreases and affects the urge to learn. (Remember that it has been shown that motivation is the consequence of their struggle to learn and not the cause; if a student is not learning well we should first ask ourselves if a SpLD could be the reason, and not assume that they are not learning well because they are unmotivated).

Although these three reasons make learning English a challenge for both students and English teachers, **it does not mean that they cannot learn!** By using appropriate methodology, materials and assessments and supporting the students in their learning both in the classroom and at home, they can be helped towards fluency in English.

h. What guidelines exist to help me as a teacher?

Guidelines to help teachers fall into three categories:

1. General policies of inclusion in schools, which are useful to help teachers understand their obligations towards students with dyslexia, given that they are simply part of the diversity that occurs in every classroom (some of these are provided in Appendix A).

- 2. Specific recommendations for students with dyslexia, which are geared towards removing the various barriers that they commonly encounter (presented in Part 2 of the Manual).
- 3. Approaches to learning which combine the guidelines described in 1 and 2 above; that is, they provide a framework in which teachers' obligations are met for all students, including those with SpLds. (One such framework, Universal Design for Learning, is described below).

The guidelines listed in Appendix A advocate the following:

- Inclusion, in the sense that all students have the same educational opportunities and the necessary aids (curricular, personal, material) that they need for their academic and personal progress.
- The ordinary classroom is the space that enables educational inclusion, and interventions should take place there.
- Appropriate strategies and methodologies should be used, for example, personalised tutorials, diversified teaching, collaborative learning, personalisation of teaching.
- Personal itineraries and curricula should be more flexible and allow different learning contexts, including non-formal ones, to obtain basic competences and accreditations.
- Efforts must be made to overcome the barriers to access, participation and learning of all students.

Part 2 of the Manual provides specific recommendations for students with dyslexia, to overcome the barriers that dyslexia causes. Later in the Manual we will look at how Universal Design for Learning can provide a framework for putting these recommendations into practice.

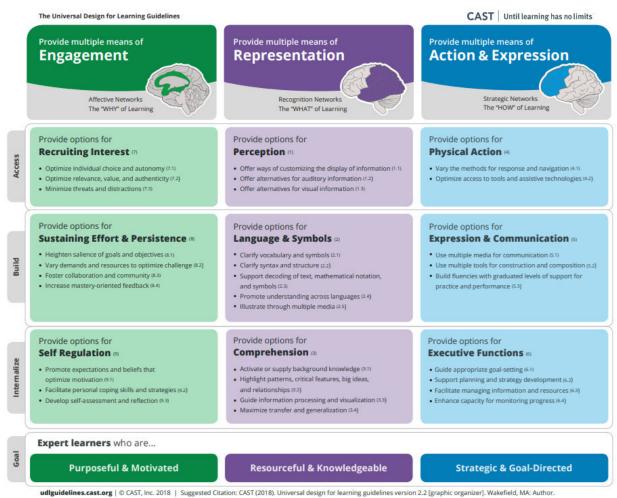
Introducing Universal Design for Learning (UDL)

The principle of Universal Design is clearly illustrated using architecture. An architect must design a building to be **accessible to all**. Those who arrive walking, by bicycle, in a wheelchair, pushing a baby buggy or on crutches, must all be able to get into the building.

Universal Design for Learning applies the same principle to education with the objective of maximising inclusion and fostering students' skills so that they become resourceful, knowledgeable, motivated, purposeful, strategic and goal oriented (see below, Figure 1.2). The goal of UDL is to use a variety of teaching methods to remove any barriers to learning and give all students equal opportunities to succeed.

To help teachers do this, it has three main principles, explained below and summarised in Figure 1.2 and summarised by Reading Rockets (2019).

- 1. Representation: Because different students access information differently, UDL recommends offering multiple ways of providing information, such as text, audio, video and hands-on materials. That way all students can access the material in the way that is best suited to their learning types. By providing different options for perception, language and symbols and comprehension, students become resourceful and knowledgeable.
- 2. Action and expression: UDL suggests being flexible in the ways that students interact with the material, because students differ in their capacities to express their knowledge, demonstrate their skills or show what they've learned. By providing different options for physical action, expression and communication and executive function, students will learn to strategize and direct their learning towards a goal.
- 3. Engagement: As learners differ in the ways in which they can be engaged or motivated to learn, providing multiple options for engagement is essential. For example, some learners like spontaneity while others prefer a strict routine. Some prefer to work alone, while others prefer to work in groups. By providing different options for recruiting interest, sustaining effort and persistence and self regulation, students learn to be purposeful and motivated in their learning.



uniguruerines.cast.org | © CA31, int. 2016 | Suggested Citation. CA31 (2016). Universal design for learning goldenines version 2.2 (graphic organizer). Wakened, WA. Addition

Figure 1.2. UDL Guidelines (version 2.2)

The UDL guidelines are presented in detail in the website below and we would encourage you to look through them. At the very least they give clues as to where teaching options might be included in your classes so as to maximise inclusion. The website is https://udlguidelines.cast.org/.

Summary

This manual is aimed at providing ideas for the EFL teacher so that they may start to use and apply UDL principles in their classes, thereby maximising the inclusion of their dyslexic students and all others. Later in the Manual some practical case studies are provided to show how this goal may be met in class.

In summary, EFL teachers should know that:

- Dyslexia is a specific learning difficulty with a neurological basis, which impedes learning of reading, writing, spelling and organisational skills.
- There is a genetic element to it, but it is not linked to intelligence, socio economic status, gender, language or culture.
- There are certain signs that help us to recognize dyslexia in our students, although no two dyslexic students are the same.
- · It can be thought of as a barrier to learning.
- Dyslexia can be the cause of emotional and social difficulties, if not attended to correctly.
- People with dyslexia benefit from early identification, appropriate intervention and targeted, effective teaching.
- English can be a difficult subject for dyslexic students because they have an inherent difficulty with language, English presents some particular challenges and negative classroom experiences affect motivation.
- Guidelines for teachers emphasise the need to address the barriers to learning and maximise the inclusion of dyslexic students, and all other students, in their classes.



Part 2: What can English teachers do to help our dyslexic students succeed?

The general principles for adapting the education of dyslexic students to their needs, for any subject in which they struggle, are provided in the Good Practice Guide (GPG): Teachers and the teaching of reading (Jardunbide egokien gidaliburua: "Irakasleak eta irakurketaren irakaskuntza" / Guía de Buenas Prácticas: El profesorado ante la enseñanza de la lectura). Ordinary measures to adapt the **materials used**, the **methodology employed** and **assessment techniques** are described in general. In this Manual we take the general guidelines provided in the GPG and expand on them using ideas from a variety of other sources. In addition, in Part 3, there is an array of ideas for teachers to refer to if they need inspiration regarding a particular language feature.

Before going into detail, however, about methodology, materials and assessment techniques, there are two factors which are fundamental to understanding the teacher's role in their dyslexic students' success in English. The first is that our attitude as teachers influences the perception that the student has about their ability to learn English. An attitude that our dyslexic student will never be able to learn English is an attitudinal barrier as described above. Dyslexic students are perfectly capable of learning English as proven by the bi- and tri-lingual dyslexic adults that abound. As we will see below, however, the methodology that best allows them to learn efficiently, and their rate of learning, is different from their classmates', which often makes it difficult for them to pass English as a subject. If we as teachers first understand all the barriers faced by dyslexic students in learning English, then act accordingly in our classes, we both allow our students to feel understood and contribute to a positive attitude towards their learning which will motivate them to keep studying English.

The second factor to consider is that there is a wide range of approaches to English language teaching, from explicit to implicit, from a purely language-centred approach (the "traditional" learning of vocabulary and grammar) to a more competence-based approach in which the focus is on communicative skill. Given that the barriers experienced by the students may vary according to the approach they are being taught as well as their individual differences in learning, it is even more important that both the teacher AND the student be aware of, and communicate to each other, the barriers they observe and experience.

For students and their families, it may initially seem an impossible task to learn at the same rate as their classmates and pass their exams. Likewise for the teacher, it may seem a daunting task to have to adapt classroom activities and lesson plans for a small percentage of students. In either case, bear in mind the following:

- Changes in classroom activities to benefit dyslexic or other SpLd students do
 not prejudice the learning of other students in the class; in fact there is
 evidence to the contrary (Kormos and Smith, 2012) and this is a foundation of
 UDL as described above.
- Small gestures, especially those with a metacognitive objective, can have a
 dramatic effect on the learning and motivation of the dyslexic student. For
 example, in taking the time to teach the student to use mnemonic devices for
 memorising vocabulary, the teacher provides the student with a tool that they
 can use in English and throughout their schooling.
- A "team effort" in which the student and their family agree to put in the necessary effort at home, and the teacher agrees to do as much as they can to reduce the barriers in class, is more likely to lead to success in English learning.

With these overriding factors in mind, the practicalities of accommodating dyslexic students in the classroom now make more sense.

1. Methodology

In terms of methodology, the GPG suggests the following, and remember that these are suggestions for all subjects, not limited to EFL:

 Promote inclusive methodologies that favour student participation: cooperative learning techniques, peer-tutored teaching in pairs or small groups in those activities that have a high reading component, interactive groups, literary seminars, flexible groupings, etc.

- Provide diagrams and / or scripts so that the students can follow the development of the topics, as this simplified reader support later facilitates recall of the information.
- Present the instructions in sequenced steps, read the instructions to the students, give verbal and visual information simultaneously through images, using DVDs, murals, slides, videos, etc.
- Be flexible with time: give more time to organise thinking, to carry out tasks and try to give SpLD students a lighter and shorter task while still guaranteeing the achievement of basic skills.
- Use visual planning: use of schedules, calendars, agendas that help them remember important tasks.
- Propose the preparation of a daily work guide to be reviewed with the teacher / tutor to assist in planning.

We can add more recent recommendations to these general guidelines, as described in Schneider and Crombie (2003) and Kormos and Smith (2012).

1. Multisensory Structured Learning (MSL)

The recommended approach uses **multisensory** methods to teach sounds, spelling, vocabulary and grammar, that is, methods that use auditory, visual, tactile and kinaesthetic pathways. This makes learning fun, and just as importantly, allows information to be recorded in the memory more easily, compensating for the barriers of poor phonological processing and working memory that we saw in Part 1. There is evidence that MSL strategies help language skills across all languages (Nijakowska, 2010).

Three points of interest arise:

- 1. These approaches are well within the guidelines of good practice in language teaching, so by using them you are not doing anything strange in your classroom, just being a better teacher. Neither are they detrimental for your students who do not have learning difficulties as they attend to all different types of learners and provide varied ways of working language.
- 2. These multisensory techniques are equally good for teaching L1 and L2. So once you have finished reading this Manual, please pass it on to the Basque and Spanish language teachers in your school. As we have seen, dyslexic students often struggle with language in whatever form it takes.
- 3. This is where overlap with recommendations from UDL guidelines occur, as mentioned earlier, as multiple means of representation, with different options for perception, coincides with the recommended multisensory approach.

The visual sensory pathway may be stimulated by using resources such as colour to distinguish between different language structures, charts, mind maps, sketches, drawings and pictograms as well as pictures and video to present vocabulary and grammar in English. Auditory resources such as our own voices as teachers and those of members of the class, which can be recorded and played back, and those found in internet resources and audio books etc. Tactile resources aid learning by providing materials that can be touched, for example letters cut out of sandpaper, play-doh or plasticine and realia such as toys, plastic fruit, toy cars and figures. Any activity which encourages learning through movement activates the kinaesthetic sensory pathway, so for example using plastic letter tiles such as those from 'scrabble' or 'bananagram' games to spell out a word helps the student fix that word in their memory (Nijakowska, 2010).

Where possible, multi-sensory techniques should be incorporated into normal classroom lessons. They provide an interesting approach for all students in the class. Some examples of multi-sensory techniques for learning vocabulary for both young learners and older students are given below in Part 3 and it is important to remember that while many of these may appear to be games they are in fact important ways for dyslexic students to learn vocabulary, language structures and grammar.

2. Carefully Structured and Paced

Dyslexic students benefit from carefully structured material which is presented at a pace that allows them to consolidate the structures being learned before moving on to a new one. A teaching style in which new material is presented in logical sequences is beneficial as well, especially if it starts with simpler ideas which are then built on using explicit explanations and discovery techniques (Nijakowska, 2010; Kormos and Smith, 2012).

Many textbooks are organised according to themes such as "around town", "going shopping", "at school" etc. There is a risk that these topics present linguistic and grammatical information in an order which may not benefit dyslexic students, for example more complex structures may be taught before the simpler ones, or separately, and the connection between them is not made explicitly in the textbook or in class.

Many students with dyslexia also suffer when a sequence of presentation which seems illogical and a pace of work does not permit them to assimilate structures before moving on to the next ones. By carefully structuring each class and the course as a whole, dyslexic students can be helped enormously.

Associated with structure and pace, English language learning should be cumulative, with each step in their learning journey building on previous steps. The reason for this is that dyslexic students learn best when they can see that each new structure learned is building on their previous knowledge.

Below are "top tips" to keep in mind when structuring English classes to help our dyslexic students be successful in English, (these will also help when developing lesson plans using the UDL design cycle, described in Part 4):

- 1. Read each chapter with a critical eye. What barriers to learning does it present for your dyslexic students? For example, is there a lot of new vocabulary? Is a completely new grammar topic being presented? If it is competence based, what communicative skill is being learned? Where will your dyslexic students have difficulties?
- 2. Can the chapter be divided easily into smaller units?
- 3. Is the textbook material vibrant and colourful but also distracting? (See Idea 62 in Part 3).
- 4. As dyslexic students often struggle with attention span, do the textbook activities take longer than 15 minutes? How can I make sure that they keep on track with the activities?
- 5. Is there a logical sequence of activities? What can I add in to make sure that the connection between previously-learned material and new material is clear?
- 6. Are there explicit explanations of new structures? If not, how can I make structures more salient for the students?
- 7. Is the sequence of activities approached from simpler to more complex?
- 8. Is the sequence of activities approached from more guided to less guided?
- 9. What activities can I add to help learning for all my students?
- 10. Are there extra practice activities that I can pass to my dyslexic students to work on themselves? (See below on Metalinguistic and Metacognitive approaches).
- 11. Is the overall learning journey through the material a cumulative one?
- 12. Is the learning journey that the students will take through the material clearly defined?
- 13. What do I need to add to make sure that the learning journey is clearly defined?
- 14. What do I need to add to make sure that learning is cumulative?

Even small changes can really help your dyslexic students, not to mention others who may be struggling with English.

3. Opportunities for "overlearning" through repetition and revision

Students with dyslexia often need to "overlearn" new vocabulary and language elements that they have covered in class because their memorization and language processing skills are weak, as we have already seen. The overall objective of overlearning is to provide sufficient practice of each learning step so that automaticity is achieved. In practice this means providing opportunities for repeating a concept in a variety of ways and through a variety of tasks. Areas in which overlearning may be important are (ibid):

- 1. **Spelling and Sentence Structure:** Dyslexic students' production in these areas is often full of mistakes, in spite of having learned them thoroughly. The reason for this is often more to do with working memory weaknesses than with a lack of effort or concentration. To become successful, over-practising the structures and explicit teaching of spelling for example, (see below) in individual and group activities are necessary (see Ideas 70-76).
- 2. **Memorising and retrieving vocabulary:** As this is a weakness in all languages, it helps to provide plenty of techniques and opportunities for dyslexic students to automate word retrieval from the memory. Mnemonic devices are useful here.
- 3. **Pronunciation spelling links:** Ideally the sound-spelling system of English should be taught explicitly with plenty of repetition. This means that the shape that the mouth has to form to pronounce a particular sound should be demonstrated and practised as well as the relationship of this sound to its spelling options.

Owing to the difficulties with language and memory, dyslexic students benefit from frequent revision of the words and structures that they are learning.

Ideally, new vocabulary and grammar structures are presented in small units and students are given plenty of opportunity to revise and learn. There are many activities and games which can be used in class to revise, which are both fun and multi-sensorial, however if it is difficult to incorporate frequent revision in the general classroom setting, students must be taught tools and strategies to be able to revise by themselves (see below).

4. Explicit explanation of linguistic structures

As English teachers we cannot assume that implicit learning of English is efficient in dyslexic students as their language processing characteristics are a barrier to learning. Implicit learning of new vocabulary through reading, for example, may not be very efficient because working memory is weak. For dyslexic students to learn implicitly, they will need a much larger amount of input than their classmates, which may not happen in normal classroom activities (ibid).

Explicit explanations of the following components of English are necessary to aid learning, highlighted in the UDL guideline of providing options for language a symbols):

- 1. Sound-spelling relationships
- 2. Vocabulary patterns such as prefixes and suffixes.
- 3. Grammatical concepts
- 4. Socio-pragmatic information such as cultural cues (both verbal and nonverbal), idiomatic expressions and colloquialisms.

5. Metacognitive or learning strategy training

As we have seen, dyslexic learners have language weaknesses especially in processing oral and written language, identifying language patterns and memorization. For this reason, training dyslexic learners in metacognitive (problem solving) and metalinguistic (thinking about language) techniques is essential to provide students with tools to learn and allow more autonomy in their English language learning (ibid). Teaching such learning strategies benefits all students, but can make the difference between failure and success for dyslexic students because when combined with multisensory approaches, the students use their strengths to compensate for their auditory and visual memory weaknesses in language learning.

What do we mean by metacognitive or metalinguistic skills? There are four skills that students can be taught, as shown in Table 2.1 below (taken from Schneider and Crombie, 2003).

Table 2.1 Metacognitive and metalinguistic skills

Skill	Metacognitive example	Metalinguistic example
1. Be aware of the problem	A flat tyre	A possible spelling error
2. Be aware of the variety of strategies to solve the problem	 Look for a pump and pump the tyre up Ask someone for a pump Call for help Change tyre etc 	 Ask teacher how to spell the word Look up word in the dictionary Look up word online Underline vowels and sound out the word to identify error Continue writing but underline word to check it later etc
3. Be able to choose the most appropriate solution option given the situation	 Flat tyre happens close to home in the daytime Flat tyre occurs at night far from home 	 Doubt about spelling occurs in an exam Doubt about spelling occurs while doing homework.
4. Check that chosen strategy is the best one and try another if it has not been successful	Can I drive home safely now?	 Am I sure that the word is spelled correctly now? Do I need more proof?

How can we incorporate these skills into our classes?

English teachers can teach these skills in their classes by:

- Modelling a variety of metalinguistic strategies in class, with self-reflection and self-correction.
- Allowing sufficient practice time with these strategies.
- Encouraging observation and questioning in all students with the goal of fine-tuning self-correction abilities.
- Use mnemonic devices which help improve their ability to remember.
- Help students to be aware that they need to find the strategies that work best for them.

These can be incorporated easily into textbook-based lesson plans by following these steps, with a simple example (Table 2.2):

Table 2.2 Metacognitive and metalinguistic skills in a lesson plan



Step		Example
1	Read the textbook carefully to identify the steps that the student must think through to understand the structure and use it correctly	The 3rd person singular spelling of present tense verbs; remembering to add the "s". Thinking steps: i. What is the verb? ii. What is the subject of the verb? iii. Is it 3rd person singular (he/she/it)?.
2.	Design teaching support material using multisensory ideas and use them for teaching, as accommodation materials for SpLD students and for teaching of learning strategies.	Make a set of colour coded cards: Subject and subject pronouns in blue (I You We, He, She, It, They, The dog, The boy, My neighbour, Mrs Smith etc) Verbs in red with different present tense conjugations (wash, washes, eat, eats, write, writes, throw, throws etc). Objects in green (a letter, an apple, her car, etc). Model the use of the cards by sticking
		examples to the board and miming the verbs: I eat an apple You eat an apple He eats an apple We eat an apple They eat an apple.
		Students see the appropriate word order through the colour pattern Blue Red Green, and are shown that the 3rd person singular has an "s" at the end of the verb.
3.	Incorporate multisensory activities into the classroom activities.	Pass one card to each student which they hold in front so others can see. The class then mingles and regroups until they form lines of three students with the cards in the right order to form a sentence.
4.	Encourage metalinguistic learning:	Go around the class and ask for opinions.
	Don't tell them the answer unless	For example, in the class you find: I eat an apple
	they cannot work it out for themselves	I eats a ball The dog clean the car writes Mrs Smith a letter
	Ask thought provoking questions that	Do you think this is correct? What is the
	draw on previous knowledge.	correct word order in English? What subject pronoun would The dog be?
	Allow students to verbalise the	Why is it correct?

correct response.	Why is it incorrect? Why does it have an "s" at the end?
Pass the students the responsibility of working out the correct answer.	Ask the class to work together to correct any mistakes they might have noticed, regrouping if necessary.
Use positive language to encourage students to continue their investigative work.	"Good work!" "Great question" "What can you do next to get closer to the correct answer?"
Give the students an opportunity to go through the metalinguistic steps that they have used to find the answer.	Which is the subject of the sentence, that is, the one which does the verb? Is it first person, (I or we), second person (you) or third person (he, she, it or they)? Which is the verb? Does the verb correlate with the subject? What is the object, that is, the one the verb is done to? Is the order of words correct (S, V, O)?
Use L1 for metalinguistic strategies to ensure comprehension, until the students are used to the new learning process.	

2. Materials

In terms of appropriate materials, the GPG suggests the following, and again, remember that these are suggestions for all subjects, not limited to EFL:

- Use technological tools such as recorder, cassette, MP4, etc. which are effective aids in resolving their difficulties in the acquisition of knowledge.
- Use the computer since it offers the possibility of self-correction (spell check).
- Use speech recognition programmes (that write what our voice dictates) and Text to Speech programmes (allow written texts to be read), facilitating access to information.
- Recommend Internet pages to work systematically on a specific type of text, spelling, historical text commentaries, philosophical, literary, journalistic texts, etc.
- Compile audiovisual or digital material to facilitate the reading and comprehension of written texts, or to replace the mechanism of access to knowledge without using only and exclusively reading.
- Compile a library of audiobooks that facilitate access to literary texts.

- Compile a library of visual resources with schemes or mind maps of all the topics covered and the key points of each of them, exam-type questions or models of exams, and PowerPoint presentations etc that facilitate access to knowledge.
- Provide written materials with broad and clear typefaces (see Dyslexia Scotland leaflets, Appendix C).

Once more we can add to these general recommendations with ideas taken from other published books and from the experience of teachers of dyslexic students. Many of the ideas on appropriate materials are those which encourage a multisensory approach, which as you will remember, allows language structures to be learned through many sensory channels.

Useful materials, none of which are expensive or could include:

Coloured pens

Coloured card in different sizes and shapes

Blank flashcards or index cards

Dice

Balloons

Small bean bags or Hacky Sacks for throwing games

Board games such as Snakes and Ladders, Ludo

Small toys such as plastic figures, toy cars, fruit, plastic animals

Magnetic letters

Wooden letters

Letter tiles from games such as Bananagram or Scrabble

Play-Doh or plasticine

Pictures taken from magazines, postcards, photos

Post-it notes in different colours

Cuisenaire rods

Tupperware with sand (for tracing words)

Depending on the topics being taught, it is also worth investigating the materials available for teachers of English as a first language to dyslexic native speakers, for example, flipchart style materials for sentence structure and vocabulary, manipulative blocks for word formations etc. Catalogues of material are available online from companies in the UK, listed in Appendix C. Games compendia for language teachers are also very useful, for example, Shelley Ann Vernon's material (see Appendix C).

3. Assessment

In terms of appropriate assessment, the GPG suggests the following, and again, remember that these are suggestions for all subjects, not limited to EFL.

- Adjust the assessment to the characteristics of the students, allowing them to take oral exams and use the complementary materials that they may need.
- Support written test material with graphics or images.
- Assess the content of the answers and not just the spelling or composition of the text.
- Make the time of the exams more flexible.
- Involve the professionals who influence the students in the process so that everyone can make adaptations.
- Assess their progress in their deficit areas against themselves, against their initial level, not against the level of others.
- Select carefully (for tastes, difficulty...) or reduce the number of reading books to be read per assessment period, provide a script that facilitates comprehension, facilitate other ways of reading the book (audio books, films that reflect the idea of the book...)... reduce or select carefully, taking into account tastes, difficulty...?
- Take care of the presentation format of the written exams: size, typeface and spacing, so that it is clear and clean.
- Graduate the order of the questions according to their difficulty, from easier to more difficult.

Again, we can add to these recommendations with ideas which are more specific to EFL teaching and which give plenty to think about!

As we have seen, the characteristics of dyslexia mean that dyslexic students are at a disadvantage when it comes to learning English and this also applies to assessments. As Kormos (2017) states, having a certificate in English or another foreign language is a requirement for many tertiary education courses so it is essential that assessment of English competence is both valid and fair for dyslexic students. The validity of an exam refers to the "appropriateness of a given test or any of its component parts as a measure of what it is supposed to measure".

Fairness has four principal characteristics: lack of bias, equitable treatment in the testing process, equality in the outcomes of testing, and fairness in the opportunity to learn. "With SpLDs, the most important aspect of fairness is concerned with appropriate testing conditions. Tests need to be administered under circumstances which allow students to demonstrate what they know and which do not prevent them from performing to the best of their knowledge".

Ideas 99-101 indicate some of the accommodations (strategies) which may be appropriate for SpLD students.

DISLEGI is often consulted about the assessment of students with dyslexia in schools and it is worth mentioning here that the recommendation provided by the GBG to "assess their progress in their deficit areas against themselves, against their initial level, not against the level of others" (ipsative assessment) is supported by law (specifically the Resolución 10 julio 2020), which provides the tools for teachers to personalise the learning and assessment of students with SpLDs (through the Plan de Actuación Personalizado / Norbanako Jarduera Plana or Personalised Action Plan). This allows teachers to assess students according to their own progress and the marks given accordingly. For example, if a student is given the minimum curricular content to study in an evaluation period, studies the material well and is able to answer 80% of the exam correctly, then the mark they should receive is 8/10. The mark should not be 5/10, as some have argued, owing to the reduced quantity of material that that student has studied compared with the rest of the class. Such an assessment is not a fair judgement of the student's own progress.

Some specific EFL exams, such as those organised by Cambridge (PET, FIRST, ADVANCED) offer special arrangements for candidates with special requirements. These vary according to the examination board so it is recommended that the teacher or Academy ensure that the family is aware of the requirements to be granted such arrangements well in advance of the exam date.

Summary

- There are several overriding factors involved in language learning and dyslexia which must be kept in mind, such as teachers' attitudes towards students with dyslexia, and good communication between students and teachers.
- The general recommendations for approaches to teaching English to SpLDs respect the learning differences of these students are are divided into:
 - Methodology, including multisensory, structured, explicit approaches which offer plenty of opportunity for revision, among others,
 - o Materials, again centred on multisensory approaches, and
 - Assessment, which recommends flexibility (in time and method of assessment, for example) but also that, in a school context at least, progress be measured against the student's own start point, not the average of the class.



Part 3 Ideas to incorporate in the classroom

In Part 2, the recommended principles for adapting the education of dyslexic students to their needs were presented and their overlap with UDL guidelines became apparent. In this section, some practical ideas which may help your students are provided. These are also, not surprisingly, some examples of ways of providing options for representation, action, expression and motivation but are not the only ones, by far. The examples come from cited sources² and our own experience with students with SpLDs, and we encourage teachers to put their creativity to good use in coming up with their own ideas. Appendix C lists digital resources, and others, which help in providing more options.

Ideas using the visual pathway

Oldea 1. Use colour to teach sentence structure. The subject of the sentence is written in blue pen or on blue card, the verb is in yellow and the object is in green pen or on green card. Students can see the word order in sentences by colour as well as through meaning of the words. Use the same colour coding to compare with L1 word order in Basque or Spanish, so that they can see the differences and similarities.

Oldea 2. Use colour to help with spelling. When presenting new words, write the consonants in one colour and the vowels in another, to show visually the patterns of letters in new words. Prepare and use coloured letter cards in the same way, so the students can rearrange the cards (the kinaesthetic pathway) into the correct word.

² Particularly useful for ideas are: Burrows (2014), Callighan, (2003), Daloiso (2017), Ebenhöh (2014), Fry (2010), Hawes (2015), Hernández et al. (2018), Kormos and Smith (2012), Kormos (2017), Nijakowski (2010), Reid and Green (2011), Schneider and Crombie (2003) and SEN marketing (2008).

■Idea 3. Use pictures for vocabulary and grammar. Keep a picture library of pictures taken from magazines, brochures, newspapers and printed off the Internet. Bring out appropriate pictures and stick them on the board for a visual reference when necessary.

Multisensory vocabulary ideas for young learners

(Adapted from Kormos and Smith, 2012).

ldea 4.

Theme: Means of Transport

Aimed at: Children 7-8 years old

Words to learn: car, bus, train, bicycle, truck.

Materials: 5 big pictures of these words, 5 medium pictures and 5 small pictures.

Step	Aim	Sensory channels
Part 1 – Sound-meaning association Materials: 5 big pictures of these words, 5 medium pictures and 5 small pictures.		
Show the large picture of the car and say the word. Choral repetition several times then check that individual students can say the word correctly. Stick the big picture on the wall	Phonological form of the word	Auditive and Visual
2. Repeat with the second picture, bus, then hang that picture on the wall in a different place. Practise the two words by asking students to tell you the name of pictures as you point to them.	Present and cumulatively Practise the phonological form of the words	Auditive and Visual
Repeat the procedure with the five words until the students seem to have memorised them.	Present and cumulatively practise the phonological	Auditive and Visual

4. Distance distation. Occulto accordence de allette estadores	form of the words	Auditius visual
4. Picture dictation. Say the words and ask the students to draw them.	Practising sound-meaning associations	Auditive, visual, kinaesthetic
5. Word race. In teams, lined up, two students at a time race to the picture that you name. The fastest student gets a point and the winning team is the one with the most points at the end of the game. If not appropriate for the classroom space available, use small bean bags. Each pair has to throw the beanbag to hit the correct picture. Give points for the correct picture and actually hitting the picture.	Practising sound-meaning associations	Auditive, visual, kinaesthetic
6. Charades. Select five students from the group and give them the small picture card. They must mime their word to the rest of the class for the class to guess. Repeat until all students have had a turn.	Practising sound-meaning associations	Auditive, visual, kinaesthetic
7. Finally, at the end of the lesson, revise the words again by showing the pictures and asking the students to name them. Or, in pairs, using the drawings that the students did for the Picture Dictation in Step 4. one student in each pair points to a picture and the other says its name.	Revision	Auditive, visual, kinaesthetic

Step	Aim	Sensory channels
Part 2 – Learning the written from of the words		
Materials – The pictures from Part 1		
5 big sheets with the words written, 5 medium sheets and 5 small sheets with the words written. <i>Use different</i>		
colours for consonants and vowels and highlight difficult sounds.		
5 smaller sheets with pictures		
5 smaller sheets with the written word and the picture		
5 cards with the written word		
Letter cards for each student The 5 small picture cards from Part 1, in an envelope for		
each pair of students		
Sasir pair of stage.ite		
Revise the words from Part 1	Revision	Auditive and Visual

	l	La luc 150
2. Show the picture of the first item, car, along with the written form. Say the word and ask students to repeat. Break the word into sounds and ask the students to repeat after you.	Present the written form of the word and explain explicitly the sound-letter combinations.	Auditive and Visual
3. Students arrange their letter cards to form the word.	Present the written form of the words	Kinaesthetic and Visual
4. Students draw the word highlighting the difficult part as shown in figure x below. Repeat with additional two words	Present the written form of the words	Visual, kinaesthetic
5. Show a picture of one of the words and ask students two point to the sheet with the written word on the wall. Then show the picture again and ask the students to form the word using the letter cards.	Practise the written form of the words	Visual, kinaesthetic
6. Repeat steps two, three and four with the remaining two words then revise all words as in Step 5.	Cumulative presentation of words and practice of the written form	Auditive, visual, kinaesthetic
7. Word race. Play the game as in step part 1 but this time show a picture of the object and students must run to the written form on the wall	Practise written form and meaning associations	Visual, kinaesthetic
8. Charade. Play the game as in part 1 but this time students have the written form of the word to act out	Practise written form and meaning associations	Visual, kinesthetic
9. Pair dictation. One envelope per pair of students with small pictures. One student takes the pictures out of the envelope one by one. The other student must form the word using the letter cards. They then swap roles. And repeat the activity.	Practise written form and meaning associations	Visual, auditive kinesthetic
10. Revision and recording of words. Students form the words with letter cards. Check they are correct by showing them the written form and asking them to find any mistakes then go around the class correcting making sure the students have the correct words. Ask students to	Revision	Visual, auditive kinesthetic

trace the words with their fingers in the air or on the desk	
then to copy the words into their notebooks and put a	
drawing next to the word. Use colour coding and spelling	
clues in the drawings.	

Ideas for learning vocabulary for older students

	Aim	Sensory channels
Materials. A small ziplock bag, blank index cards, colored pens. Whenever new vocabulary appears from the textbook all students prepare their own set of flashcards with the word on one side and a small sketch or pictogram on the other. They can also include a translation if they wish. For example if they are learning school subjects perhaps they might be right <i>English</i> on one side and a draw the Union Jack on the other; <i>Biology</i> on one side and a sketch of a cell on the other, <i>ICT</i> on one side and the computer on the other. Any difficult parts of words can be colour-coded so that the student knows to pay special attention to the spelling of those words. The vocab cards are placed in the vocab bag and sealed at the end of every lesson so they don't get lost. They can be used in class for revision and individually by the students for self study.	Present new vocabulary	Visual, kinesthetic
Idea 6. Using the cards to memorise vocabulary. Students can use those for individual study by having the pack of cards picture side up and going through one by	Revision	Auditive and Visual

one, saying the name of the subject. Any they don't know		
they can turn over to read the word, then return to the		
bottom of the pile to be revised again. They then repeat		
the process, this time writing the words as well as saying		
them.		
The cards can also be used in pair or group revision such		
as pair dictation where one student shows a picture of a		
card and the other writes it down. (See [Idea 8] Flashcard		
1		
games).		
Idea 7. Using the cards for spelling.		
Materials: Scrabble or Bananagram letters		
The students study the word on the card then cover it		
and think about the word, visualising it in their minds,		
then they write the word in their notebook or use scrabble		
letters to form the word. They then uncover the word and	Learning to	
check it to see that it is written correctly and if it isn't they	spell the	Auditive, Visual,
repeat. They can pay particular attention to tricky parts of	words	kinesthetic
words which require more attention and if they have	correctly	
difficulty with spelling, they can repeat but writing the	00.100y	
letters of the word in reverse order, that is, starting from		
the end of the word and working backwards, to fix the		
word in their visual memory. This method of		
study/ cover / think / write / check / repeat works well		
for memorising the spelling of words.		
Idea 8. Flashcard Games		
Backs against the Board: Divide the class into two		
teams. One student from each team stands at the		
front with their backs to the board. A flashcard is		
placed on the board behind them and the students have to explain that word to their team member.		
The first to guess the word wins a point for their		
team.		
Pictionary: One student sees the flashcard then		
starts to draw a picture of the word on the board.		
The first one to guess correctly gets the next turn.		
Big board game. Place flashcards in a trail around the place with a start and finish and at a sale and at a sale.		
the class, with a start and finish card at each end,		
respectively. Use a dice for students to roll and		

move that number of places along the trail. When	
they land on a card, they pick it up and must use	
the word in a sentence correctly or any other task	
you set.	

Use sound clues to help memorise and recall pronunciation patterns and vocabulary

Pronunciation

Idea 9. Students often use phonological patterns in Basque and Spanish to spell out words in English. For example, the word *bought* may be sounded out as "b" "o" u" "g" "t" using Basque or Spanish phonemes in order to remember the correct spelling. This is a natural way for students to learn and is fine, so long as the correct pronunciation of the English word is learned at the same time.

Idea 10. Difficult sound patterns such as the kn can be learned by associating them with ideas in Basque or Spanish. For example, for words with kn we want to say Qui ni, like the grain quinoa, which reminds us that we don't pronounce the k (Qui NO a).

The letter u in the word building is silent, so we remember that by remembering "There are many BUILDINGS in BILBO".

Idea 11. "Kitchen" is where we chop vegetables with a big knife, which swings up KIT and then crashes down on the carrot CHEN.

Idea 12. The silent e at the end of words can be remembered by imagining that the e is pulling the rest of the word along and it is such an effort that his mouth is stretched in a "eeeeee" but he can't speak. It also helps to imagine that the vowels previous to the "e" are being pulled out to their long sounds:

- Cak pulled by the e becomes cake.
- Pol pulled by the e becomes pole, etc.

Sound clues to link the letter sound with a cultural or semantic association in L1 are also useful in learning vocabulary, for example using onomatopoeia.

- **Idea 13.** Crack can mean a. a line on the surface of something along which it has split without breaking apart, b. a sudden sharp or explosive noise, c. to break without a complete separation of the parts d. to make or cause to make a sudden sharp or explosive sound or e. someone who is skillful at something.
- **Idea 14.** Use letter shape clues to reinforce spelling and vocabulary, with associations or keywords:

Students may misspell *accommodation*. *Accommodation* has two **c**s and two **m**s, like a hotel room which has two CaMas.

Idea 15. Link an association in L1 with the shape of a letter that is part of a difficult vocabulary word to remember. For example the word *beach* may be misspelt. *Beach* contains *EA* and the word *playa* also contains *YA* (using the Spanish phonemes). So now we can remember that *beach* is written with *EA*.

Crazy stories

Idea 16. Make up story with up to 5 difficult spelling words. For example, words with "ough" which have multiple sounds. This is even better when combined with picture mnemonics. L1 words can be used in the story if necessary.

Manex bought a tractor to plough el campo thoroughly while we made pizza dough and passed it through the window.

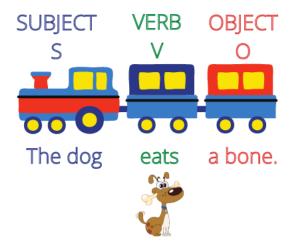
Picture clues

- **Idea 17.** Let students draw their own pictures, sketches or pictograms for new words to help them remember.
- **Idea 18.** Encourage students to keep a visual dictionary or to draw pictograms on vocab cards or in their vocab books.
- Idea 19. Use mind maps and graphic organisers to map out structures of texts and essays.

Idea 20. Incorporate pictures into words to aid memorization of new words such as bed table chair.



Idea 21. Use pictures for sentence structure, such as a train, with the parts of speech represented as train carriages.



Idea 22. Get drawing!! Use sketches on the board for teaching grammar. Seeing your sketches, and not just the word, helps bring home the message.

Acronyms

Idea 23. Acronyms can be used to aid study and exam taking techniques. For example, when taking exams use the acronym BREATHE.

Breathe to give the brain, your thinking machine, oxygen
Read all the questions
Easy - choose the easy ones first
Ask the teacher if you do not understand the instruction
Time - keep an eye on the time
Highlight key words in the question
Extra time - use it to check through your answers

Use of songs and sounds

and new grammatical concepts, as the universal success of "Heads, Shoulders, Knees and Toes" shows! Incorporate drills, songs and chants into classes as much as possible, and if none are provided with your course material, have a go at making them up yourself. You'll be impressed by how quickly the students learn vocabulary and grammar concepts through sound.

- **Idea 25.** Chant the list of irregular verbs, for example, and encourage students to learn them this way, but note that they should include writing the verbs put as well in their revision as the spelling needs to be fixed in their memories too.
- **Idea 26.** Use pop songs to practise points of grammar. <u>Busyteacher.com</u> has many worksheets submitted by other teachers which use songs to work on specific vocab and grammar.
- **Idea 27.** Encourage students to use technology to help them learn through sound, for example, mobile phone apps that record speech and turn it into a rap (autorap Smule and rapchat).
- **Idea 28.** Words or structures that students have difficulty pronouncing can be dictated into a computer or their mobile phone, if they are permitted to have them in class, and repeated a few times.
- **Idea 29.** Pronunciation checks can be made on dictionary websites such as the Oxford English Dictionary https://en.oxforddictionaries.com/ and howjsay https://howjsay.com/ among many others.

Use of tactile materials

Use tactile, kinaesthetic options for learning and practising vocabulary and grammar:

- **Idea 30.** Ask the students to write sentences with the vocabulary or grammar in question (once checked for accuracy) on blank paper (colour coding the parts of speech if appropriate). Students tear up the pieces of paper into words and exchange with their partners for them to organise in the correct order.
- **Idea 31.** Use popsicle sticks with words written on them for the same purpose.

- **Idea 32.** Use words written on strips of post-its to be stuck into place in cloze activities instead of writing them. In this case give the students a selection of words to choose from and they have to choose the correct word to put in each space.
- **Idea 33.** Set up a washing line in the classroom with pegs and peg the coloured cards in the correct order on the washing line to give a tactile and visual reinforcement of the vocabulary and grammar to be worked.
- **Idea 34.** Stick words and pictures on the board. Working in teams or going around the class individually, each student has the opportunity to throw a bean bag (small and soft is better) at the board. The objective is to hit the word that you have called out or that is the answer to the question you have asked. Students get one point if they get the word right and another point if they manage to hit that word on the board.
- **Idea 35.** Write 2 columns of words on the board or stick flashcards on the board in two columns. Students stand up and when you call out a word from the board they jump to the left or the right according to the column in which that word is located.
- **Idea 36.** Use board games in which students move their counters around the board and answer questions or use target vocabulary for each square they land on. There are many game templates like this available for free online.
- **Idea 37.** Use a large soft dice to play games with flashcards. Place flash cards in six piles with the words down and number the piles with a sticky note. Working in teams or individually, students roll the dice to find the pile they will be using and take the top card. They then do something with the words that they have chosen such as spell it, use it in a sentence, ask a question about this word etc. You decide the rules!
- Idea 38. Use toy figures, cars and small construction blocks to make scenes which are used to illustrate points of grammar. For example, the scene below could be used to illustrate the order of verb tenses.



I was waiting at the bus stop when I saw an accident.

• Idea 39. An idea described by Ebenhoh (2014) shows how toys and other realia can be used to reinforce grammar learning. She uses a "quirky identifier" (an item to represent) each verb tense. For example, a toothbrush for the present tense as it is an item we use every day and the present simple is used to describe actions we do every day. An old black and white photo might be the quirky identifier for the past simple as it is the tense we use to describe past events. These identifiers appear in class as a clue to the tense they students should use.

Teaching specifics: First steps to reading - Phonological awareness and Sound/letter relationship

As we saw in Part 1, phonological awareness is an individual's awareness of the phonological structure, or sound structure, of words. What is more, it is the base of literacy: children with a strong phonological awareness go on to develop good reading and writing skills later on. For most dyslexic students, working on their phonological awareness in L1 early on helps offset some of the difficulties that they experience when learning to read and write later on.

This leads to questions about which phonology to work on first, L1 or L2? Based on the few studies which have been done, Kormos (2017) concludes that phonological awareness seems to be transferable between languages, so reinforcing this in Basque or Spanish will help students with English and vice-versa. Ideally, phonological awareness work in young students will be coordinated between class

tutors and English teachers, especially in identifying students who have noticeably poor phonological awareness. Activities to work on these skills in any language include the following. Note that these are all oral activities, that is, the students do not need to see the words written. Model each activity first, or if necessary, give instructions in L1.

- **Idea 40.** Sound isolation of initial phonemes. For example, invent activities or games, preferably with a picture or toy for visual support, in which students identify the sound that starts a word. For example, cat, bed, man, fish, dad, pig.
- **Idea 41.** Then ask students to identify the odd word out in a group of words from the first sound. For example, bed, big, boy, fish.
 - **Idea 42.** Repeat these activities with the final sound of words.
- Idea 43. Try activities to work on the vowel sounds in the words: For example, asking if the sounds are the same or different in bed/bad, dog/dig, cut/ cat. Use pictures to help, such as those shown here, used with 3rd and 4th graders to work on the short and long a and u sounds.
- Idea 44. Count the phonemes: Students count how many sounds they hear in a word. Use counters or small objects to help. Students might place one counter on their desk for each sound they hear.

Idea Deleting phonemes: Which sound is different between these words, seat/eat, bill / ill.

Idea 46. Identify syllables: Use student's names and clap the syllables in each one, for example, Man-ex, Mai-a-len, Al-va-ro, Na-hia, En-e-ko.



- **Idea 47.** Deleting syllables: Take one syllable off words and say what is left. Rainbow- bow= rain, cowboy-boy=cow.
- **Idea 48.** Use words that rhyme within the vocabulary that the students have, to reinforce the concept that different words might have a common sound (a difficult task for dyslexic students). For example, cat, bat, coat, goat, rose, nose.

Idea 49. Separating words. Students tap their fingers for each **word** they hear in a sentence. For example, The cat sat on the mat (6 taps), Today is sunny (3 taps).

Idea 50. The next step to reading is learning the sound/letter relationship. This can and should be taught specifically as we have seen. For younger children there are many phonics resources available, for example from Phonics International (Appendix C).

Idea 51. For older students some textbooks use the phonetic alphabet, with or without explanatory pictograms or pictures, to describe the sound associated with a letter or combination of letters. However, as the phonetic alphabet is another code to learn, it may be that this is a confusing way for dyslexic learners to learn the sound-letter relationships in English. We have found no evidence that the phonetic alphabet helps students to learn the sound letter relationship in English, although clearly a knowledge of the alphabet will help in the pronunciation of new words.

Teaching specifics: Reading

Idea 52. Students should not start to learn to read in English until they have a strong base in phonological awareness in Basque or Spanish, as otherwise, the reading process will be slowed down considerably. More progress will be made in less time by waiting until they have progressed in Basque or Spanish first.

There are two ways to teach children to read a word. The first is by phonetically "sounding out" the word. The second is by reading the word globally. Both of these are useful techniques when teaching reading in English.

■Idea 53. Sounding out the word, that is, reading each letter or combination of letters in each successive syllable, is the preferred method of learning to read in either Basque and Spanish or English, as the students relate directly the order of letters to the sound of the word. We often observe our students of all ages using the Basque or Spanish sounds to remember how to spell English words, for example they may sound out "ambulance" by saying "AM-BOO-LAN-THEY". This is fine for more experienced learners but for beginners, the final correct pronunciation must be very clear, and it is for this reason that it is useful to specifically teach the sound-letter relationship in English. If the students already know that the "u" in

Ambulance is pronounced YOU, that the "c" is an S sound and that the "e" is silent, they will be able to read the word correctly without resorting to their L1 phonology.

■ Idea 54. There are, however, many common words which become so familiar that we don't need to sound them out and we can read them globally. These are called "Sight" words or "Dolch" words and can be found in many resources across the internet, divided into grade levels, (corresponding to native English speakers). By practising these words until they become automatic, students increase their reading speed and comprehension. Word lists, flashcards and other games and resources are suggested in the Sightwords website (Appendix C):

Techniques for developing sight word vocabulary include:

- **Idea 55.** Frequent reading of flash cards with sight words
- **Idea 56.** Students trace the letters of the word with the finger while saying each letter and then the whole word for example away: trace with finger and say the letters: a w a y, then say "away".
- **Idea 57.** Skywriting students do the same as above, but with their whole arm, writing the letters in the sky.
- **Idea 58**. For younger learners the Starfall website helps reading by working on individual phonemes at a time, in an American accent.

Other tips to help with reading include:

- **Idea 59.** Do not ask the student to read aloud in class without asking their permission first. Dyslexic students often read less accurately and slower than their classmates so asking them to read aloud can put them on the spot and make them feel uncomfortable, as well as leaving them open to the ridicule of their classmates (which incidentally, should be kept in under control by the teacher).
- **Idea 60.** Use printed text fonts (letter types) which are sans serif and a large font size (12 or 14), with spacing between letters, spaces between lines and between paragraphs. Ariel, Comic Sans and Verdana are suitable fonts.
- Idea 61. Try coloured overlays to help with reading. Some dyslexic students suffer from "visual stress" and a coloured overlay can help them to see the words on the page better. Each student will need to try different colours to see which one helps them. These can be bought from the online shops shown in Appendix C.

- ■Idea 62. Use cardboard cut into L shapes to place over text in the textbook leaving only the text to be read uncovered. Students don't get distracted by other text or images on the textbook page this way.
- **Idea 63.** Use reading strategies such as paired reading with the dyslexic students paired with a stronger reader, and where appropriate, cooperative group reading strategies such as the jigsaw approach. In this, the class is divided into "home groups" for example, Groups A, B,C, D, and each group is given a part of the text to read, understand and summarise or a specific task using a common text as a base. Then jigsaw groups are created, which consist of one A, one B, one C and one D. The text can be read individually or as a group, reducing the volume of reading for the dyslexic students, then each member undertakes the task required of them. A consultation session within the home group may be programmed in to ensure that comprehension is correct.
- **Idea 64.** Try not to overload the reading component of classroom time or homework. Too much reading simply becomes counterproductive as it negatively affects motivation. Choose shorter texts for dyslexic students to read, allow them to choose readers that are interesting for them.
- **Idea 65.** Use audiobooks or text to speech software such as Irakurle Digitala, Claroread, Text Aloud and Read and Write, which all manage English, Spanish and Basque. If the same text is heard and read at the same time, it will be understood better.
- **Idea 66.** If audiobooks do not exist for the texts that you wish to use in class, try recording it yourself and creating a digital library of material. Google sites or Blogger are free and useful resources for this purpose.
- **Idea 67.** There are now digital applications that can be used to create an audiobook, such as Audiobook maker (Appendix C).

Teaching specifics: Reading comprehension

Many students with dyslexia focus so much on decoding each word as they read that they don't understand the information in the text as a whole. This occurs in every language that they read and more so in English with its opaque phonology. Reading comprehension strategies are an important metacognitive skill that will be useful in

all areas of life. If the student is required to read a short story or a novel then the techniques recommended in the Dyslexia Help website of the University of Michigan will apply (Appendix C).

■Idea 68. An effective reading comprehension strategy is the KWL, Know, Want, Learned approach. A simple table is provided in which, before reading, students note down what they know and what they want to know, then after reading, what they have learned.

Before reading		After reading
What I already know What I want to know		What I have learned

- Idea 69. If the text is a text from a textbook or a CLIL subject then the following steps are useful to improve reading comprehension. This process may seem to be quite laborious however it is very effective in ensuring that students understand and learn from a text. These top-down processing techniques can also be used in other languages obviously and across the curriculum.
- 1. Preview the text. What does the title say? Are there any pictures or photos which give me a clue about the topic of the text? Do I know anything about it already (previous knowledge?). Take a look at the text. If it is a book, look at the cover. Is there a picture? What does it tell you? What does the title say? What do I already know about the topic that the text is covering? If the text is long I can think about breaking it into smaller chunks to work on one at a time, for example, a paragraph or a page at a time.
- 2. I ask myself questions about the text. The "Wh" question words are very useful for this. (see below for examples).
- 3. I read the text once and underline in blue any new words for me. The new words are added to my vocab list, along with a definition *in my own words*, or a translation if that helps. I do not copy the definition from the dictionary.

- 4. I read the text again, looking carefully at the clauses and I try to understand the essential meaning of each clause in each sentence (the beating dyslexia website has more details about the meaning of clauses; Appendix C). I underline the key ideas in red.
- 5. At the end of each "chunk", I draw a little pictogram in the margin of the text or in my exercise book, to remind me of the main idea of that chunk. The pictogram method is very powerful. Many dyslexic students can use their own drawings, that have meaning for them, to retell an entire text.
- 6. When I have finished reading all the text I take the key words and my pictograms and I make a flowchart or a mind map about the text. I use colour to separate the main ideas, pictures or pictograms wherever possible, and I do this on paper or on the computer.
- 7. I go back to the questions I asked myself about the text in Step 2 and make sure I can answer them. I do this silently, or by explaining it to another person, and then I write down my answers as this helps me to fix the vocabulary in my memory and also helps me to take care of any tricky words for spelling.

An example of these steps in action is given below and in this case, it assumes that good CLIL practice has been applied and the students have previously been given a reason for reading the text (Ball et al., 2015).

Example: A book review of Drawdown, which has appeared in a newspaper, and is used as an introductory activity in a Unit on Climate Change. Students read the text and prepare for a class discussion about it.

The book review text is as follows:

Everyday, climate change appears in the news and each article seems to be more alarming than the first. Scientists are pointing more and more to the <u>urgency of controlling global warming and climate change</u>. But apart from the obvious, that is reducing fossil fuel combustion, even the scientists haven't been clear on other ways of reducing our CO₂ emissions.

Until now that is. A new book, Drawdown, claims to fill in that gap and boldly states "the most comprehensive plan ever proposed to reverse global warming". The book is edited by Paul Hawken, himself an active environmentalist, and is a compilation of studies undertaken in Project Drawdown. There are over 60 researchers in the Project, overseen by an advisory board of 120 experts from diverse fields. The book looks at 80 different emission- reducing strategies and describes how much CO: reduction they would cause but also their economic costs and benefits. The strategies are ranked in order of effectiveness.

Many strategies do not come as a surprise, as we already know that by using more renewable energy and by planting more trees, we can reduce CO₂ emissions. Drawdown, however, puts figures to these ideas, so that now we know that land-based wind turbines would save 85 gigatons of CO₂ by 2050 and afforestation would save 18 gigatons.

On the other hand, some of the strategies are very surprising. Who would have thought that educating girls could reduce carbon emissions by 60 gigatons by 2050? This is the sixth most effective strategy, because educated girls are better able to take care of themselves, their surroundings and their families, they have fewer children and they are more resilient to natural disasters caused by climate change events. Equally surprising is the fact that netzero buildings, that is buildings which have a net zero energy consumption, is ranked 79 out of 80 with little data to support its effectiveness.

The book is an impressive achievement. It is packed with information accompanied by beautiful photographs and while it would be too heavy to read in one sitting, it's a great book to delve into for snippets of interesting information. I would recommend it to anybody interested in climate change, which according to the scientists in the news, should be all of us.



Student comprehension strategies:

Step 1. Preview the text - Climate change - previous knowledge, CO2, energy,

Step 2. Questions - What will help reduce climate change? When do we need to think about climate change? Where does climate change most affect? How can we reduce climate change? Who is responsible for reducing climate change?

Step 3. New words in blue

Drawdown - A reduction in size

Compilation - A thing made by bringing together separate items

Overseen - Directed, looked after

Fields - Subjects, eg biology, geology

Ranked - Put in order

Turbines - A machine for producing electricity

Resilient - Can recover from difficult conditions

Net - Final, remaining

Delve - Look or feel for something

Snippets - Small bits

Step 4. Confusing clauses underlined, main ideas in red

Step 5. Sketches

Everyday, climate change appears in the news and each article seems to be more alarming than the first. Scientists are pointing more and more to the urgency of controlling global warming and climate change. But apart from the obvious, that is reducing fossil fuel combustion, even the scientists haven't been clear on other ways of reducing our CO₂ emissions.

Until now that is. A new book, Drawdown, claims to fill in that gap and boldly states "the most comprehensive plan ever proposed to reverse global warming". The book is edited by Paul Hawken, himself an active environmentalist, and is a compilation of studies undertaken in Project Drawdown. There are over 60 researchers in the Project, overseen by an advisory board of 120 experts from diverse fields. The book looks at 80 different emission-reducing strategies and describes how much CO₂ reduction they would cause but also their economic costs and benefits. The strategies are ranked in order of effectiveness.

Many strategies do not come as a surprise, as we already know that by using more renewable energy and by planting more trees, we can reduce CO₂ emissions. Drawdown, however, puts figures to these ideas, so that now we know that land-based wind turbines 85 gigatons of CO₂ by 2050 and afforestation would save 18 gigatons.



On the other hand, some of the strategies are very surprising. Who would have thought that educating girls could reduce carbon emissions by 60 gigatons by 2050? This is the sixth most effective strategy, because educated girls are better able to take care of themselves, their surroundings and their families, they have fewer children and they are more resilient to natural disasters caused by climate change events. Equally surprising is the fact that netzero buildings, that is buildings which have a net zero energy consumption, is ranked 79 out of 80 with little data to support its effectiveness.

The book is an impressive achievement. It is packed with information accompanied by beautiful photographs and while it would be too heavy to read in one sitting, it's a great book to delve into for snippets of interesting information.

I would recommend it to anybody interested in climate change, which according to the scientists in the news, should be all of us.

Step 6. Answer my questions

- What will help reduce climate change? 80 strategies.
- . When do we need to think about climate change? Now, as it is urgent.
- Where does climate change most affect? Don't know.
- How can we reduce climate change? Applying these strategies.
- Who is responsible for reducing climate change? Everybody.



Teaching specifics: Spelling

As indicated in Part 2, dyslexic students have characteristics which make learning to spell accurately in English a difficult task for them, for example, weak working memories and poor phonological awareness. As teachers we can help our students improve their spelling skills, and probably the most useful skill we can have is to understand the difficulty that they are facing, and to understand that the difficulty may not ever be overcome completely! That is, spelling in any language is typically inaccurate for their entire lives, no matter how many times they have seen and written a word. Our roles as teachers must be to maximise our students' spelling skills within the limitations of their dyslexia, but not let it be a primary source of failure in English. There are, after all, many famous dyslexics who still misspell words, Erna Solberg, for example, a past Prime Minister of Norway.

There are many approaches to teaching spelling to all students, not just dyslexics. There are also many different approaches to spelling in the English language teaching materials that are used in schools. Some use an implicit approach whereby the spelling of new words is learned through use of the new words. Others, however, explicitly teach spelling rules as they arise with new vocabulary. The recommended approach for dyslexic students is for explicit teaching of spelling, so it may be necessary to look at how to incorporate this into the teaching programme that is used. Some books on teaching spelling rules are given in the bibliography.

Idea 70. The general tips for teaching spelling, however, are:

- Work on spelling should be undertaken slowly and consistently.
- Multi-sensory techniques work to help fix the spelling of words in the memory (see examples below).
- Flexibility and creativity in tackling spelling is essential. Keep a wide range of strategies on hand for the teaching of spelling and use all of them in class.
- Overlearning is necessary and opportunities should be provided for this.

There are many resources available to help teachers teach spelling and here we have included some examples of these which are used specifically with dyslexic students.

Idea 71. Multi-sensory approaches:

- Use magnetic, wooden or letter tiles from board games such as bananagram or scrabble to spell the word.
- Use a handicraft approach. Write the word and white glue and make a coloured word with sequins, feathers or other material.
- Trace the word in a tray of flower sand or shaving foam.



- Form the word using plasticine.
- Rainbow writing, trace over the word using as many different colours as possible.
- Use water bottles that squirt to write the word on the playground floor.
- Use fallen leaves or branches to make the letters of the word, or a trip to the beach to write words in the sand.
- Break long words down into syllables and try to identify the part that is difficult to spell. For example, "handkerchief" has a silent d and the ie which may be reversed.
- Make the difficult part for spelling identifiable through a different colour.
- Add a drawing to the word to help remember the spelling of the difficult parts.
- Use a visual representation of the word to remember the spelling.

Idea 72. Simultaneous oral spelling:

- First the teacher says the word and the student repeats it.
- Next the teacher models writing the word saying each letter out loud then the completed word is said.
- The student then writes the word saying each letter out loud.
- The student then writes the word again using rainbow writing and saying each letter out loud.
- Finally, the student writes the word again saying the letters out loud but with their eyes closed.

Idea 73. Look cover write check.

- Look at the word
- Cover the word
- Write the word
- Check the word for correct spelling.

Idea 74. Spelling dice:

Each number of the dice is allocated a task, for example:

- 1. Write the word in bubble writing.
- 2. Spell the word forwards and then backwards.
- 3. Write your word with red consonants and blue vowels.
- 4. Say the first, third and last letter.
- 5. Write the word as small as you can.
- 6. Write the word in capital letters.

Idea 75. Letters and sounds:



An approved method for teaching the letter sound relationship which forms the basis of spelling skills in English is found in the Letters and Sounds website (Appendix C).

Idea 76. Tips for people with dyslexia in spelling correctly in English are given in the Beating Dyslexia website (Appendix C).

Teaching specifics: Writing

As we saw in Part 2, dyslexic students often have difficulties in structuring written texts and finding and using a wide range of vocabulary. This difficulty is not limited to English but occurs in L1 as well. Some ideas for teaching writing skills are given below and it is useful to maintain a flexible and creative approach, which is multisensory as far as possible. For example:

Idea 77. Teach correct word orders by using coloured cards to represent subject, verb and object. Compare the word order in sentences in L1 with English using these colored cards so the student can see where the differences lie.

Idea 78. Use visual dictionaries to encourage the students to use a wider range of vocabulary in their writing.

Use writing frames

• Idea 79. Particularly useful for young learners, a writing frame sets out the structure of the text that they are to write and gives them clues on starting and finishing each sentence or paragraph. For example a writing frame for writing a recipe for Spanish Omelette might look like this:

Word bank:
Potatoes Onions Eggs Oil Salt
Peel Cut Beat Heat Mix Turn over
Frying pan Knife Spatula
You will need:

Firstly, you	
Secondly,	
Thirdly,	

Scaffolded writing

• Idea 80. A helpful strategy for teaching how to structure texts is to use a multi-sensorial approach to scaffolded writing. Like simpler writing frames, scaffolds provide the structure of a text with a language framework and cues upon which students can add their own language to complete the written task. The framework and cues change according to the type of text they are writing. They are made multisensorial by using coloured cards to represent each paragraph of the text and sentences and phrases that have been printed and cut up, to glue into the appropriate paragraph.

For example, a writing task might be to write a simple email to an English friend, inviting them to come and stay in the summer holidays.

Prepare coloured cards:

Green, like the traffic light for GO, for the first paragraph, the greeting and purpose of the email.

Blue for the second paragraph, explaining where he/she would sleep, one activity that you are planning to do with your friend.

Yellow for the third paragraph, explaining another activity that you can do with your friend

Red like the traffic light for STOP, for the final paragraph, the sign off.



Prepare the following sentences and cut them into strips:

Hi	How are you?
I am fine.	I was wondering if
I have been thinking and	You can stay
We live	It is close to
We can go to	There are plenty of things to do.
We could also visit	I hope that
Let me know	I look forward to
Also	so,
as well.	though

The activity consists in deciding which words go onto each card, sticking them on, then writing the rest of each paragraph. As the student becomes better at structuring texts, less scaffolding will be required.

News at Ten approach

Idea 81. For informative texts, use the *News at Ten* approach, named after an evening news programme on TV in the UK:

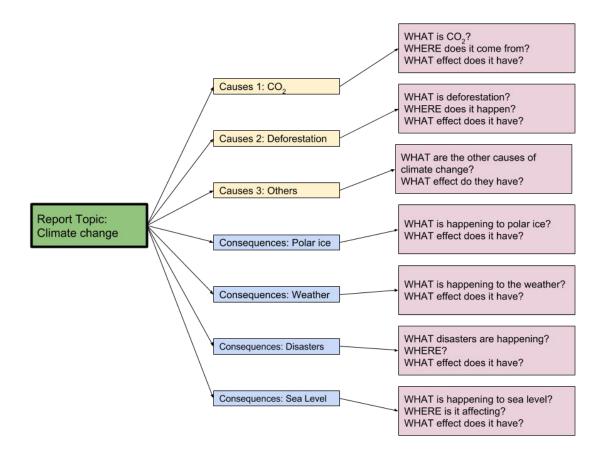
- 1. Tell them what you are going to tell them (Introduction)
- 2. Tell them (Main body)
- 3. Tell them what you have just told them (Conclusion).

These can be scaffolded according to the type of informative text and the number of paragraphs to be written, with emphasis on linkers.

Self-scaffolding

●Idea 82. Particularly useful in CLIL subjects where report writing is required, teaching students metacognitive skills in self-scaffolding are very useful for them, and translate to other subjects in all levels of their education. For every topic that they have to write about, they first investigate and identify the subtopics they should

include. They then ask WH questions about each subtopic, and write these down. Using material from their studies, they answer the questions, which gives them the paragraphs of the main body of their report. They add linkers to connect between topics, then follow the News at Ten approach to add an introduction and a conclusion. An example is given below:

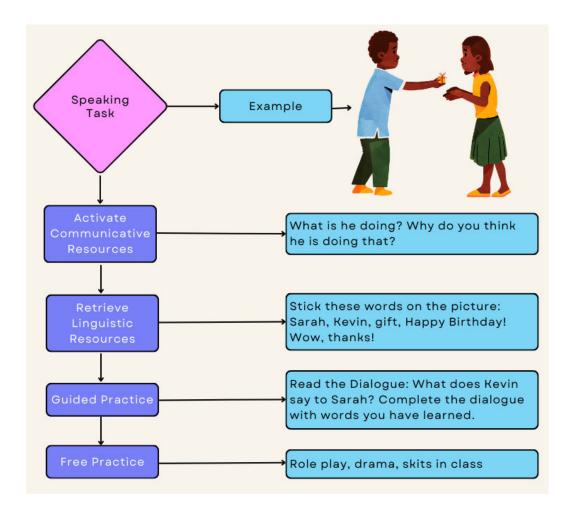


Teaching specifics: Speaking

Oral skills such as speaking and listening seem to be less affected by dyslexia than reading and writing skills, but may still need support due to language weaknesses such as retrieving words from the memory and correctly applying grammatical structures. By using the following techniques and strategies, speaking skills can be further improved the English language skills can be for the improved:

- Provide a good pronunciation model for the students.
- Refer to the previous section on teaching phonological awareness as a good basis for speaking.

Structure speaking tasks carefully, using multisensory techniques which as we have seen, provide language cues, and follow the following general guide (Daloiso 2017):



Activities to practise speaking activities include:

Idea 83. Drills, repeating target language until the students have interiorized it.

• Idea 84. Chants, which can be interactive and a fun way to work on vocabulary and other target language. For example:

Teacher: I see

Students: with my EYES!

Teacher: I hear

Students: with my EARS!

Teacher: I taste

Students: with my TONGUE

Teacher: I touch

Students: with my HANDS

Teacher: I smell

Students: REALLY BAD!



(Then reverse roles and students start the chant, then repeat with a student's name to work the third person singular).

- **Idea 85.** Raps. Use free auto rap apps such as Smule to put them to music and record them.
 - Idea 86 Role plays.
 - Idea 87. Drama.
- **Idea 88.** Oral presentations using visual supports (notes, powerpoints, digitised schemes or mind maps etc).
- **Idea 89.** Class radio programmes which can be recorded on mobile phones or digital recorders and edited.
- **Idea 90.** Video recordings of any of the above activities, on video cameras or mobile phones.
- **Idea 91.** Video projects which can be edited, such as a news report, an interview, a sports event, a cooking show etc.

Teaching specifics: Listening

Listening skills are greatly favoured by having a firm basis in phonological awareness, as shown above. However, segmenting speech into small units can be tricky for them as for many other students. Suggested strategies for improving listening comprehension are:

- **Idea 92.** Break the listening texts into small chunks and work on a sentence at a time, which is not a natural way of hearing language, but can help to boost listening skills at the beginning. As skills improve this will be less and less necessary.
- **Idea 93.** Allow students to use transcripts to read as they listen, to help comprehension, after at least one time of only listening to the text.
- **Idea 94.** Ensure students can distinguish similar sounds that appear in the listening text (pat/bat, tall/told).
- Idea 95. Adapt the strategies for reading comprehension (above) to listening:

- Read the title of the listening and try to predict what the piece will be about
 - Ask questions what will the piece cover?
 - Listen once for gist (the essence of the piece). Were the predictions correct?
 - Active listening for the second time, in which they listen for specific information (from questions to be answered or from a true/false worksheet made for this purpose).
 - Oheck were their predictions correct?
 - Continue with exercise.

• Idea 96. Be aware that dyslexic students often find it difficult to listen and write at the same time, so taking notes from audio tracks may impede their comprehension as attention shifts inefficiently from one task to another. In this case, use pre-prepared notes or schemes that they can fill in after listening.

Idea 97. Use mobile phones or other digital technology to record examples of structures that they have trouble understanding, so that they can listen repeatedly on their own time. Numbers may be problematic, for example, but it does not take any effort to prepare examples, save as audio files in the class blog and allow the students extra practice.

Assessment accommodations

Kormos and Smith (2012) suggest the following accommodations for dyslexic students in exams:

Idea 98. In presentation:

- Oral reading
- Large print
- Magnification devices
- Screen reader
- Idea 99. In response format:
 - Using a computer
 - Using a scribe
 - Responding in the test booklet instead of an answer sheet
 - Using organisational devices such as spelling assistive devices, visual organisers



Idea 100. In timing:

- Extended time
- Multiple or frequent breaks
- Change in testing schedule
- Testing over multiple days

Idea 101. In setting:

- Administering the test individually
- Testing in a separate room
- Testing in a small group
- Adjusting the lighting
- Providing noise buffers

Note that some accommodations need to be practised first, such as the use of a scribe to respond to exam questions. Also, as individual needs differ, the student should be consulted first about the accommodations which best apply to them.

Bear in mind that UDL guidelines recommend multiple means of expression, or showing what the students have learned, so flexibility when developing assessments is encouraged.

Summary

In Part 3 some of the unending ideas for providing options for representation, action, expression and motivation are given, from cited sources and our own experience with students with SpLDs.

We encourage teachers to put their creativity to good use in coming up with their own ideas.



Part 4 Put guidelines and ideas into practice: ideas for developing inclusive lesson plans

As seen in Part 2, the UDL framework offers a solid perspective on how to ensure that all students succeed in our English classes, even those who seem to have great difficulties with learning English. Part 3 has presented useful ideas for teaching, which comply with the recommended strategies for students with SpLDs and also fall under the UDL guidelines of offering multiple means of representation, action, expression and engagement.

The UDL Design Cycle

This leaves us with the task of trying to incorporate these ideas into our daily lesson plans in such a way that our students meet the curriculum standards we are required to cover in our classes. Rao and Meo (2016) and Torres and Rao (2019) provide a useful strategy to help us with this task.

Taking each component of the lesson or didactic unit that we are to teach, start by considering the following questions, in Table 4.1 (adapted from Rao and Meo, 2016 and Torres and Rao, 2019).

Lesson Component	Questions to ask when considering flexible components and UDL
Goals	Based on the academic standard addressed in this lesson, what are the skills and concepts that we want the students to master?
Barriers	What are the barriers that students will face?
Assessments	How can the students demonstrate achievement of the identified goals in varied ways?
Methods	What supports and scaffolds can be used as part of instruction to help students acquire the content and demonstrate what they have learned?
Materials	What resources, materials, and tools can be used to provide multiple means to represent and express information and concepts or to engage with content?

Table 4.1 Questions to consider when putting UDL into practice.

Once we have considered these questions, the following design cycle is recommended (Torres and Rao, 2019), with steps to be planned before and after teaching (Figure 4.1). Examples of how this process works are shown in two "Case" Studies, once again with hypothetical teachers based on experiences in DISLEGI with teachers struggling to find ways to attend to all students in their classes. The UDL checkpoints that are used in each of these case studies are shown on page 22 and are described in full in https://udlguidelines.cast.org/.

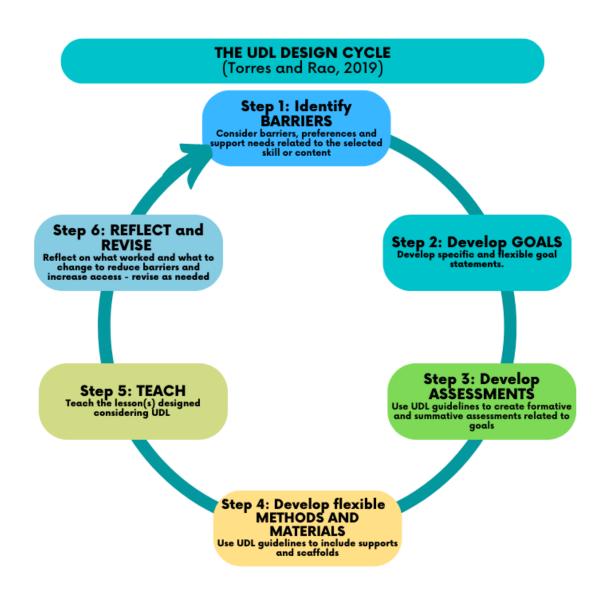


Figure 4.1 The UDL design cycle (Torres and Rao, 2019).

Case studies

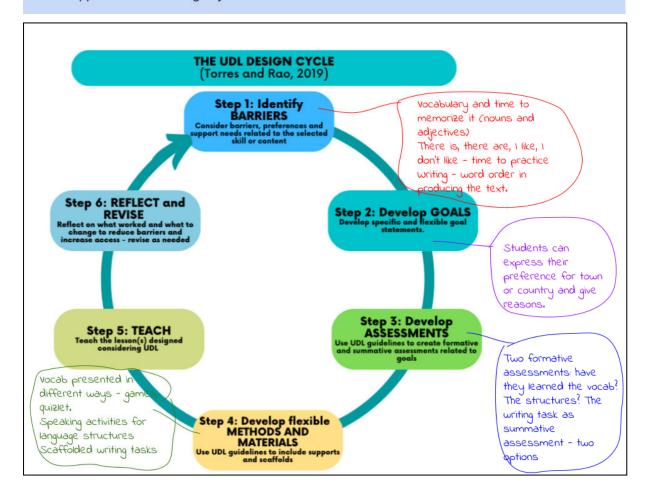
Case Study 2: Amaia

Amaia

Amaia teaches English to Primary school students in Grades 3 and 4. In her 4th Grade class, the current didactic unit works the theme of the country and the town. The unit starts with Aesop's Fable, The Town Mouse And The Country Mouse, then includes activities for naming features of both places using "There is / There are" and descriptions using adjectives. The final activity is for the students to produce a simple text in which they use the language they have learned to explain whether they prefer the town or the country, and why. (The curriculum requirement that is met in this unit is: Can produce simple written texts with the help of models, on paper and digital media, on known topics, according to a previously established script and based on his/her previous knowledge (memorised expressions, topic...).

Amaia has two students with dyslexia in her classes and two more who show difficulties in maintaining attention, one of whom has been diagnosed with Attention Deficit. Her classes also include students who have recently arrived from elsewhere and are learning L1 at the same time as English.

Amaia applied the UDL design cycle on the unit and her initial notes looked like this:



Once she had identified the barriers and knowing that her students would benefit from a multi-sensorial approach to learning, which would give them more and varied opportunities to learn, Amaia was able to adapt the way she approached the tasks in class. The goal statement helped her focus on the end result that she wanted her students to attain. Her adapted approach was as follows:

- She recorded herself reading the story and put the audio file on the school's digital platform where it was accessible by students from home. UDL 1.1, 1.3
- She prepared flashcards with pictures of the new vocabulary, nouns and adjectives (forest, tree, field, hill, farm, river, road, house, shop, car, bus, office, people, quiet, noisy, calm, busy), as well as flashcards with the written words. UDL 2.1
- She added various games to her lesson plans using the flashcards (Idea 8 in Part 3) and two worksheets, both in a paper version and an online version as an interactive worksheet for the students to do in class or at home as extra opportunities for learning. The worksheets included tasks of matching text to pictures, writing nouns in gaps and using adjectives from a list in a sentence. The interactive version was set up so that feedback is immediate and students know if they have made a mistake. One interactive worksheet was designed as a formative assessment to see how well the students were remembering the new vocab words by recording how many attempts were needed to get a correct answer in each activity. UDL 2.5, 5.3, 6.4, 8.4, 9.3
- She added speaking activities into her lesson plans to practise the There is / There are and I like / I don't like structures, then games in which students match cards with these expressions to pictures on a sheet. (For example, pictures of many trees+There are, picture of a mouse+There is). Another interactive worksheet served as a formative assessment on how well the students were learning to use this language. UDL 5.1, 5.2, 8.4, 9.3
- She gave the students two options for the summative assessment; a scaffolded writing task or a comic in
 which they draw themselves and a classmate, then write their preferences for town or country in the speech
 bubble. UDL 5.2, 5.3, 8.2
- Students were given a visual chart to track and reflect on their progress UDL 9.3

Case Study 3: Gonzalo

Gonzalo teaches English in a public Secondary School, to third and fourth grades (14 to 16 years old). He has 120 students in total and has 4 students who are diagnosed with dyslexia and one with both dyslexia and attention deficit. He suspects that there are several more as he has noticed their difficulties with spelling and expression. He has communicated his concerns to the class tutor of these students. His material for these classes is a textbook and workbook and up until now he has not tried to change the approach suggested by the publisher in the teacher's guide for this series of textbooks, which does include audios and the occasional video.

The current didactic unit that he is working with third grade students is titled "Unusual Jobs". In the next few classes the students will work on:

- understanding a text (a magazine article),
- a listening task in the form of a radio interview and multiple choice questions,
- a section on grammar which uses the present perfect taken from examples in the radio interview, and
- a final task in which students must research and write about an unusual job in the form of a magazine article.

Using the UDL design cycle, Gonzalo has made notes about adapting the class material to be more inclusive. His notes are as follows:

Barriers:

- Reading and comprehension of text and new words
 - time to understand and process text
 - opportunities to learn new vocabulary
- Listening task (listening, reading and choosing correct answers at the same time)
- Grammar
 - understanding the present perfect, how it is formed and when it is used
 - need to overleam, opportunities to practise.
- Final task structuring and writing about an unusual job.

Based on these barriers that Gonzalo had identified, he decided to try a more flexible approach to this didactic unit. He consulted with other teachers in his school and decided to try preparing some new activities himself, that he thought the students would enjoy and help them to learn. His notes continue:

goal statement

Students can show that they can use appropriate vocabulary and the present perfect in the context of the topic of "unusual Jobs".

Assessments:

Exercise 3 A in the workbook - formative assessment over new vocabulary

interactive worksheet - formative assessment on present perfect (to be prepared)

Final task - Two options for summative assessment: A written magazine article (individual) or a radio interview with a partner (prepared individually and done together). UDL 5.1, 8.3

Methods and materials

Follow the programme in the book, but add in

- Extra opportunities to learn new vocabulary
 - Virtual flashcards with new vocabulary but nouns, verbs, adjectives are colour coded, students are given the link to go through the new words until they feel conficident they know them all. UDL 3.1
 - Game in class silly sentences. Flashcards of new vocab (on screen in class), other random words that they already know, printed on cards and in a bag (giraffe, mouse, Superman, a fireman, a ballet dancer, to play to sleep, to tickle, to fly snowy grumpy, cold, elegant). In groups of four or five, teacher shows one word on the screen, then one person from each group selects two cards from the bag. Each group has to write a silly sentence using three words correctly, the sillier the better. Class votes for the best sentence at the end of three rounds. UDL 2.1, 5.2, 6.1, 8.1, 8.3, 9.1



- Present perfect activities after Grammar activities in student's book and workbook activities, on separate days.
 - Each student is given a piece of paper and writes have and has, then the past particles finished played, walked cooked and washed. Students tear up their paper so each word is separate. Teacher shows five photos and students have to place appropriate verbs in the present perfect on the desk from their paper strips. Photos on screen are of students finishing an exam (have finished), a small boy in muddly football gear (has played), a group of people in a Climate change demonstration (have walked), a chef in a very messy kitchen (has cooked), a girl with a hose and a wet dog (has washed). UDL 1.1, 2.1
 - Separate finished time from unfinished time blackboard activity
 - Game Have you ever.....? Students stand up, teacher asks questions and if the students have done itm, they sit down, until only two or three standing (repeat as necessary) Possible questions Have you ever been to Africa? Have you ever eaten an insect? Have you ever dyed your hair? Have you ever been skydiving? Have you ever won the lottery? Have you ever met anyone famous? Have you ever danced hip hop? Have you ever planted a tree? UDL 2.1, 2.2, 5.1, 9.1
 - Interactive worksheet as formative assessment (homework).
- Scaffolded writing task to practise the format of a magazine article, worked on in class.
 UDL 5.2, 6.1, 6.3
- Final task two options possible. A magazine article (individual writing task) or radio
 interview (in pairs, writing 4 questions to ask their partner, then 4 answers) then recording
 two interviews, with each student being in turn the interviewer and the interviewed person,
 on a mobile phone. UDL 5.1, 8.3

Summary

In Part 4, the use of the UDL design cycle has been demonstrated, to plan lessons which take into account the barriers and differences present among students while maximising the learning of all. The strategies to be included in the lessons use the recommended approaches for students with dyslexia, which coincide with the UDL Guidelines for variety in representation and expression.

References

Alemany Panadero, C. (2019). Las consecuencias sociales de las dificultades de aprendizaje en niños y adolescentes. Equidad International Welfare Policies and Social Work Journal, 11, 91-122. doi: 10.15257/ehguidad.2019.0004

Augur, Jean. (n.d). Early Help Better Future: A Guide to the Early Recognition of Dyslexia. British Dyslexia Association.

Ball, P., Kelly, K., & Clegg, J. (2015). Putting CLIL into Practice. Oxford: Oxford University Press, 320 pp.

British Dyslexia Association and others. (n.d). Understanding Neurodiversity: A Guide to Specific Learning Differences. British Dyslexia Association.

Burrows, Peter. (2014). A Creative Approach to Teaching Grammar. Bloomsbury.

Callighan, Cheryl L. (2003). How to Teach Spelling without Going Crazy. Hawker Brownlow Education.

Daloiso, Michael. (2017). Supporting Learners with Dyslexia in the ELT Classroom. Oxford Handbooks for Language Teachers.

Dyslexia Scotland. https://dyslexiascotland.org.uk/what-is-dyslexia/

Ebenhöh, Louise. (2014). Teaching EFL to Students with Dyslexia.

Fry, Edward B. (2010). The Spelling Teacher's Lesson-a-Day. John Wiley and Sons, Inc.

Hernández García, F., Hernández Pallarés, LA, Valencia García, M.T., Ramírez Lajarín, J.P., Abril López, M.A. (2018). Guía De Enseñanza Del Inglés Para Alumnos Con Dislexia Y Otras Dificultades. Región de Murcia Consejería de Educación, Juventud y Deportes.

Gialluisi, A., Andlauer, T.F.M., Mirza-Schreiber, N. et al. (2021). Genome-wide association study reveals new insights into the heritability and genetic correlates of developmental dyslexia. Mol Psychiatry 26, 3004–3017 https://doi.org/10.1038/s41380-020-00898-x

González, D., Jiménez, J E., García, E., Díaz, A., Rodríguez, C., Crespo, P. & Artiles, C. (2010). Prevalencia de las dificultades específicas de aprendizaje en la Educación Secundaria Obligatoria. European Journal of Education and Psychology, 3(2), 317-327.

Goswami U, Wang HL, Cruz A, Fosker T, Mead N, Huss M. (2010). Language-universal sensory deficits in developmental dyslexia: English, Spanish, and Chinese. J Cogn Neurosci. Feb;23(2):325-37. doi: 10.1162/jocn.2010.21453.

Goswami, U. (2014). Sensory theories of developmental dyslexia: three challenges for research. Nat Rev Neurosci. 2015 Jan;16(1):43-54. doi: 10.1038/nrn3836. Epub 2014 Nov 5. PMID: 25370786.

Goswami, U. (2020). Dyslexia, Language, Rhythm and the Brain. Yidan Prize Conference Series, Europe. Yidan Prize Conference Series: Europe - YouTube

Guia de Buenas Practicas. (2010). El profesorado ante la enseñanza de la lectura. Departamento de Educación, Gobierno del Pais Vasco.

In Basque:

https://www.euskadi.eus/contenidos/informacion/dia6/eu_2027/adjuntos/RecursosParaLaInclusion/ensenanzalecturale.pdf

In Spanish:

https://www.euskadi.eus/contenidos/informacion/dia6/es_2027/adjuntos/RecursosParaLaInclusion/ensenanza_lectura_c.pdf

Handler, S. M.; Fierson, W. M. (2011). Learning Disabilities, Dyslexia, and Vision. *PEDIATRICS*, 127(3), e818–e856. doi:10.1542/peds.2010-3670

Hawes, Beccie. (2015). Getting it Right for Dyslexic Learners; A framework for graduated response to ensure early identification and intervention at waves one, two and three. Crossbow Education.

Howladar M. (2018). Barriers and Opportunities of Inclusive Education in Present Educational System. Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-2 | Issue-4, June 2018, pp.2018-2025, https://www.ijtsrd.com/papers/ijtsrd14290.pdf

Stackhouse, Joy and Wells, Bill. (1997). In Hulme, Charles and Margaret Snowling (Eds). How do Speech and Language Problems affect Literacy Development? p182-211 in Dyslexia: Biology, Cognition and Intervention. Whurr Publishers Ltd.

Kormos, Judith and H. Kontra, (2008). (Eds) Language Learners with Special Needs. Second Language Acquisition series, Multilingual Matters.

Kormos, Judith and Anne Margaret Smith. (2012). Teaching Languages to Students with Specific Learning Differences. Multilingual Matters.

Kormos, Judith. (2017). The second language learning processes of students with specific learning difficulties. Routledge.

Nijakowski, Joanna. (2010). Dyslexia in the Foreign Language Classroom. Second Language Acquisition series, Multilingual Matters.

Norton ES, Beach SD, Gabrieli JD. (2015) Neurobiology of dyslexia. Curr Opin Neurobiol. Feb;30:73-8. doi: 10.1016.

Reading Rockets (n.d.) Universal Design for Learning. https://www.readingrockets.org/article/universal-design-learning

Reid, Gavin and Shannon Green. (2011). 100+ ideas for Supporting Children with Dyslexia. Bloomsbury Education.

Schneider, Elke and Margaret Crombie. (2003). Dyslexia and Foreign language Learning. British Dyslexia Association.

SEN marketing. (2008). The Spelling Rulebook. SEN marketing.

Shaywitz, Sally. (2003). Overcoming Dyslexia: A New and Complete ScienceBased Program for Reading Problems at Any Level, New York, Alfred A. Knopf,

Smart Kids (2004). The Writer's Directory.

Sociedad Española de Oftalmopediatría (n.d.) La Dislexia NO es un problema Visual. <u>La dislexia no es un problema visual.indd (sedop.es)</u>

Sparks, R. L. (2006). Is There a "Disability" for Learning a Foreign Language? Journal of Learning Disabilities, 39(6), 544–557. https://doi.org/10.1177/00222194060390060601

Torres, Caroline and Rao, Kavita. (2020). Universal Design for Learning & Digital Tools for Language Learners KOTESOL2020 National Conference. https://www.youtube.com/watch?v=tnp19nixcY0&ab_channel=KoreaTESOL

UNESCO Bangkok (2009). Towards Inclusive Education for Children with Disabilities: A Guideline. Bangkok. 154 p.

UNESCO (2020). Global Education Monitoring Report. www.unesco.org/gemreport

Yang, L.; Li, C.; Li, X.; Zhai, M.; An, Q.; Zhang, Y.; Zhao, J.; Weng, X. (2022). Prevalence of Developmental Dyslexia in Primary School Children: A Systematic Review and Meta-Analysis. Brain Sci., 12, 240. https://doi.org/10.3390/brainsci12020240

Ziegler, Johannes C.; Goswami, Usha (2005). Reading Acquisition, Developmental Dyslexia, and Skilled Reading Across Languages: A Psycholinguistic Grain Size Theory.. Psychological Bulletin, 131(1), 3–29. doi:10.1037/0033-2909.131.1.3

Zugarramurdi, C., Fernández, L., Lallier, M., Valle-Lisboa, J. C., & Carreiras, M. (2022). Mind the orthography: Revisiting the contribution of prereading phonological awareness to reading acquisition. Developmental Psychology, 58(6), 1003–1016. https://doi.org/10.1037/dev0001341

Appendix A - Legal framework for Inclusion In the Basque Country

Framework Plan For The Development Of An Inclusive School:

https://www.euskadi.eus/contenidos/documentacion/inn_doc_esc_inclusiva/es_def/adjuntos/escuela-inclusiva/Plan Marco Escuela Inclusiva 2019 2022 c.pdf

Inclusive education and response to diversity (containing links to other information and resources):

https://www.euskadi.eus/educacion-inclusiva-atencion-diversidad/web01-a3hinklu/es/

Resolución 10 Julio 2020

Resolución de 10-07-2020, sobre recogida y organización de la información acerca del alumnado con NEAE (2020)

Guia de Buenas Prácticas. (2010). El profesorado ante la enseñanza de la lectura. Departamento de Educación, Gobierno del Pais Vasco.

In Basque:

https://www.euskadi.eus/contenidos/informacion/dia6/eu_2027/adjuntos/RecursosParaLaInclusion/ensenanza_lectura_e.pdf

In Spanish:

https://www.euskadi.eus/contenidos/informacion/dia6/es_2027/adjuntos/RecursosParaLaInclusion/ensenanzalecturac.pdf

Appendix B Indicators of Dyslexia

	Indicators of dyslexia in Learning to Read in L1 or the Language of Instruction (GBP and BDA)		
GBP	O-5 years old. A family history of dyslexia or other learning difficulties. Difficulties in recalling. Absence of phonological awareness, that is, the ability to identify and manipulate units of oral language (sounds). Does not see the sense of reading Good and bad days Difficulties with rhymes and songs Poor operative memory for the relationship between sounds and letters.	when reading and writing are the main focus of most classes. Behavioural changes Has not learned to read in first grade. Has a low reading speed in second grade Writing: makes copying errors and requires a lot of time Dictation: low performance and many errors. Poor working memory = slow work and needs a long time to complete many tasks. Truggles wing comprehens struggles wing writing comprehens writing encomprehens a long memory in the complete many tasks. Truggles wing comprehens of the complete many tasks.	Reading becomes the main vehicle of learning other material.
			writing skills Low self esteem Struggles with content especially comprehension and structure Struggles with foreign languages and writing Commits many errors when copying and requires a long time to complete a task Dictation: low performance and many errors Poor working memory = slow work and needs a long time to complete many tasks
British	Early years	Primary ages	Secondary ages



Dyslexia			
Dyslexia Association	 Difficulty learning nursery rhymes Difficulty paying attention, sitting still, listening to stories Likes listening to stories but shows no interest in letters or words Difficulty learning to sing or recite the alphabet A history of slow speech development Muddles words e.g. cubumber, flutterby Difficulty keeping simple rhythm Finds it hard to carry out two or more instructions at one time, (e.g. put the toys in the box, then put it on the shelf) but is fine if tasks are presented in smaller units Forgets names of friends, teacher, colours etc. Poor auditory discrimination Confusion between directional words e.g. up/down Family history of dyslexia/reading difficulties Difficulty with sequencing e.g. coloured beads, classroom routines Substitutes words e.g. "lampshade" for "lamppost" Appears not to be listening or paying attention Obvious 'good' and 'bad' days for no apparent reason 	 General signs to look for are: Speed of processing: slow spoken and/or written language Poor concentration Difficulty following instructions Forgetting words Written work Poor standard of written work compared with oral ability Produces messy work with many crossings out and words tried several times, e.g. wippe, wype, wiep, wipe Confused by letters which look similar, particularly b/d, p/g, p/q, n/u, m/w Poor handwriting with many 'reversals' and badly formed letters Spells a word several different ways in one piece of writing Makes anagrams of words, e.g. tired for tried, bread for beard Produces badly set-out written work, doesn't stay close to the margin Poor pencil grip Produces phonetic and bizarre spelling: not age/ability appropriate Uses unusual sequencing of letters or words Reading Slow reading progress 	reading aloud Omits, repeats or adds extra words Reads at a reasonable rate, but has a low level of comprehension Fails to recognise familiar words
	•	 Finds it difficult to blend letters together Has difficulty in establishing syllable division or knowing the beginnings and 	 Misses a line or repeats the same line twice Loses their place easily/uses a finger or marker to keep the place

- endings of words
- Unusual pronunciation of words
- No expression in reading, and poor comprehension
- Hesitant and laboured reading, especially when reading aloud
- Misses out words when reading, or adds extra words
- Fails to recognise familiar words
- Loses the point of a story being read or written
- Has difficulty in picking out the most important points from a passage
- Numeracy
- Confusion with place value e.g. units, tens, hundreds
- Confused by symbols such as + and x signs
- Difficulty remembering anything in a sequential order, e.g. tables, days of the week, the alphabet
- Time
- Has difficulty learning to tell the time
- Poor time keeping
- Poor personal organisation
- Difficulty remembering what day of the week it is, their birth date, seasons of the year, months of the year
- Difficulty with concepts yesterday, today, tomorrow
- Skills
- Poor motor skills, leading to weaknesses in speed, control and accuracy of the pencil

- Has difficulty in pin-pointing the main idea in a passage
- Has difficulty using dictionaries, directories, encyclopaedias

Numeracy

- Has difficulty remembering tables and/or basic number sets
- Finds sequencing problematic
- Confuses signs such as x for +
- Can think at a high level in mathematics, but needs a calculator for simple calculations
- Misreads questions that include words
- Finds mental arithmetic at speed very difficult
- Finds memorising formulae difficult

Other areas

- Confuses direction left/right
- Has difficulty in learning foreign languages
- Has difficulty in finding the name for an object
- Has clear difficulties processing information at speed
- Misunderstands complicated questions
- Finds holding a list of instructions in memory difficult, although can perform all tasks when told individually

Behaviour

- Is disorganised or forgetful e.g. over sports equipment, lessons, homework, appointments
- Is easily distracted. May find it difficult to remain focused on the task



	 Memory difficulties e.g. for daily routines, self-organisation, rote learning Confused by the difference between left and right, up and down, east and west Indeterminate hand preference Performs unevenly from day to day Behaviour Uses work avoidance tactics, such as sharpening pencils and looking for books Seems 'dreamy', does not seem to listen Easily distracted Is the class clown or is disruptive or withdrawn Is excessively tired due to amount of concentration and effort required 	 Is often in the wrong place at the wrong time Is excessively tired, due to the amount of concentration and effort required
--	---	---

Appendix C Useful Resources

Guides from other Autonomous Communities and tips for teachers and families:

Federación Plataforma Dislexia

https://plataformadislexia.org/guias-e-informes/

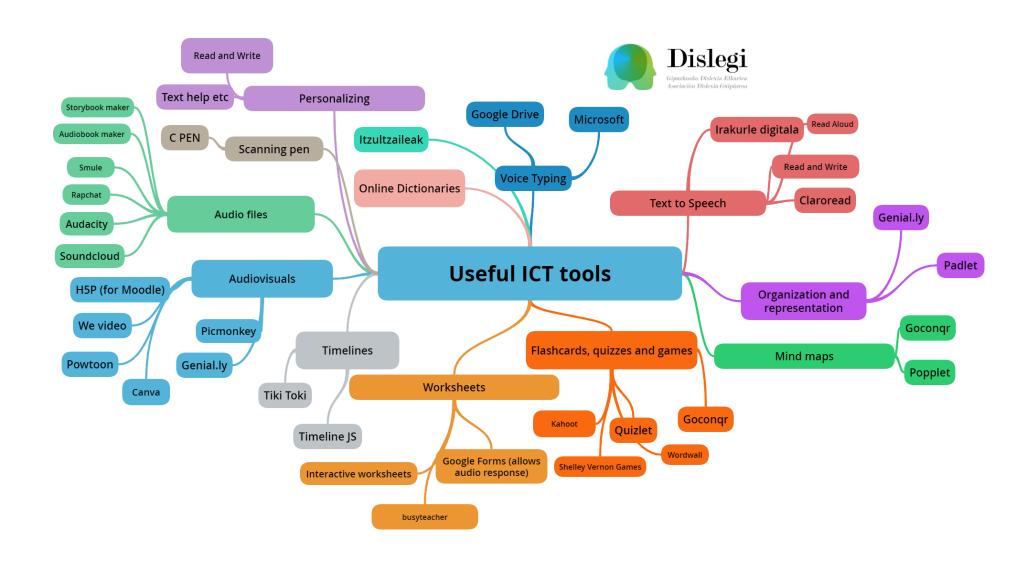
Navarra - Entender y atender al alumnado con Trastorno de Aprendizaje en las aulas https://creena.educacion.navarra.es/web/banco-de-recursos/publicaciones-del-creena/entender-y-atender/

Digital Resources

The digital resources that we have found to be most useful are summarised below according to the function they serve. DISLEGI has no commercial interest in any of these resources, being an association, and some of the recommended resources are paid services.

Many coincide with UDL guidelines for offering varied means of representation and expression. Links to the resources are listed below.





Text to speech

Irakurle digitala - https://www.euskadi.eus/irakurle-digitala/web01-a3hinklu/eu/

Read Aloud - https://readaloud.app/

Read and Write - https://www.texthelp.com/products/read-and-write-education/

Claroread - https://integratek.es/claroread/

Organizing and Representing

Genial.ly - https://genial.ly/es/

Padlet - https://padlet.com/

Mind maps

Go congr - https://www.gocongr.com/

Popplet - https://www.popplet.com/

Flashcards, quizzes, games

Kahoot - https://kahoot.com/



Quizlet - https://quizlet.com/es

Shelley Vernon Games - https://teachingenglishgames.com/

Wordwall - https://wordwall.net/

Go congr - https://genial.ly/es/

Educaplay - https://es.educaplay.com/

Edupuzzle (videos interactivos) - https://edpuzzle.com/

Worksheets

Interactive worksheets - https://www.liveworksheets.com/

Busyteacher - https://busyteacher.org/

Google forms - https://www.google.com/forms/about/

Timelines

Tiki Toki - https://www.tiki-toki.com/

Timeline JS - https://timeline.knightlab.com/



Audiovisuals

Picmonkey - https://www.picmonkey.com/

Genial.ly - https://genial.ly/es/

Canva - https://www.canva.com/es es/

Powtoon - https://www.powtoon.com/?locale=en

We video - https://www.wevideo.com/

Simpleshow - https://simpleshow.com/

H5P - https://h5p.org/

Audio files

Storybook maker - https://www.mystorybook.com/

Audiobook maker - https://www.narakeet.com/create/text-to-voice-audiobooks.html

Smule - https://www.smule.com/

Rapchat - https://rapchat.com/

Audacity - https://audacity.es/

Soundcloud - https://soundcloud.com/



Scanning pen

C-Pen (scans texts to read them to the student, works in English and Spanish)

https://cpen.com/

Personalising learning

Texthelp (Read and write) - https://www.texthelp.com/products/read-and-write-education/

Online dictionaries and pronunciation

Oxford dictionary - https://www.oed.com/

Macmillan Dictionary - https://www.macmillandictionary.com/

Cambridge Dictionary - https://dictionary.cambridge.org/

Howjsay -https://howjsay.com/

Translators

Itzulzaile neuronala - https://www.euskadi.eus/traductor/



Deep L - https://www.deepl.com/en/translator

Voice typing

Google voice typing / speech recognition - https://support.google.com/docs/answer/4492226?hl=en

Microsoft - https://support.microsoft.com/en-us/office/dictate-your-documents-in-word-3876e05f-3fcc-418f-b8ab-db7ce0d11d3c

Other Resources

English Phonetic Alphabet -

http://www.phonicsinternational.com/unit1_pdfs/The%20English%20Alphabetic%20Code%20-%20complete%20picture%20chart.pdf

Phonics International https://phonicsinternational.com/

Sight words - https://sightwords.com/

Tips for managing dyslexia - https://www.beatingdyslexia.com/

Reading Comprehension strategies from the University of Michigan https://dyslexiahelp.umich.edu/professionals/dyslexia-school/reading-comprehension

Letters and sounds

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/190599/Letters_and_Sounds - DFES-00281-2007.pdf



Other Materials

Crossbow - https://www.crossboweducation.com/

Dyslexia shop - https://www.thedyslexiashop.co.uk/

Appendix D Advice for families

