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MM Textbooks

Teaching Languages to Students with Specific Learning Differences

Judit Kormos and Anne Margaret Smith

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To László, Anna and Lackó, without whose support this book would not have been written.

JK

In memory of my grandmother, Marion Smith: an 'ESOL' teacher before 'ESOL' existed.

AMS

Contents

Preface	xi
1: Views of Disability in Education	I
Introduction	2
The interaction between language and thought	3
Models of disability reflected in discourses	5
A medical discourse	7
A legal discourse	8
A discourse of social construction	9
Discourses of disability in educational settings	10
Inclusive discourses of disability	12
Labelling and self-identification	13
Challenging dominant discourses	15
Summary of key points	16
Activities	16
Recommended reading	17
2: What Is Dyslexia?	19
Introduction	20
A historical overview of dyslexia research	20
Definitions of dyslexia	21
Basic learning mechanisms	24
Reading processes and learning to read	28
Behavioural manifestations and cognitive correlates of dyslexia	30
Cognitive and neurological explanations of dyslexia	33
Summary of key points	38
Activities	38
Further reading	39
3: Associated Learning Differences	41
Introduction	42
Specific Language Impairment	42
Dyspraxia	44
Dyscalculia	46
Attention deficit and hyperactivity disorder	48
Asperger's Syndrome	52
Summary of key points	55
Activities	56
Further reading:	57

4: Cognitive and Emotional Aspects of Language Learning	59
Introduction	60
What processes are involved in language learning?	60
Cognitive abilities in language learning	61
Affective factors in language learning	64
An overview of the language learning difficulties of students with an SpLD	65
Vocabulary learning	68
Acquisition of grammar	71
Reading in L2	72
Writing in L2	74
Producing and understanding oral texts	77
Towards success in language learning	79
Summary of key points	80
Activities	81
Further reading	81
5: Identification and Disclosure	83
Introduction	84
Identification	85
Observation	86
Screening	88
Formal Identification	90
Assessment in a second language context	93
Disclosure	95
Disclosing assessment findings to the student	96
Passing on information to class teachers and external bodies	97
Sharing information with family	98
Disclosing to peers	99
Student disclosure to an institution	99
Summary of key points	101
Activities	102
Further reading	102
6: Accommodating Differences	103
Introduction	105
Environment	105
Light, temperature and volume	106
Furniture	107
Equipment	107
Materials	109
Curriculum	111
Organization of subject matter	111
Classroom tasks and assessments	112
Differentiation	113

Communication	114
Instructions	115
Feedback	115
Self-esteem	116
Classroom management	117
Grouping	118
Routine	118
Pace	119
Developing learning skills	119
Study skills	119
Metacognitive thinking skills	120
Summary of key points	123
Activities	123
Further reading	123
7: Techniques for Language Teaching	125
Introduction	126
Multi-sensory teaching methods	126
Teaching the sound and spelling system of the L2	130
Teaching vocabulary	132
Teaching grammar	134
Teaching reading	135
Teaching listening	137
Teaching speaking	139
Teaching writing	141
Summary of key points	143
Activities	143
Further reading	144
8: Assessment	145
Introduction	146
Overview of key constructs in language assessment	146
Validity and fairness	147
Accommodations and modifications	149
Types of accommodations and selecting accommodations	151
Accommodations and modifications in high-stakes language proficiency tests	154
Classroom-based assessment	156
The purpose of evaluation	156
Planning the assessment	157
Types of assessment tasks	159
Collecting and analysing information	162
Summary of key points	164
Activities	164
Further reading	165

9: Transition and Progression	167
Introduction	168
Factors that cause stress in transition	169
Environmental and physical transitions	171
Academic and cognitive challenges of transition	171
Social demands of transition	172
Psychological transitions	172
Strategies that students and their families can implement	173
Strategies that the existing institution can implement	177
Developing personal qualities and academic skills	177
Good communication	177
Independence	178
Career advice	179
What receiving institutions can do to facilitate transition	180
Phased in transition	180
Reassessment of support requirements	180
Information	181
Moving on to employment	183
Conclusion	184
Summary of key points	185
Activities	186
Further reading	186
Appendices	
Appendix 1	187
Appendix 2	189
Appendix 3	190
Appendix 4	194
Appendix 5	197
Appendix 6	200
References	203
Index	221

Preface

Whereas language learning comes easily and effortlessly to some people, many students struggle with the acquisition of languages. The cause of language learning difficulties can be manifold, but one group of people who find language learning particularly challenging are those who tend to be different in their general approach to learning from the majority of other students. In some countries these learners are seen to have a learning disability, but in this book we will show that perceiving them as different rather than deficient in certain skills and abilities helps us understand these learners better and assists in their successful inclusion in the language classroom. Around 10% of students exhibit a specific learning difference (SpLD). In other words, they have difficulties with the acquisition of literacy-related skills (dyslexia), numeracy (dyscalculia), the coordination of movement (dyspraxia), sustained attention (Attention Deficit and Hyperactivity Disorder) and social interaction (Asperger's syndrome). This means that in every learning group of 20 students, we are likely to find at least two learners who have an SpLD.

A common practice in the field of language teaching has been to exempt these students from foreign language learning on the grounds that the successful attainment of L2 competence is beyond their reach, and the time spent in the language classroom might be better used for the development of first language skills. Exemption is also often suggested to students and their parents because many language teachers feel that they lack the necessary pedagogical tools to accommodate the needs of students with SpLDs. This practice, however, seriously disadvantages students with SpLDs in today's globalized world, where proficiency in a language other than one's own first language might be as important as literacy and numeracy skills. Lack of a workable knowledge of another language might deprive students with SpLDs of equal opportunities in education, at the workplace and potentially even in their private lives. For this reason, the language teaching profession cannot continue to turn a blind eye on students with SpLDs and ignore their language learning needs.

This book is intended to help language teachers to work effectively and successfully with students who have SpLDs. To achieve this aim, we believe that teachers need to have an understanding of the nature of SpLDs and how these affect general learning processes and the mechanisms of second language acquisition. Awareness of their strengths and weaknesses and the challenges that these learners face in the academic and private domains is a prerequisite for developing supportive and caring teacher attitudes and behaviour, and for establishing an accommodating classroom environment. Additionally, language teachers need to be acquainted with the particular methods and techniques of teaching and assessment that foster success in language learning. Language teaching is also embedded in a wider social and educational context, and therefore it is important that language teachers are cognisant of the general educational issues related to identifying and disclosing disabilities and to making transitions from one institution to the other.

The book was written with different language learning contexts and with various types of learners in mind. We aimed to address situations in which another language is taught as a foreign language in the classroom, as well as cases when students from different language backgrounds get additional support in the native language of the country they reside in. We also discuss issues pertaining to teaching younger learners as well as adults. The book can form the basis of a module on a course for experienced language teachers, or be incorporated into a longer pre-service training course for novice teachers. Individual chapters could also be used independently as part of an ongoing professional development programme, or for self-study by individuals.

The book begins by exploring a range of discourses that reflect different attitudes to disability, followed by a thorough discussion of the nature and predominant features of dyslexia, dyspraxia, dyscalculia, ADHD and Asperger's syndrome, and an analysis of the specific effects they can each have on language learning. Although a range of SpLDs are discussed and named as if they were separate causes of difficulty, it should be kept in mind that in reality it is not usually possible to separate one SpLD from another. Many people who show identifiable traits of one will also experience some traits of another; the incidence of co-occurrence may be around 70% between some SpLDs. For this reason, the term 'SpLD' is used throughout this book to denote any of the specific cognitive differences that a learner might exhibit. Occasionally, specific reference to one of the SpLDs is made in order to highlight the particular kind of difficulty that may be experienced (e.g. the kinds of difficulties with social interaction that are associated with Asperger's syndrome). Where research is reported, the authors' terminology, indicating the parameters of the work, is respected. Readers may perceive that there is more attention paid throughout the book to dyslexic tendencies than to the other SpLDs; this is a function of the fact that the difficulties most commonly associated with dyslexia are those that may affect language learning most directly (e.g. phonological and visual processing difficulties).

The remainder of the book charts the journey typical of a language learner who experiences these difficulties. This covers the process of identification and assessment, which should be followed by disclosure and sharing of the information gathered. This information feeds into the adjustments that can be made in classroom management, teaching techniques and assessment practices that enable language learners with an SpLD to succeed. Finally, in any instructional context, the learner ought to be encouraged to progress either onto the next level of education or into the workplace. Since language development affects the options that are open to learners at transition points, this is a key issue for language teachers. It is therefore explored in this final chapter, with particular reference to working with learners with an SpLD.

1

Views of Disability in Education

Introduction	2
The interaction between language and thought	3
Models of disability reflected in discourses	5
<i>A medical discourse</i>	<i>7</i>
<i>A legal discourse</i>	<i>8</i>
<i>A discourse of social construction</i>	<i>9</i>
<i>Discourses of disability in educational settings</i>	<i>10</i>
<i>An inclusive discourse of disability</i>	<i>12</i>
Labelling and self-identification	13
Challenging dominant discourses	15
Summary of key points	16
Activities	16
Recommended reading	17

Introduction

This chapter looks closely at the discourses of disability – particularly relating to dyslexia – to identify the current dominant trends, and to explore where they have their roots. It will become clear throughout this book that a range of discourses is used, according to the topic under discussion. It is not the intention in this chapter to prescribe how teachers should use language, or which discourse choices should be made. Rather, it is hoped that readers will gain an insight into the power of language, and feel empowered to move between discourses, as it seems appropriate in different situations. Most importantly, this chapter discusses where responsibility lies for determining the relative power of competing discourses, and what impact the language choices teachers make might have on their learners.

Politicians and military tacticians have long known that during wartime language plays a crucial role in influencing public opinion and boosting the morale of the troops. In a survey of terminology used by the British press to describe the events of the first Gulf War, the Guardian newspaper (1991) reported that while British forces ‘*suppressed*’, ‘*eliminated*’ or even ‘*neutralised*’ targets, the Iraqi forces were simply ‘*destroying*’ and ‘*killing*’ whatever they targeted. Most tellingly, while British journalists were working under ‘*reporting guidelines*’ for reasons of security, the Iraqi journalists were subjected to ‘*censorship*’; they were fed ‘*propaganda*’, in contrast to the ‘*press briefings*’ that allied journalists had access to. The power that carefully chosen language has to change the way we perceive a situation is clear. This has been the case throughout history, and has been well documented in the field of education, particularly with reference to disability.

When we talk about any aspect of our society we have to make choices about the words that we use; the particular way that we use language is described as the discourse of that field. Discourses do not carry meaning so much as perform specific functions, particularly in the socio-political domain in which education is located (Allan, 1999). Murray (1998) points out that acquiring the discourse of the teaching profession is part of the process of taking on the social identity of being a teacher, and being assimilated into the culture of the chosen field. It allows novice teachers to gain entry to the community and enables them to organize their ideas and understanding of the new concepts to which they are introduced.

...discourse is socially constitutive as well as socially conditioned – it constitutes situations, objects of knowledge and the social identities of and relationships between people and groups of people. It is constitutive both in the sense that it helps to sustain and reproduce the social status quo and in the sense that it contributes to transforming it. Since discourse is so socially consequential, it gives rise to important issues of power. Discursive practices may have major ideological effects – that is, they can help produce and reproduce unequal power relations between (for instance) social classes, women and men and ethnic/cultural majorities and minorities through the ways in which they represent things and position people. (Fairclough & Wodak, 1997: 258)

Although the desire to use transparent and non-offensive terminology may be strong, it is not always easy to find expressions that all can agree on, and even the term ‘disability’ is itself not straightforward to define. In the British Equality Act (Great Britain, 2010) it is defined as ‘a physical or mental impairment which has a substantial and long-term adverse effect on your ability to carry out normal day-to-day activities’, a description which includes dyslexia, depending on how ‘substantial’ and ‘normal, day-to-day activities’ are defined. Many dyslexic people are surprised when they learn that they are classed – technically – as being disabled, because, in common with many other groups of disabled people, they perceive their disability as a series of barriers in their lives, rather than as a defining characteristic of their personality or identity. In the UN Convention on the Rights of Persons with Disabilities it is acknowledged that ‘disability is an evolving concept’ (UN, 2006) so definitions may be subject to alteration as society changes its perceptions, and as more disabled people find their voices and contribute to the debate.

Dominant discourses tend to reflect and further the interests of the powerful (for example, policy makers and professional bodies), while competing discourses seek to challenge this power structure and refocus the discussion, usually in favour of the oppressed or less powerful (in this case, these might be disabled students and their families and advocates). It takes time for alternative terminology to become established in a community, and usually even longer for attitudes to change; as Corbett notes, language pertaining to disability ‘has always been built on shifting sands... waves move in to wash away one set of words and new shapes are drawn’ (1996: 70). In order to establish the role that discourses play in our society, it is important to consider the relationship between language and thought.

The interaction between language and thought

The exact role that language plays in shaping our thoughts has long been debated by linguists, anthropologists and psychologists, but opinions are still divided as to the nature of the relationship between language and thought (Slobin, 2003). Put simply, the question is whether language fundamentally *determines* our view of the world, or only *reflects* it.

Linguistic determinists argue that we may not be aware of things that our first language does not have ways of describing, because our world view is shaped by the first language we learn. Evidence for this view is exemplified by studies of colour terms in different languages. Some languages divide the colour spectrum into only two parts (equivalent to ‘light’ and ‘dark’); others divide it three ways (having a separate term also for ‘red’ somewhere between light and dark). Most known languages divide the spectrum into a maximum of eleven distinct colour terms; English is one example of a language that has eleven terms (Dowman, 2007). The argument is that people whose first language has

fewer colour terms are not so sensitive to the variations in colour that English speakers describe. That is not to say that they cannot perceive the variations in shade – colour perception is essentially a biological phenomenon, which language does not determine. However, on perceiving a colour, we assign it to the nearest category that we have a label for, and describe it in those terms. Even speakers of English, who have a relatively wide range of basic colour terms to draw on, still have to differentiate between the many shades that are described as blue using additional adjectives (light / dark / sky / navy / royal blue etc). It is not that English speakers cannot see the colours, but they do not have distinct terms for them, and so mentally group them together under the umbrella term ‘blue’. However, by interacting with other language communities English speakers may become aware of new ideas or concepts and may even adopt the appropriate terminology if these concepts are deemed to be important enough, so the determinists’ position seems weak in this respect.

On the other hand, linguistic relativists argue, babies and infants must generate thoughts long before they develop language, so that it seems clear that our thoughts are independent of our language use, rather than being determined by it. Their argument is that the language used merely reflects what is important to the speech community using it. One domain where this seems to be demonstrated is in the terminology of kinship. In some cultures where marriage conventions are strictly regulated and potential partners may come from one side of the family but not the other, it becomes vital to recognize distinctions such as maternal vs. paternal relatives, and thus to label them differently (Hage, 1999). This is not the case in English, for example, since in most English-speaking communities, marriage partners generally are found outside of the family. Other examples include distinctions between terms for older and younger siblings, and for parents’ older and younger siblings, where the degree of deference due to individuals varies according to a strict hierarchy. Again, this is not the case in most English-speaking communities, and if a speaker uses the term ‘aunt’ it would be unusual to enquire whether a father’s or mother’s sister was being referred to, or an uncle’s wife, let alone whether she was younger or older than the parent. It is not the case that English speakers are not aware of how a woman they call ‘aunt’ is related to them, but that it is not of sufficient cultural importance to warrant indication in everyday speech, and so the language lacks the necessary terms to do so.

Perhaps it will never be possible to say definitively whether language exerts more influence over thought, or vice versa; most likely it is a cyclical process, which starts as language use develops and continues throughout a person’s life (see Figure 1.1). However, what is important in this chapter is the idea that making a conscious effort to change language habits and usage can affect the way we think about the world around us, and can also influence the thinking of others we interact with.

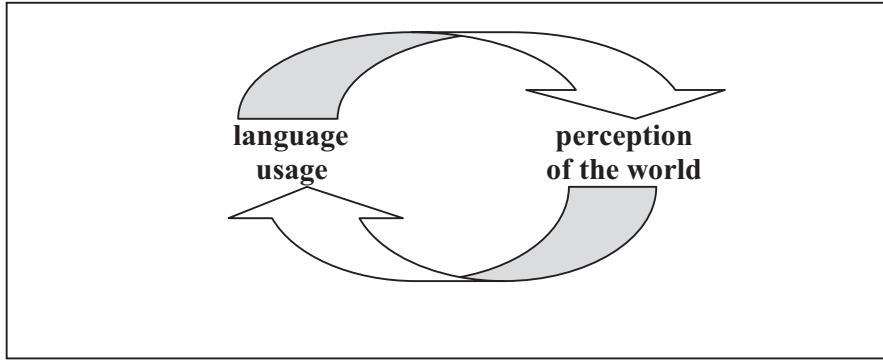


Figure 1.1 *Language reflects as well as shapes our view of the world around us*

Models of disability reflected in discourses

The first educational psychologist in the UK, Cyril Burt (appointed in 1913) is best remembered for developing the idea of categorizing people according to their IQ, as measured using the crude tests of the time (Segal, 1967). Those whose IQs were gauged at 50 or below were classed as ‘*feeble-minded*’, and those with an IQ of 70 were deemed to be ‘*backward*’, which later became known as ‘*educationally subnormal*’. The 1959 (British) Mental Health Act stipulated that these children were ‘*ineducable*’ – a powerful and demeaning label which reflects the pressure on students to be receptive learners, rather than on the instructors to be effective teachers. In 1970 these terms disappeared from official usage (Rogers, 1980), but of the generations of teachers who had been trained using this discourse, it is hard to imagine that all would immediately find it easy to embrace the idea that every child could – and should – be able to access education. What does seem likely is that changes in terminology would have been adopted (even if not fully internalized) more readily by the educational and medical professionals than by lay-people. This may well have caused difficulties in communication between parents and teachers, educational psychologists and students (Norwich, 1990). The use of language that is unfamiliar to non-experts serves to underline the power of the professionals and the powerlessness of the people they are supposedly working for. This is a common theme, as will be seen in the following sections which trace the development of discourses relating to dyslexia. Figure 1.2 illustrates the progression from a medically dominated discourse pertaining to dyslexia, to a more inclusive discourse, indicating some of the key terminology. As will become clear, though, it is by no means the case that when a new discourse is introduced, the previous one disappears.

The condition that is generally called *dyslexia* among medical professionals and lay-people alike is not easy to define precisely (see Chapter 2 for more on this). Perhaps for this reason, over the years a range of different expressions has been used to denote the

TIME	LOCATION OF PROBLEM	DISCOURSE	TYPICAL TERMS
Late 19 th Century	INDIVIDUAL PROBLEM	Medical Discourse: <i>Dyslexia as a Syndrome</i>	Diagnosis Treatment / care Condition Disorder
		Legal Discourse: <i>Dyslexia as a Disability</i>	Reasonable adjustments Discrimination Duty / Rights
Late 20 th century	SOCIETAL PROBLEM	Social Discourse: <i>Dyslexia as a Specific Learning Difficulty</i>	Disabling environments Integration
		Discourses used in Educational Settings: <i>Dyslexia as a Special Educational Need</i>	Statements Special Educational Needs Coordinator ('SENCo') Inclusion Support
21 st century	THERE IS NO PROBLEM – ONLY DIVERSITY	Inclusive Discourse: <i>Dyslexia as a Specific Learning Difference</i>	Individual differences Diverse perspectives Full accessibility

Figure 1.2 Chronological developments in dyslexia-related discourses

particular difficulties that dyslexic people experience; some of these are explored here. It is over a hundred and thirty years since it was documented that people of apparently average intelligence in other fields could experience difficulties in manipulating symbolic representations of speech, music or numbers. The first identification is usually ascribed to Adolph Kussmaul, a German doctor, who in 1878 recognized that one of his patients was unable to read, despite being otherwise cognitively sound (Kirby & Kaplan, 2003). He called the condition '*word-blindness*', thereby relating it to the visual impairment already well known and documented; this is a term that many people would find relatively accessible. Half a decade later, Rudolf Berlin, a German ophthalmologist, coined the term '*dyslexia*' (from the Greek words for 'difficulty' and 'word') to describe a condition in which people seemed to have lost their ability to read (Wagner, 1973). This term (arguably less accessible to non-medical lay-people) is now most commonly used for a developmental difference in learning, having replaced the term '*congenital word blindness*' proposed in 1917 by Hinshelwood (Ellis, 1993). Another early term for this condition which is no longer in everyday use is Samuel Orton's word '*strephosymbolia*', which translates literally as 'twisted symbols' (Orton, 1925, cited in Hallahan & Mercer, 2005). This is now reserved for a specific visual disturbance phenomenon in which the reader perceives the text to be distorted or moving. Other terms that are often used interchangeably for dyslexia, such as '*reading disability*', '*specific learning difficulty*' and '*specific learning difference*' will be discussed below.

A medical discourse

Much of the terminology relating to disabled learners (covering a full range of impairments) that was used in Britain up to the 1970s is considered unacceptable today, as was noted above. Expressions from the 1950s and 1960s such as *'imbecile'* and *'feeble-minded'* betrayed a lack of understanding of the issues that gave rise to difficulties in learning, and a lack of respect for the individuals so labelled. As diagnosis was in the hands of doctors, and based on the perceived deficits in individuals, the emphasis was on what learners could not do as well as their peers, resulting in them being designated *'dumb'* or *'handicapped'*. This medical model of disability focussed on physical or cognitive abnormality and informed many developments in the British education system. The assumption of the need for segregated 'special' education can be seen as analogous to quarantine for the students' own good, and that of the wider community (Oliver, 1990). Dyslexia is still often referred to as a *'reading disability'*, particularly in North America, which embodies the assumption that learning to read is a 'normal' activity that everybody should be able to do, rather than an activity that has only become central to our society relatively recently in human history.

Diagnosis of dyslexia and other specific learning differences (SpLDs) is usually now carried out by specialist assessors such as educational psychologists, rather than medical practitioners; they use statistical analyses to determine who has significant discrepancies (that is, 'abnormalities') in their cognitive profiles (see Chapter 5 for more details). A range of different cognitive functions (for example, visuo-spatial and phonological processing) are presented as indices, with standardized scores, confidence intervals and percentiles given. This can sometimes give the effect of reducing students' educational experiences to numbers, and neglecting the very human elements of diversity and individualism. Formal diagnostic reports typically document their statistical findings in scientific language that many people find opaque (particularly those dyslexic people who find any reading onerous). The use of this scientific language, with its reliance on Latin and Greek-based vocabulary, can have the effect of distancing the professionals from the people they are 'treating'. It serves to underline the authority they have to determine who has dyslexia, and who does not, and gives them the powerful role of gate-keeper when it comes to deciding who may be eligible for additional resources or reasonable adjustments in the curriculum.

Another aspect in which the medical model is still very often prominent is in describing what dyslexia is. Dyslexia is sometimes described as being a 'syndrome' in that there are a number of 'symptoms' that manifest in different ways in different individuals. An analogy can be made with the symptoms of a common cold: one person who declares that he has a cold may have a sore throat, a headache and a high temperature, while another may say that her cold symptoms comprise a runny nose, a cough and a shivery feeling. The two individuals experience different symptoms, but both can fairly be said to have 'a cold'. This can be a very useful way of thinking about the complex and diverse manifestations of dyslexia, which otherwise can be hard to explain. However, it is important to keep in mind that dyslexia is not a disease, and as such cannot be 'cured'.

There are several specific learning differences (SpLDs) that are often associated with and frequently co-occur with dyslexia, and these will be discussed more fully in Chapter 3. Here, it is worth noting that dyslexia and other SpLDs are often described as developmental ‘*disorders*’, such as Attention Deficit (Hyperactivity) Disorder (more commonly referred to as ADHD) and Obsessive – Compulsive Disorder (OCD). The very negative term ‘disorder’ highlights the ‘abnormality’ of the developmental pathway that people who have learning differences have followed and the suggestion of ‘chaos’ in their cognitive profile seems to pass judgement on them as individuals.

Since the 1980s, alternative models that take a more socio-cultural view of disability have been gaining strength, and their associated discourses are becoming more familiar. However, the medical model has by no means disappeared from our range of discourses, and it is still common to hear references to the ‘diagnosis’ of dyslexia, and to see medical analyses used as the basis for making reasonable adjustments in education.

A legal discourse

Over the last thirty years, recognition has been growing in the UK and many other countries that some learners (including those with hidden disabilities such as dyslexia) require particular types of support in order to succeed. Although well-meaning, and usually welcomed by teachers and students alike, the provision of this support is still based on the idea that some learners are deficient in certain ways; the legal discourse supports the belief that there is a problem, and that it is located in an individual learner. The British Education Act of 1981 established the legal parameters for this in the UK and defined a learner as having ‘Special Educational Needs’ (‘SEN’) because of ‘learning difficulties’ if he or she demonstrated ‘a significantly greater difficulty in learning than the majority of children of his [sic] age’ or ‘a disability which either prevents or hinders him [sic] from making use of educational facilities of a kind generally provided for children of his [sic] age in schools’ (DES 1981). These definitions assume some expected level of ability which some learners deviate from sufficiently to attract the label of ‘SEN’. They also fail to acknowledge that it may be the educational facilities that are generally provided which are deficient, rather than the learner.

The legal discourse that this legislation relies on makes use of concepts such as responsibilities, rights and duties. The legal protection offered to learners who experience difficulties in their studies is generally welcomed by these individuals and their advocates, but the paternalistic tone of the discourse seems strangely outdated in the 21st century; the use of the word ‘special’ in connection to the education of disabled learners is seen by some as overly sentimental (Corbett, 1996). In the USA, the term ‘exceptional’ has come to serve the same function as ‘special’ in British English to indicate that which is not ‘normal’ (see for example Winzer, 1993), however that is defined (if indeed it ever is). Although both terms have the potential to denote that which is better than usual and therefore desirable or admirable, all too often they are commonly used as a euphemism for educational provision that is of less value than that which is ‘ordinary’ or ‘mainstream’, and ultimately for failure (Barton, 1997). An analysis of the terminology in general use in legal circles shows that the deficit model underpins all the provision,

and that this has become quite firmly fixed in the common language of the literature and in schools and governmental circles.

This discourse is likely to affect learners in different ways, depending on their experiences in the education system. Some may be thankful for the opportunities they are afforded through the provision of additional support (in the form of technology or specialist tuition), and not think too deeply about the inequalities of the education system which mean that they require this support. Others may come to perceive themselves as unable to succeed on their own, and because of the support they receive, develop a 'learned helplessness' (MacIntyre, 2005), which persists throughout their lives. Undoubtedly, it is good practice for a society to set out what rights disadvantaged groups have, and to determine what provision will be made to enable them to succeed in life. It is unfortunate that this provision rests on the medical definitions of developmental differences, which will only perpetuate the excluding notion that it is somehow the individual who has a problem and who must be helped.

In the sense that the injustice of discrimination against people with disabilities is seen as socially created, this draws upon a social constructionist way of thinking. However, inasmuch as the legislation applies only to medically defined "impairments", it is limited to a medical model that deals with accidents of birth, and does not seek to address social causes of poor literacy learning (Chanock, 2007: 37).

A discourse of social construction

The view of disability as a socially constructed barrier is one that has gained wide acceptance over the last twenty years. The United Nations Convention on the Rights of Persons with Disabilities (2006) supports this model and defines disabled people as those 'who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others' (p. 4). The discourse of this model places the emphasis on disabling factors in society and the environment, rather than locating any difficulties in the individual. The term 'dyslexia' is used alongside the expression '*Specific Learning Difficulty*' (or SpLD) which indicates that an individual may face challenges with regards to one particular aspect of learning. Although this is an attempt to acknowledge learners' strengths as well as their areas of weakness, the term does not stand up well when scrutinized in detail. It seems that these students have a difficulty in learning that is specific to one area, or a difficulty with learning in one particular element of their course. When the implications of this are considered, it could be argued that almost all of us have a 'specific learning difficulty' in one way or another, perhaps with spatial awareness (e.g. in parking a car) or in processing figures (for a tax return). Booth *et al.* (1992) more helpfully suggest that most difficulties in learning are largely due to the contextual interactions of several factors in the education system, such as the physical environment, group dynamics, attitudes of staff and students, the materials and resources that are used, and government policy. In other words, the difficulty that the learner experiences is not an intrinsic characteristic of his or her person, and if the education system were

organized differently it would cease to exist (just as it would be easier to park if the bays were bigger).

For students who do experience ‘specific learning difficulties’, additional support should be made available, in compliance with the legislation. This is the provision of assistive technology or specialist tuition that was noted in the previous section, which is a legal responsibility of the educational provider. This support is additional to the input that the subject tutor offers the rest of the class and is perceived in a variety of ways by students who receive it. Some are open to the support and find that it enables them to succeed; others feel it is embarrassing to have to have extra help, or feel that they do not have time to access the support since they are having to work so hard to keep up with the class. Some students who are not receiving additional support may feel that those who are have an unfair advantage over them, and this can be divisive in a class. In any case, it seems that the discourse – although broadly based in a socio-cultural view of disability that seeks to identify systemic barriers to learning and provide solutions – still accepts that there are certain individuals who experience difficulties, and that ad hoc arrangements must be made to allow this minority to integrate into the system that caters for the majority.

Discourses of disability in educational settings

In educational institutions, the responsibility to comply with disability legislation is usually taken relatively seriously and it forms a prominent part of the school’s or college’s policies and procedures documentation. The discourse used in education can be categorized as a hybrid of the models already discussed above. Learners will be assessed by a suitably qualified professional who will *diagnose* the kind of disability present in the individual. Although practice varies from country to country, in England a *Statement of Special Educational Needs* may be drawn up and discussed by a panel made up of the professionals in conjunction with the advocates of the learner (and occasionally even the learner him or herself!). This will decide what provision needs to be made in terms of *additional support* by a *specialist teacher*, so that the learner can be *included in the mainstream class*, or whether the student would benefit most from attending a ‘*Special School*’ (i.e. a segregated institution which caters only for disabled learners, and which may offer a more restricted curriculum).

When choosing an educational route, some students with profound and complex physical and learning disabilities (or their parents or guardians on their behalf) may believe that a small institution with specialist staff and equipment will meet their learning needs more fully, and opt for the ‘special’ educational route. A good example of this is provided by some members of the deaf community in Hungary, whom Bajkó and Kontra (2008) found would prefer to learn English in a small discrete group with a teacher who made extensive use of sign language, rather than adapting to a predominantly oral language teaching situation in which they are likely to be disadvantaged. However, there are many students whose disabilities and learning differences are not complex and who would prefer to be educated alongside their peers, and for these learners, *reasonable adjustments* need to be made in order to allow *inclusion*.

Being '*included*' should entail all learners sharing not only the same physical space and facilities, but also following the same curriculum and extra-curricular activities as their peers. In reality, it is often the case that disabled learners are '*integrated*' rather than fully included. That is, they are allowed to be present, but without the expectation that they would be able to access all of the activities and facilities that other learners do.

Whilst many educational establishments are genuinely striving to implement an inclusive system, there is a very human tendency to find ways of meeting criteria set out by external bodies, so that, although policies and discourses may be adopted superficially, there is little fundamental change evident that points to the internalisation of the concepts or ownership of the policies. To some extent, this is the situation with the term '*inclusion*', which has been introduced in legislation and is now the 'correct' term to describe policies related to the education of disabled students. However, there appears to be a wide range of understanding as to what it actually means to implement an 'inclusive' education policy (Lindsay, 2003).

Hamre and Oyler (2004) comment that, in the USA, the term is often used to describe schools and colleges that try to provide education for disabled students in the same place as non-disabled students, rather than those that have a culture of providing education that is fully accessible for everyone. It thus has a much narrower remit than that set out in the 'Index for Inclusion' (Booth *et al.*, 2000). This ties in with Dyson's (2001) observation that there are also calls in the literature for '*responsible inclusion*', which he takes to mean, in reality, integration. This is the situation when students who have disabilities share physical facilities but do not interact meaningfully with the wider cross-section of the student population. The onus is on the individual to accommodate the needs of the 'including' institution. Barton and Tomlinson (1984: 79) suggest that it is often financial considerations rather than pedagogical goals that govern decision-making in many cases, and unfortunately 'political rhetoric supersedes practice'. Gray (2001) remarks that the 1997 UK Green Paper 'Excellence for all children: meeting special educational needs' describes inclusion as a process rather than a state, which seems to cast doubt on the likelihood of any educational establishment ever achieving a truly inclusive ethos, especially as the term has been usurped and the meaning corrupted.

There are also institutions that operate a semi-inclusive approach by withdrawing some learners from some classes in order to provide additional intensive tuition in first-language literacy or numeracy. Unfortunately, it is often second or foreign language classes that are deemed to be non-essential, so these students are denied the opportunity to broaden their world-views in this way. Other schools may run separate language classes for learners with an SpLD in order to provide specialist tuition designed to accommodate their learning styles. This may be beneficial to these learners, but as will be seen in later chapters, techniques that are helpful for learners with an SpLD are usually also good for their peers who have no apparent SpLD. In practice, therefore, there may be benefits for all in keeping the group together.

In its purest form, inclusion calls for a radical restructuring of the education system so that it will be equipped to accommodate all learners (Clough & Corbett, 2000; Frederikson & Cline, 2002), and, as such, it looks beyond the integration of disabled

learners in the 'mainstream' to a vision of participation and engagement in education which is accessible to all. This concept is explored in more detail in the following section.

Inclusive discourses of disability

In a truly inclusive model of education, no 'additional support' would be needed. No 'specialist teachers' would be required because all teachers would be teaching with the aim of including all members of the class. Materials would be produced in a range of formats, and therefore would not need to be specially adapted for individuals, and assistive technology would be available to everyone. There would be no need to discuss the issue of inclusion, because it would be taken for granted that everybody should be able to access all parts of the curriculum. Of course, individual learners would still experience their courses in different ways, and some would have greater difficulty with some areas than others. The range of diversity in human beings cannot be ignored, and this would inform the construction of the built environment, syllabi and curricula, thus affording full accessibility to all. The question that this utopian scenario would raise would be how to discuss the experiences of students who seem to be experiencing greater difficulties than their peers, without using demeaning or derogatory language.

MacKay (2006) suggests the use of the expression '*specific learning difference*' (also shortened to SpLD) for students who are currently deemed to have a specific learning difficulty such as dyslexia, autism, attention deficit or hyperactivity disorders (ADHD). The recognition that these are just manifestations of a different way of perceiving the world is a positive acknowledgement of learner individuality, and throughout this book the convention will be adopted of referring to a learner who has (or learners who have) an SpLD to mean those learners who exhibit some traits of any of the specific learning differences mentioned here and explored in more detail in the next two chapters. Booth *et al.* (2000) prefer the expression '*barriers to participation and learning*' to '*learning difficulties*', which clearly signals that the issues lie in the learner's environment, rather than in the individual. While both this term and '*specific learning differences*' unmistakably reflect inclusive attitudes towards all learners, critics could argue that they seem to suggest a reluctance to acknowledge that barriers and differences can result in very real experiences of difficulties in the classroom.

This ambivalence is in part explained by Dyson as a '*dilemma of difference*' (2001: p. 26); he asserts that maintaining the balance between emphasizing similarities and acknowledging difference is an essential feature of educational policy, past and present. The problem is to avoid what MacKay characterizes as confusing equity with uniformity (2002: p. 160). It is equitable to provide learners with input in a variety of formats, so that they can discover for themselves which sensory channels offer them greatest accessibility. It is not equitable to treat all learners in the same way, and disregard their individuality and their developmental differences. For example, in language teaching it is very important that teachers use a variety of task-types and differentiate in terms of expectation, level of challenge and degree of support offered, so that students with different learning styles are not disadvantaged. The particular difficulties that students

might experience because of these differences need to be recognized and named if they are to be addressed with practical strategies. To achieve this, we currently have to fall back on the language that is available to us, drawing from the range of discourses that have been explored in this chapter.

Labelling and self-identification

The phenomenon of individuals taking on characteristics assigned to them through the application of a label (such as 'bright' or 'disruptive') has been explored in the development of 'labelling theory', notably by Becker (1963) and Rosenthal and Jacobson (1968). The premise of this theory is that there are no qualities that can be objectively identified, but rather the more powerful members of a society agree on how certain behaviours should be perceived and assign labels accordingly. By categorizing students into particular groups (for example 'dyslexic' or 'having Asperger's syndrome'), the labellers come to perceive elements of behaviour to be characteristic of that category, when in fact an examination of empirical evidence may reveal that these elements can be found across a range of groups. Furthermore, the people so labelled also come to believe that they behave in ways designated by their label, and ultimately begin to display these behaviours. This can be a positive force in education – if teachers communicate that they expect a lot from their students, these students are more likely to succeed. However, more often it has a negative effect, because students labelled as having a disability (such as dyslexia) may come to believe that they are experiencing all of the difficulties that are associated with it. For this reason, some educators and parents are reluctant to pursue formal assessments for fear of how labelling a young person may affect his or her achievement.

MacKay reports from Scotland that the term 'Special Educational Needs' has been removed from the legislation in that part of the UK, so that Scottish legislation 'unequivocally recognises pupils with a disability' (2002: 159). However, as Bradley, Dee and Wilenius (1999) point out, it is not for the non-disabled community to formulate definitions without the input of disabled people. The World Health Organization now defines disability as: 'the outcome of the interaction between a person with an impairment and the environmental and attitudinal barriers he/she may face', which has been accepted by the broad-based disability-rights organization Disabled Peoples' International as leaning more towards a social view of disability than to medical/deficit models (Mulcahy, 2005). As noted above, the United Nations Convention on the Rights of Persons with Disabilities (2006) reinforces this view in the definition used in that document, which was the product of discussion between disabled people from several contributing countries.

Florian *et al.* (2004) argue that it is misleading and inaccurate to assign a learner to one main category of disability, and that it is likely to amplify the deficit notions already

prevalent in the education system. Whilst it is certainly necessary that extreme care be taken in the use of these labels, explicit recognition of these differences can be seen to have some beneficial consequences at a practical level for the learners, their teachers and families. Since we have not yet evolved a fully-inclusive education system, they provide a starting point for describing the difficulty the learner is experiencing in the classroom, and putting in place some support or accommodatory measures to enable learning to progress; in many countries an individual can invoke the protection of legislation as a result of the formal identification of some disabilities, and funding may also become available. An analogy can be drawn with language teachers identifying their learners' first languages, so as to be able to anticipate aspects of the target language that they might find strange or difficult, and approach them in a sensitive manner. It is important here to avoid essentialism, however, and to keep in mind that disabled learners (or even learners who have the same disability) do not form a homogeneous group (Barton, 2003), any more than a group who share a first language would.

On a social level, knowing the type of labels that may be applied to a particular kind of difficulty empowers learners and their families by enabling them to make contact with others who experience something similar, thereby building valuable support networks, and to do their own research independent of the 'experts' who provide the labels. It could be argued that this merely perpetuates a labelling culture, but as Farrell (2001) points out, we live in a society that categorizes us according to numerous criteria, and, with this in mind, perhaps it is better for learners and their teachers to be involved in some way with the process.

Some commentators have called for disabled people to reclaim terms that have hitherto been thought of as derogatory as a means of asserting their right to self-definition (Bolt, 2005; Corbett, 1996) and to try to unify an extremely diverse group of people (Beresford, 2005). The validity of this suggestion is supported by the success of other minority groups (such as homosexuals and ethnic minorities) in using such a strategy to challenge the dominant discourse and take control from the 'professionals'. One prominent advocate for people with Asperger's syndrome refers to herself as an 'Aspie' (Willey, 2009), and this term is beginning to appear more often in informal internet discussions. However, it has not yet become appropriate for people who do not have Asperger's syndrome (sometimes referred to as 'neuro-typicals') to use the term; it takes time for new words to evolve and transfer from their original speech community to the wider population, but the use of global electronic media is likely to increase the speed of language evolution.

Corbett reminds us that 'unfamiliar sounds take time to hear' (1996: 74), and there is little point in simply changing current terminology because, if there is no corresponding change in attitudes (Bolt, 2005), the new terminology simply becomes attached to outmoded thinking, and the status quo is conserved.

Challenging dominant discourses

Although it has been accepted that some of the terms noted above are unhelpful, insensitive and have no place in formal discourse in the 21st century, that is not to say that the terms preferred today will not be regarded by our descendants as derogatory or inappropriate. Indeed, this chapter has shown that the language of difference and disability, and how best to refer to learners who experience difficulties, has been the subject of ongoing debate in education for decades. The terms in current use in 'mainstream' education in the UK are 'Special Educational Needs' and 'Learning Difficulties' (Clough & Corbett, 2000), both of which require further definition in order to play any useful role in the discussion. In North America, the most common terms are 'Learning Disability' and 'Reading Disability'. In British post-16 education, there has already been a clear shift towards the terminology of 'disability' in an attempt to clarify the situation. Some institutions are phasing out the word 'support' from their literature, preferring instead to offer 'specialist tuition' and the 'provision of reasonable adjustments' to their disabled learners. It is not clear whether this has, or will in the future affect the attitudes or self-image of the learners who access these services. It may simply be a window-dressing exercise, designed to placate disability rights campaigners. However, any changes that are made serve to raise awareness of the language that is used and to encourage reflection on the underlying attitudes that the discourse embodies.

Teachers often serve as the intermediaries between other educational professionals and students, and as such often have to communicate messages between the parties. This important role involves a degree of translation skills, and requires fluency in several different discourses so that they are able to move between them as appropriate for each different audience. At the same time, there is some responsibility on teachers to choose to use more empowering discourses that reflect inclusive approaches to education. Of course, the responsibility to promote discourses that challenge the dominant, paternalistic aspects of our education systems cannot be borne by teachers alone; it must be shared among the academics who research and report in the field, the practitioners who use the language on a daily basis and the learners and their families who are the subject of the terminology (bearing in mind that these are not discrete groups, but include individuals who have more than one of these roles). It behoves us all to reflect on our use of language, and to acknowledge our own dependence on existing terminology (Beresford, 2005), whilst striving at the same time to promote those discourses that are beneficial to an inclusive environment, however we conceive of it.

In the following chapter we set out our understanding of the specific learning difference usually referred to as dyslexia, and highlight the difficulty of narrowly defining this very complex phenomenon.

Summary of key points

- Discourses embody prevalent attitudes; they both reflect and influence the way their users think.
- The dominant discourses relating to disability currently reflect the medical model and the social model of disability, but there are many alternative discourses.
- The medical discourse expresses disability as an abnormality located within an individual, which requires (medical) intervention.
- The social discourse expresses disability as a result of the barriers raised by society and the environment that prevents an individual with an impairment from doing what others do.
- The legal discourse draws on medical terminology to define which individuals should receive support in the form of reasonable adjustments in order to overcome societal and environmental barriers. It therefore draws on the two dominant discourses to further the rights of disadvantaged individuals.
- The discourse employed in educational settings is also a hybrid discourse, where terminology from other domains is sometimes adopted but used in a different way.
- The discourse of a truly inclusive education system has no need to refer to additional support or reasonable adjustments, since all curricula are fully accessible to all. However, it is still important to be able to discuss the ways in which individuals' specific learning differences impact on their studies.
- Wherever possible, learners should be involved in the process of defining their own difficulties.
- As teaching professionals, we need to make use of the full range of discourses, moving between them as necessary to enhance communication with other professionals, our colleagues, our learners, and their advocates.
- As teaching professionals we have a role to play in shaping attitudes towards disability through the language choices that we make, and by encouraging others to reflect on their own language use.

Activities

1. What are the advantages and disadvantages of the different discourses in discussing the difficulties that language students may experience in their studies?
2. Look at texts in your institution or your country connected to student support or learning development. Which discourse/s can you identify? If there is more than one discourse being used, can you determine why?
- 3a. Consider the words used for dyslexia and other specific learning differences in any other languages that you know. What discourses do they seem to fit best with?
- 3b. Do you know any new, alternative terms or older, less-used terms that might fit with other discourses? Why are some terms used in preference to others?
4. As you progress through this book, make a note of how the authors move between discourses when discussing different topics and try to decide how the different discourses complement each other.
5. Read Chanock's (2007) paper on the discourses of dyslexia. How many discourses does she identify? How would you characterize the differences between them?

Recommended reading

Chanock, K. (2007). How do we not communicate about dyslexia? – The discourses that distance scientists, disabilities staff, ALL advisers, students, and lecturers from one another. *Journal of Academic Language and Learning*, 1 (1), 33–43.

Corbett, J. (1996). *Badmouthing: the Language of Special Needs*. London: Falmer Press.

2

What Is Dyslexia?

Introduction	20
A historical overview of dyslexia research	20
Definitions of dyslexia	21
Basic learning mechanisms	24
Reading processes and learning to read	28
Behavioural manifestations and cognitive correlates of dyslexia	30
Cognitive and neurological explanations of dyslexia	33
Summary of key points	38
Activities	38
Further reading	39

Introduction

In this chapter we will discuss what dyslexia is. The reason we devote an entire chapter to this type of SpLD is that, among the various learning differences, it is dyslexia that has the most significant impact on language learning. As pointed out in the introduction of this book, different types of SpLDs are often difficult to distinguish from each other and often co-occur. Therefore, this chapter will not only consider the linguistic manifestations of dyslexia and the cognitive correlates of reading difficulties, but will also provide a broad overview of the strengths and weaknesses of dyslexic students.

Defining dyslexia is not a simple enterprise. If you ask a layman, he/she would tell you that dyslexia is a reading problem children tend to experience. A special education teacher would say that dyslexia is when children fail to learn how to read despite adequate instruction. An educational psychologist would describe dyslexia as a reading difficulty, which is unexpected given the cognitive abilities of the child. These definitions seem to suggest that dyslexic individuals have difficulties in reading, but, as we will see in this chapter, dyslexia might also affect spelling and general information processing skills. In fact, dyslexic adults might not exhibit noticeable problems with literacy skills and might mainly struggle with memory and attention problems. Dyslexia also has different degrees of severity; hence dyslexic students often display different profiles of strengths and weaknesses. Not only is the definition of dyslexia problematic, but, as this chapter will show, the causes of dyslexia are also enigmatic. Mainstream theories of dyslexia consider deficits in phonological processing as major causes of dyslexia, and neurological and genetic factors contributing to the development of dyslexia have also been identified. Recent theorizations of dyslexia, however, have begun to question the widely held belief that dyslexia is a specific learning difficulty that manifests itself only in literacy-related skills. It has been argued that dyslexia might encompass a conglomerate of learning differences, which among others cause problems in motor-control, sustaining attention and in the automatization of knowledge.

A historical overview of dyslexia research

The word dyslexia was invented in 1884 by a German ophthalmologist, Rudolf Berlin, in order to explain a neurological condition in which people lost the ability to read, but where all their other intellectual capabilities remained intact. Such cases had previously been described by Adolph Kussmaul with the term ‘word-blindness’. The terms ‘word-blindness’ and ‘dyslexia’ were used interchangeably until the 1960s, when dyslexia became the general term used for labelling reading difficulties (on the further evolution of terminology see Chapter 1). The first descriptions of cases of dyslexia were concerned

with acquired dyslexia, that is, with conditions when people lost the ability to read as a result of brain damage. Developmental dyslexia, that is, problems in learning to read in childhood and lack of achievement in the development of reading skills, was first studied by the British physician Pringle Morgan, who described the case of a 14-year old boy, who failed to learn to read despite his apparently good intellectual capacities.

Systematic research on dyslexia started in 1917 with the work of a Glasgow eye surgeon, James Hinshelwood, who made the first attempt to describe the symptoms of dyslexia. In the United States, Samuel Orton, a neurologist, studied a large number of patients who exhibited reading difficulties. He argued that the main problems of these people were related to 'symbol twisting' such as mixing up the letters b and d and interchanging letters in words. He concluded that dyslexia is caused by visual processing problems. As the list of researchers mentioned above reveals, in the early stages of the history of the field, dyslexia was perceived to be a medical problem, and most of the work on reading difficulties was carried out by doctors. Public awareness of dyslexia emerged in the beginning of the 1960s in the USA and in the UK, and dyslexia research started to be undertaken by educational psychologists. A major breakthrough in the investigation of the causes of dyslexia occurred when theories of reading were evoked in explaining reading difficulties, and when phonological deficit was identified as the main cause of dyslexia (e.g. the work of Vellutino, 1979). Since the 1980s, the study of dyslexia has been undertaken in a number of disciplines: educational psychology, linguistics, developmental and cognitive psychology, neurolinguistics, neuropsychology and genetics. Although our knowledge of what dyslexia 'is' is far from complete, insights from different fields of scientific inquiry will hopefully help us understand the causes of reading difficulties and find appropriate means to support students with dyslexia.

Definitions of dyslexia

Dyslexia is difficult to define because four different levels need to be considered in its definition: behavioural, cognitive, biological and environmental (Frith, 1999). At the behavioural level there seems to be an agreement that dyslexia manifests itself in reading problems (although we will see below reading difficulties are not the sole symptoms of dyslexia – for a review see Nicolson & Fawcett, 2008). The behavioural definition of dyslexia, however, is insufficient for several reasons. First of all, reading difficulties can be caused by a number of factors and not only by dyslexia; thus poor performance in a reading test is not a sufficient diagnostic criterion for dyslexia (Frith, 1999). Secondly, with age and practise, the reading skills of dyslexics improve, and the severity of reading problems tends to decrease, yet other dyslexic problems such as spelling difficulties might remain (Frith, 1999). Defining dyslexia at the behavioural level with sole reference to reading impairments would also imply that dyslexia is a condition children grow out of, which is obviously not the case.

To define dyslexia in terms of reading test performance is rather like defining measles as an increase in body temperature. Raised temperature, however, is merely a sign of the infection, not the illness itself. Decreasing the temperature is usually a good thing, but it does not cure the illness. All the knowledge accumulated in dyslexia research indicates that dyslexia is not a disease which comes with school and goes away with adulthood. It is not a temporary childhood affliction; it is a life-long burden (Frith, 1999: 209).

The difficulty of definition starts at the cognitive level, where explanations for reading problems need to be offered which are related to the cognitive functioning of dyslexic individuals. These explanations have to account for differences between dyslexia and general learning difficulties, and they have to be able differentiate dyslexia from other types of SpLD such as ADHD. At the biological level, further explorations into the neurological/genetic causes of differential cognitive functioning need to be carried out in order to understand the fundamental cause of dyslexia and develop effective support tools. This is especially important because for a long time dyslexia was not diagnosed until children failed to learn to read. Waiting until children experience failure might cause serious emotional and social problems and might eventually lead to poor overall academic achievement in school. Remediation and support at a young age is of crucial importance, and valuable time might be wasted if adequate screening methods based on findings in neurology are not developed (Nicolson & Fawcett, 2008). Environmental factors, such as exposure to print, attitudes to literacy in the family, and the effectiveness of reading instruction also need to be considered in order to separate the effect of social, cultural and economic status and inadequate teaching on reading behaviour from the effects of developmental dyslexia (see Figure 2.1 for the illustration of the different levels of dyslexia).

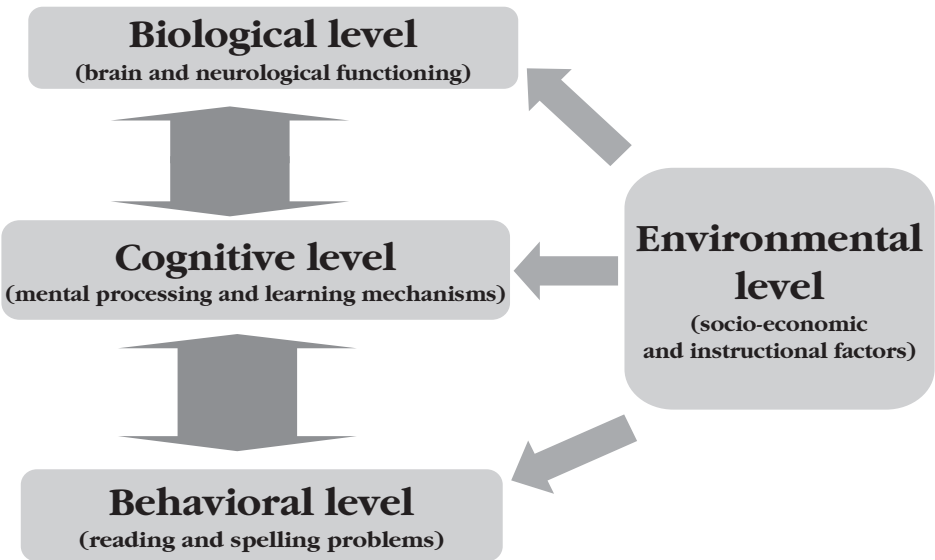


Figure 2.1 Illustration of different levels of dyslexia (based on Frith, 1999)

There is now extremely clear evidence that the earlier one intervenes in helping a child learn to read, the more effective (and cost-effective) the intervention is (with many different interventions apparently being effective). Replacement of the “wait-to-fail” diagnostic method is arguably the central applied issue (Nicolson & Fawcett, 2008: 17).

The first definition of dyslexia that dominated the international field of education up to the 1990s was based on the discrepancy between students’ aptitude primarily measured with the help of IQ tests and tests of achievement. An example for this conceptualization of dyslexia is the definition of the World Federation of Neurology in 1968, which stated that ‘developmental dyslexia is a disorder in children who, despite conventional classroom experience, fail to attain the language skills of reading, writing, and spelling *commensurate with their intellectual abilities*’ (our emphasis). Viewing dyslexia as a disorder was characteristic of the medical discourse in the 1960s, and, as argued in Chapter 1, it implies that dyslexia is an ‘abnormal’ condition. Definitions based on discrepancies between IQ and reading achievement have also come under serious criticism, due to the biased nature of IQ tests towards certain ethnic and social groups, and also because they were found to under-identify students with dyslexia (for a review see Fletcher *et al.*, 2007). An additional problem with this definition was that, in order to diagnose dyslexia reliably, the difference between the IQ test score and the reading test score had to be sufficiently large (Miles & Haslum, 1986). Consequently, students who were dyslexic but whose IQ score was in the lower band of normally developing children might have missed identification.

The main question that arose after the discrepancy-based definitions were discredited was how it was possible to identify reading difficulties without reference to general intellectual abilities. One possible answer was to introduce the concept of unexpectedness, namely that dyslexia might occur despite adequate cognitive skills, appropriate socio-economic circumstances and high quality literacy instruction. A number of conceptualizations of dyslexia in the 1990s viewed unexpectedness as the students’ failure to respond to appropriate and high quality instruction (Response to Intervention Model – Fuchs & Fuchs, 1998). A definition that illustrates this conceptualization is that of the American Psychiatric Association (1994): ‘Developmental dyslexia, or specific reading disability, is defined as an *unexpected*, specific and persistent failure to acquire efficient reading skills despite conventional instruction, adequate intelligence and socio-cultural opportunity’ (our emphasis). Although this definition is more detailed and makes more accurate predictions concerning the diagnosis of dyslexia, it is still a behavioural definition, which does not make reference to the underlying cognitive and neurological characteristics of dyslexic individuals. Another problem with this definition is that it shifts responsibility for reading difficulties from the educational institution to the individual learner.

More recent definitions of dyslexia include specific differences in cognitive and neuro-psychological functioning. One of the most influential definitions of dyslexia today is that of the International Dyslexia Association (IDA) in the United States, which makes an attempt to integrate all four levels of descriptions: biological, cognitive, behavioural and environmental (see Table 2.1). Although this definition is one of the most detailed to date, it does not provide sufficient insight into the nature of the neurological

Table 2.1 *Levels of description in the definition of dyslexia by the IDA*

Dyslexia is a specific learning disability that is neurological in origin.	Biological level
It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.	Behavioural level
These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities	Cognitive level
and the provision of effective classroom instruction.	Environmental level

characteristics of dyslexic children, and it places a heavy emphasis on the behavioural manifestations of dyslexia. Another issue to consider in relation to this definition is that it is primarily a medical definition, which describes dyslexia as a disability instead of regarding it as a learning difference.

Another related problem of definition is that dyslexia is dimensional and is not an ‘either-or’ condition; hence cut-off points in tests below which children are identified as dyslexic are often arbitrary. People can exhibit symptoms of dyslexia that range from mild to severe, and sometimes symptoms might even be camouflaged (Frith, 1999). The severity of dyslexia might depend on the nature of the underlying cognitive abilities, such as the extent to which phonological processing skills of individual children are impaired. Dyslexia might also have different sub-types: for example, there might be children who are only slow in reading (i.e. have speed differences), and children who decode words in accurately (i.e. have phonological processing problems), and children who have both speed and phonological processing difficulties (Wolf & Bowers, 1999). Other cognitive differences frequently associated with dyslexia, such as attention deficit, might also influence the severity of reading problems. Finally, educational factors, such as high quality remedial instruction, and a supportive home environment where literacy activities are highly valued, might also mitigate the manifestations of dyslexia.

Continuous abilities type theories of dyslexia are based on the assumption that reading ability occurs along a continuum defining levels of reading ability and that there is a gradation of risk for becoming dyslexic, depending on the particular assortment of reading-related cognitive abilities with which the child is endowed and the degree to which that child’s home and school environment capitalize and build on his or cognitive strengths and compensate for his or her cognitive weaknesses. (Vellutino *et al.*, 2004: 4)

Basic learning mechanisms

In order to understand dyslexia and other associated learning differences described in the next chapter, we need to be familiar with the basic cognitive mechanisms involved in learning. In the following we present the structure of memory and the mechanisms involved in acquiring various skills such as reading.

Memory is generally sub-divided into two main components: long-term memory and working memory. Long-term memory, as its name suggests, is the store for the knowledge, skills and habits a person has acquired during his or her lifetime and consists of two main components: declarative and procedural memory (Ullman, 2004). Declarative memory stores knowledge about facts and events, such as the fact that the capital of Italy is Rome, whereas procedural memory is the storage place for motor and cognitive skills and habits. Declarative memory is sub-divided into two further components. Semantic memory contains concepts as well as meaning related memory traces associated with these concepts, such as the concept that the dog is a furry four-legged animal. Episodic memory is the store of temporally organized events or episodes experienced in one's life (Tulving, 1972) – being bitten by a dog, for example.

Working memory is the gateway to long-term memory, through which information passes before being encoded in long-term memory. The most widely accepted conceptualization of working memory today is the model developed by Baddeley and Hitch (1974; Baddeley, 1986), in which working memory is not only seen as a storage device but also as a module where the processing and manipulation of information takes place. Although models of working memory use terms like modules, components and sending and receiving information, we should not think about working memory as a separate compartment of the brain. It should rather be conceptualized as part of the intricate network of long-term memory which is active at a given moment in processing information either based on the input or in preparation for producing output (Cowan, 1999; Craik, 2002; Engle, Kane & Tuholski, 1999). Working memory is limited in capacity and usually maintains information actively for one or two seconds (Baddeley, 1986). When we process incoming information, the memory traces of the information will fade very quickly, but if some elements of the incoming stimuli become integrated and encoded during this time in long-term memory, we can say that learning took place. Consequently, working memory is a key cognitive component in learning, and it has been found to influence a number of skills and abilities. As we will see below, working memory capacity plays a key role in most types of SpLDs.

The working memory model comprises a multi-component memory system consisting of the central executive, which coordinates two modality-specific subsystems, the phonological loop (also called phonological short-term memory) and the visuo-spatial sketchpad. The visuo-spatial sketchpad works with visual and spatial information, while the phonological loop is specialized for the manipulation and retention of speech. The central executive has several functions, including attentional control, directing the flow of information through the system and planning (Gathercole, 1999).

The most widely researched component of working memory is the phonological loop. This subsystem consists of a phonological store, which holds information for a few seconds, and an articulatory rehearsal process, which refreshes decaying information amongst other functions. The rehearsal process is analogous to subvocal speech and takes place in real-time, resulting in a limited span of immediate memory (after a certain number of items, the first one will fade before it can be rehearsed). The best example for the working of the phonological loop is when one wants to remember a telephone

number. In order not to forget the number before we can get a piece of paper and write it down, we keep repeating it to ourselves. Phonological loop capacity is often measured by tasks involving immediate serial recall of numbers (digit span) or words (Baddeley, 2003). One of the most widely used tests of phonological short-term memory capacity is the non-word repetition test, where participants have to repeat non-words of various length. Non-words are words that do not exist in the given language but conform to its phonological rules. We will show below that differences in phonological short-term capacity have important consequences for the acquisition of literacy skills and certain aspects of mathematical abilities.

One of the basic mechanisms in learning involves the development of the automaticity of a particular skill, such as the automatization of word-recognition. Automaticity is necessary for efficient, quick, effortless and accurate performance in a number of skills because our attentional resources are limited, and when carrying out complex activities such as reading a text, we cannot pay attention to all the processes involved at the same time. Most human activity involves a combination of *automatic* and *controlled* performance. For example, when we read in our first language, we automatically decode the words, retrieve the meaning associated with them and process the sentence structure, but in order to interpret the meaning of the text, we need to consciously draw on our background knowledge and remember previously read pieces of information. This latter process is an example of conscious controlled processing. Automatic processes are generally fast, can run parallel, are effortless, capacity-free and unintentional. They are the result of consistent practise and are not prone to interference from processes. On the other hand, controlled processing is often slow and inefficient, is limited by the capacity of the working memory and requires effort (Schneider & Shiffrin, 1977).

There are several theories of automaticity development, and here we will only describe the ones that have direct relevance in understanding the cognitive characteristics associated with SpLDs. There are two main groups of theories of automaticity: rule-based and item-based approaches. Rule-based approaches to automaticity view the development of automaticity as the transformation of factual knowledge into production rules, which are called *procedural knowledge*. To take an example from the field of learning to read in English, when a child is taught that the grapheme combination of ‘sh’ represents the [ʃ] sound, he/she will first store it as factual or *declarative knowledge*. With practise, this knowledge will be transformed into a production rule, such as: ‘if I see two letters s and h together, I should read [ʃ]’. Finally, this rule will be applied automatically, that is, without conscious attention. Rule-based approaches to automaticity attempt to account for how this conversion takes place. Item-based approaches of automaticity development argue that in learning solutions to problems, processing mechanisms become stored as one unit in memory (e.g. one does not add up 4 five times when calculating 4×5 but remembers the solution) and are retrieved from memory as a single item.

The best-known rule-based theory of the development of skilled performance is Anderson’s (1983) ACT* (adaptive control of thought) and ACT-R theory (adaptive control of thought – revised) (1995). Anderson proposed that the development of automatic processes does not only involve a quantitative change, that is, speeding-up, but also

qualitative modifications in the nature of processing. Two important processes in the development of automatic performance are *composition* and *proceduralization*. Composition and proceduralization constitute the sub-processes of knowledge compilation, in which the former involves the creation of ‘macro-productions’ from the smaller units of processing, and the latter the removal of declarative knowledge, which results in the retrieval of the production as a whole. In other words, the creation of macro-productions is called chunking, which refers to the psychological process of transforming items into larger units in order to help processing in the working memory. The simplest example of this is remembering telephone numbers. Due to the fact that the working memory can hold between 5-7 items at a time, when trying to remember a phone number, which is a long list of unrelated one-digit numbers, people tend to chunk this list into larger units in order to help keep it in working memory (e.g. 2 4 6 1 9 2 2 3 6 gets chunked as 246-19-22-36). The process of proceduralization has the potential to explain why, once a production has become automatic, the initial declarative knowledge underlying it is often not retrievable any more. For example, L2 learners who were once taught explicitly in which situations to use the present perfect tense in English might not remember the exact rules after the application of these rules becomes automatic. Figure 2.2 gives a graphic illustration of the theory.

Logan’s (1988) instance theory is an example of an item-based model of skill acquisition. Logan was the first to address the issue that not all learning involves the conversion from declarative to procedural learning. Logan assumed that automatic processing equals memory retrieval, that is, the use of an algorithm is substituted by a single step retrieval of the solution from memory. For example, beginning readers decode words letter by letter first, but, with the development of reading expertise, they will be able to automati-

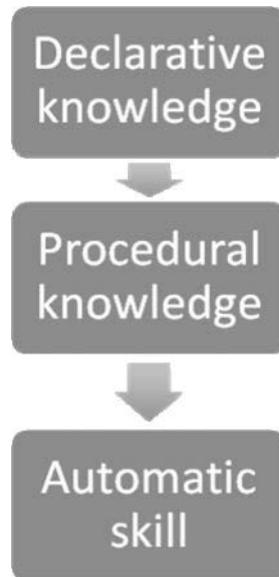


Figure 2.2 An illustration of skill acquisition theory

cally recognize words just by looking at them and without recourse to phonological analysis. In other words, in this theory it is presumed that if a problem is solved repeatedly, the solution becomes stored as one unit and is called upon when encountering the problem. With practise, associations between problems and the memory traces of their solutions become stronger, and retrieval consequently speeds up. Logan (1988) also argued that there is a competition between rule-based processing and memory retrieval, and the speed of the two different processes determines which one will be applied. Logan's instance theory is best illustrated with mathematical operations; when a child first learns to do multiplications, such as 6×3 , s/he will use the algorithm $6+6+6$. With practise, s/he will sooner or later remember the solution (18), and instead of applying the algorithm, will retrieve the solution from memory. Memory-retrieval will take place when its speed exceeds that of the algorithm.

Reading processes and learning to read

In order to understand the difficulties of dyslexic readers, we also need to examine how reading works. Reading is a complex skill in which several processes need to work parallel and automatically to aid the decoding of information. Reading skills are hierarchical in the sense that low-level reading processes such as word recognition and sentence comprehension need to be automatized before readers can be expected to understand the overall informational content of a text. The key component of lower-order reading processes is fast and efficient word-recognition (for a review see Perfetti, 2007). In order to recognize words, the reader needs to combine different processing mechanisms: orthographic processing (recognizing letters), phonological processing (phonological activation of word forms, converting letters to sounds, letter combinations to syllables), accessing the semantic and syntactic information related to the word, and finally morphological processing to understand words with suffixes and prefixes. Higher order reading processes involve creating a text model, that is, processing the informational content of the text, and a situation model, which helps the reader interpret the information presented in the text based on relevant background knowledge (Kintsch, 1998).

The prevailing views about dyslexia suggest that phonological processing problems are at the core of the reading difficulties that dyslexic students experience (see below). As these problems primarily manifest themselves at the stage of word-recognition, we will describe word-recognition processes in detail here. There are two ways in which words can be recognized: the sub-lexical and the lexical routes (for a review see Nicolson & Fawcett, 2008). In the sub-lexical route (route 2b in Figure 2.3), the written word is decoded letter by letter. The reader accesses the meaning of the word through the conversion of letters into sounds and assembling the sounds to form the phonological (spoken) form of the word. This is the prevalent reading process for beginning readers and for reading unknown words. There is another route for reading, which bypasses the phonological

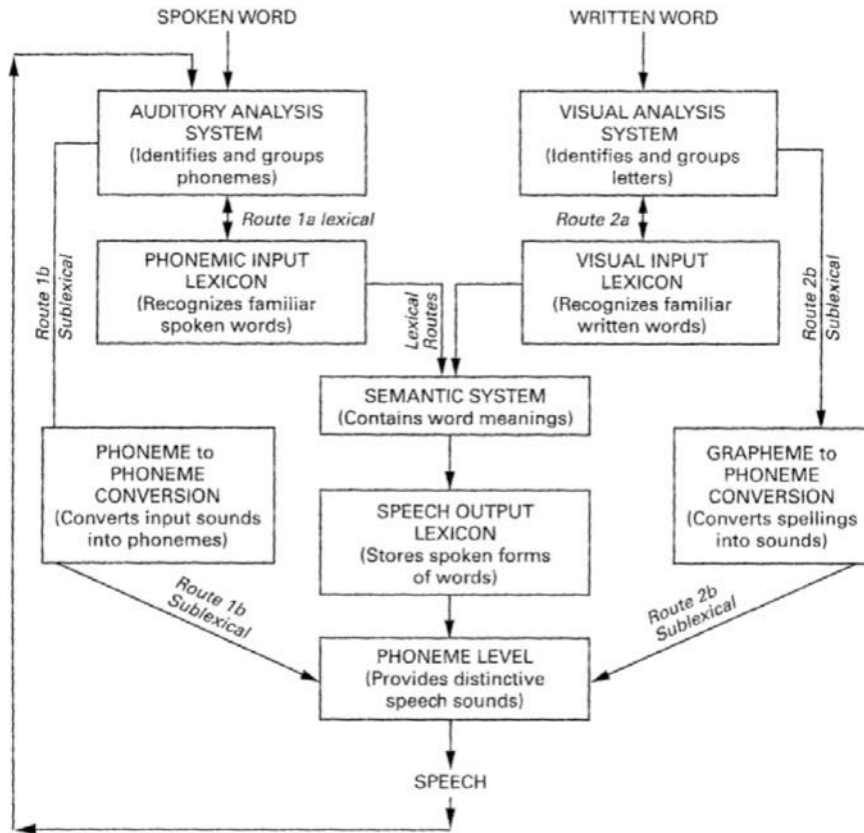


Figure 2.3 Model of word recognition (Figure 3.1. on p. 44 of Nicolson & Fawcett, 2008 reprinted with permission)

analysis, called the lexical route (route 2a in Figure 2.3). In the lexical route, readers perceive the visual form of words as a whole unit and recognize the word-form without having to analyse it into segments. Skilled readers often recognize familiar written words in this way.

In order to understand reading difficulties, it is also important to consider how children learn to read. The most influential theory of learning to read was proposed by Frith (1986), who argued that children acquiring reading skills in an alphabetic language proceed through three stages. First, children learn to read a few words as a whole unit, such as their names or the names of supermarkets on the roads they frequently pass. This is called the *logographic stage*, which corresponds to route 2a in Figure 2.3. In this stage, children do not yet know the alphabet and process the words visually as one single unit. In the next stage, the *alphabetic stage*, children learn to segment visually perceived word forms into letters, convert letters into sounds and combine them to form the phonological form of the word (see route 2b in Figure 2.3). Children need to achieve high levels of automaticity in these processes to be able to proceed to the next stage. If we recall skill acquisition theory, presented above, children will first acquire alphabetic

knowledge in a declarative form through explicit classroom instruction, and with ample practise they will proceduralize their knowledge and will be able to use it automatically. As children with dyslexia experience difficulties in phonological processing, it is this stage of learning to read that is the most challenging for them. They need more exposure to explicit explanation, as well as more practise, to be able to successfully move on to the next stage of reading.

The final stage in Frith's (1986) theory is the *orthographic stage*, in which children do not process words letter by letter anymore but analyse words into bigger units such as letter sequences and convert these into syllables. This is called the orthographic stage because readers have to make use of their knowledge of how written (orthographic) words are constructed from larger chunks such as morphemes, prefixes and suffixes. In Figure 2.2, this involves route 2a and additional phonological analysis from route 1a. Children with dyslexia might also find this phase of learning challenging due to their reduced level of syllabic awareness (see below).

Nicolson and Fawcett (2008) propose another stage in reading acquisition at which words are automatically recognized visually as one unit in a similar fashion as at the logographic stage. This stage of development can be understood as a solely memory-based process based on Logan's (1988) instance theory, which we described above. Instance theory of automaticity development might explain that in skilled word recognition there might be two routes: one based on the proceduralization of phonological encoding processes and one on instant memory based recognition of word forms. Phonological encoding processes might be called on in reading unknown or unfamiliar words, whereas memory-based processes are at work in the case of highly familiar words. This dual processing route explains why dyslexic people may easily recognize familiar words, and why their reading difficulties manifest themselves when faced with unfamiliar words.

Behavioural manifestations and cognitive correlates of dyslexia

The main behavioural manifestations of dyslexia in childhood are reading and spelling difficulties, as well as problems in memory and organization. As pointed out above, manifestations of dyslexia might vary in their severity and not all the symptoms might be present in every individual. Reading difficulties primarily manifest themselves in word-recognition and are assumed to be caused by difficulties in converting letters to sounds. Dyslexic children tend to have problems recognizing existing words as well decoding non-words. Although we will present a more detailed cognitive explanation for this problem below, we give a brief description of the nature of the word-recognition problems here. Every writing system, even Chinese, makes use of information related to speech sounds, or in other words, phonological information (Goswami & Bryant, 1990).

Alphabetic and syllabic writing systems are based on the notion that speech can be represented in units (i.e. phonemes in an alphabetic system and syllables in a syllabic system). Therefore, when children learn to read and write, they first have to be able to do two basic things: segment spoken words into relevant units, and acquire how specific units are represented in writing (orthographically). In the case of alphabetic writing systems, the latter process is called phoneme-to-grapheme mapping, and it is this process which causes the most serious difficulties for dyslexic learners (for a review see Vellutino *et al.*, 2004). These difficulties might result in slow and/or inaccurate word-recognition.

Another important factor influencing the nature of dyslexic difficulties is the language itself in which children learn to read. Some languages, such as Italian, German or Hungarian, have relatively simple sound-letter conversion rules and a predictable writing system, which is called *transparent orthography*. In other languages, such as English and French, the phoneme-to-grapheme mappings are complex and sometimes unpredictable, and acquiring these orthographic systems might cause serious problems for dyslexic children. As a consequence of the differences in writing systems, reading difficulties might manifest themselves differently in different languages. Italian or German dyslexic children might be slow but generally accurate readers, whereas dyslexic children whose first language is English might exhibit differences in reading both in terms of speed and accuracy (Paulesu *et al.*, 2001).

Another major area in which dyslexic children experience difficulties is spelling. In certain cases of dyslexia, spelling difficulties might be the sole signs of literacy problems (Frith & Frith, 1980; Snowling, 2008). Just like word recognition, spelling requires segmenting spoken words into phonemes and converting these phonemes into letters or letter combinations. While visual processing mechanisms such as recognizing the word as a unit by sight and other contextual clues might compensate for a lack of phonological awareness in reading, these compensatory processes are not available in writing. Therefore, spelling problems are frequent correlates of dyslexia and might often be observed in the case of at-risk readers who do not meet the diagnostic criteria for dyslexia based on their reading performance (Snowling, 2008).

We have shown above that learners with dyslexia have difficulties in segmenting words into sounds and learning sound-letter correspondence rules, both of which involve phonological processing. Phonological processing, however, is not only implicated in reading and writing but also in speech perception and speech production. Research evidence suggests that dyslexic individuals show differences both in the accuracy and in the speed with which they can process orally presented information (Bowers & Swanson, 1991; Wolf, 1991). Dyslexic children were found to perform significantly worse in sound-discrimination (Adlard & Hazan, 1998) and in word repetition tests than their non-dyslexic peers (Miles, 1993). Both of these tasks involve phonological short-term memory, which helps maintain verbal information active for further processing. Baddeley (1986) argued that the phonological short-term memory plays a crucial role in the learning of new words by storing unfamiliar sound patterns while long-term representations are built, which presupposes a direct link between short-term memory and the long-term retention of vocabulary. Impairments in phonological short-term

Table 2.2 *Overview of linguistic problems experienced by dyslexics*

Problems in segmenting words into phonological units
Problems with phoneme-grapheme correspondences
Problems in word-recognition
Slow reading speed
Difficulties in spelling
Smaller range of vocabulary
Slow word retrieval
Slow speech
Articulation problems
Problems in keeping verbal material in phonological short-term memory

memory and in phonological processing generally result in speech delay, a slower rate of speech sometimes with indistinctive pronunciation, and a smaller receptive and expressive vocabulary range (Lundberg & Høien, 2001; Scarborough, 1990, 1991; Snowling, 2008). Not only is the size of the vocabulary dyslexic children are familiar with often smaller than that of their non-dyslexic peers, but they might also be slower in retrieving words when they have to name pictures. Table 2.2 gives an overview of the linguistic problems experienced by dyslexic students.

One of the major problems in research on SpLDs, to which we will return towards the end of our discussion of dyslexia, is that most dyslexic individuals do not only exhibit difficulties in literacy-related skills but show other types of differences, though sometimes minor ones, in other areas of cognitive functioning. Research evidence suggests that dyslexic people also have a shorter working memory span (Jeffries & Everatt, 2004). This might explain, for example, why so many dyslexic children have problems memorizing the multiplication tables and have difficulties with arithmetic and are also considered as having dyscalculia (mathematical learning difficulties) (see Chapter 3). Reduced working memory capacity makes it difficult for dyslexic people to hold several pieces of information in working memory at the same time, which is often required in mathematics as well as in reading and listening to longer pieces of texts. Problems with sustained attention are also frequent in the case of dyslexic children and adults even in the absence of a formal identification of ADHD (e.g. Fletcher *et al.*, 2004; Snowling, 2008). Limited attention span can cause difficulties in general academic contexts and can lead to problems in acquiring general knowledge and skills, not only literacy related ones. Attention to input is a prerequisite for learning new information, and, due to problems in sustaining attention, dyslexic individuals cannot concentrate on new incoming stimuli for a long time, and might need repeated exposure to acquire new knowledge. Attention is also necessary for monitoring output, and thus dyslexic students are prone to making mistakes even if they have acquired the relevant knowledge and skills. Difficulties with

Table 2.3 *Overview of non-linguistic problems experienced by dyslexics*

Smaller span of working memory
Problems with arithmetic and memorizing multiplication tables
Difficulties with handwriting
Gross motor-coordination problems
Problems with sustained attention
Difficulties in time-management and organizing work
Difficulties in automatizing new skills

attention might also be the cause of difficulties in time-management, keeping deadlines and organizing academic work.

Dyslexic children and adults are often perceived to have difficulties with motor skills (for a summary see Nicolson & Fawcett, 2008). Fine motor skills are needed for handwriting, which explains why a large number of dyslexic children's handwriting is often difficult to read (Miles, 1993). Gross motor-coordination problems such as difficulties in bicycle riding and swimming have also been reported among dyslexic children (Augur, 1985). Finally, Nicolson and Fawcett (2008) additionally summarize evidence that dyslexic children tend to be slow in automatization when acquiring new skills.

We have already pointed out above that with adequate instruction, support from the home environment and practise, reading and spelling difficulties might decrease, but dyslexic adolescents and adults frequently continue to struggle with other problems associated with dyslexia, such as problems with working memory, sustained attention and the coordination of motor skills. Consequently, non-literacy related difficulties might be important signs for teachers working with language learners past childhood age, and these difficulties might sometimes need more attention in the classroom than problems with reading and spelling (for an overview of the difficulties see Table 2.3).

Cognitive and neurological explanations of dyslexia

The most well known cognitive theory of the causes of dyslexia, which is based on the models of reading and learning to read presented above, is the Phonological Deficit Hypothesis (Stanovich, 1988; Vellutino, 1979). As its name suggests, the Phonological Deficit Hypothesis assumes that dyslexia is caused by an underlying phonological processing problem, namely impaired phonological awareness. Phonological awareness has two levels: syllabic and phonemic knowledge. Syllabic knowledge entails the ability to segment words into syllables and manipulating syllables in words (e.g. deleting or

adding syllables). Phonemic knowledge involves the ability to divide words into sounds, differentiating sounds from each other and manipulating sounds (e.g. deleting, adding and substituting sounds). The Phonological Deficit Hypothesis has received extensive support through research, which has demonstrated that dyslexic people perform significantly worse in tasks requiring phonological awareness, such as non-word reading and non-word repetition, sound differentiation, letter recognition, deleting and adding letters and syllables to words, than their non-dyslexic peers. Support for decreased phonological awareness in dyslexic people, in particular in phonemic knowledge, has been provided in a number of intervention studies, where significant improvement in reading skills was achieved through training in phonemic awareness (for a review see Vellutino *et al.*, 2004). Difficulties with phonological processing skills can provide a good explanation for why dyslexic people have problems in lower level reading skills, specifically in word recognition, and why they experience spelling and speech perception problems (see Figure 2.4). There seems to be a consensus among dyslexia researchers that the underlying cognitive cause of reading difficulties in people with dyslexia is phonological processing deficit. The question, however, is whether phonological deficit is the only cause of dyslexia and what other underlying neurological problems might explain dyslexic reading difficulties. The Phonological Deficit Hypothesis has been instrumental in setting up remedial programmes for dyslexic children, which gave them support in acquiring sound-letter correspondences and helped to develop their phonological awareness.

A modified version of the Phonological Deficit Hypothesis is the so-called Double-Deficit Hypothesis, which posits that, in addition to phonological processing problems, naming speed deficits also play a role in developmental dyslexia. Research evidence suggests that dyslexic children are significantly slower in word naming tasks than people with no apparent dyslexia (Denckla & Rudel, 1976), which might point to problems with the speed of processing in the case of dyslexic participants. Wolf and Bowers (1999) argued that differences in naming speed and difficulties with phonological processing are two independent sources of dyslexic reading problems (see Figure 2.5). They supported their theory by showing that students who experience reading difficulties can be divided into three groups: those who exhibit speed problems; those with phonological processing problems; and finally the most severely impaired reading performance was associated

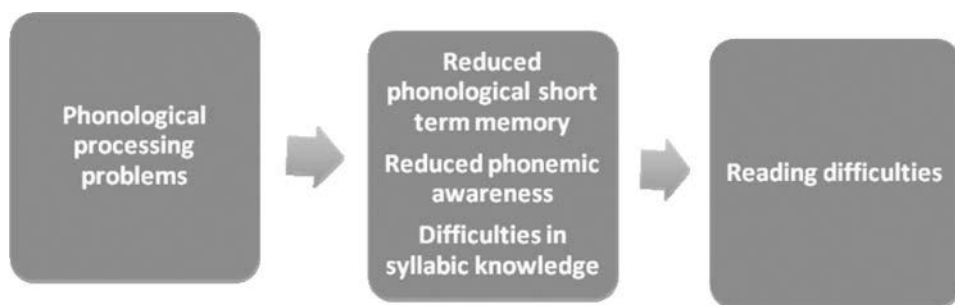


Figure 2.4 An illustration of the Phonological Deficit Hypothesis

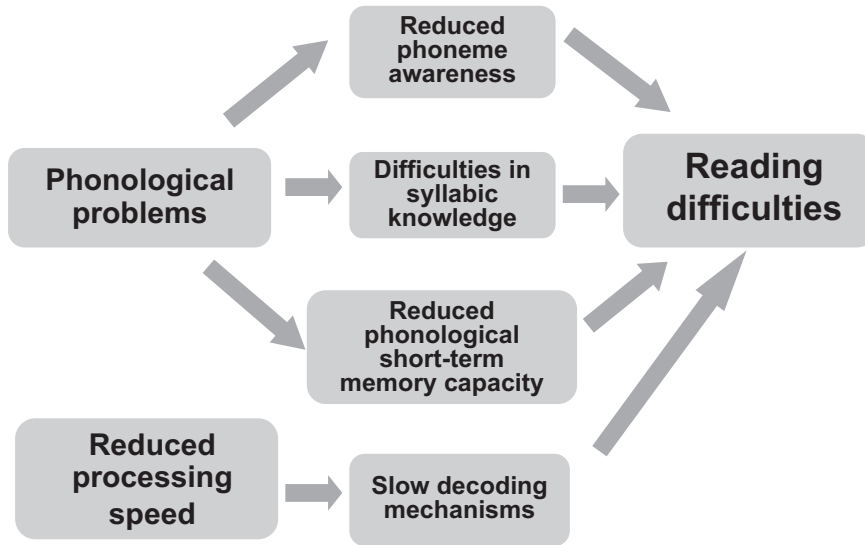


Figure 2.5 An illustration of the Double-Deficit Hypothesis

with both phonological processing and naming speed. It has to be noted that most studies that have tested the Double-Deficit Hypothesis found that the majority of dyslexic people have difficulties both in terms of speed and phonological processing (e.g. Lovett *et al.*, 2000; Pennington *et al.*, 2001). These findings seem to suggest that the Double-Deficit Hypothesis might not be tenable. Nevertheless, the hypothesis had important consequences for reading remediation because in addition to phonics support, children also started to receive training in the fluency of letter and word-recognition.

A competing cognitive theory of dyslexia is based on the observation that dyslexia frequently co-occurs with other types of learning differences such as motor coordination problems (dyspraxia), general language processing difficulties (Specific Language Impairment) and ADHD. Therefore, it might be argued that dyslexia is a manifestation of a learning difference, which is not only restricted to reading. Nicolson and Fawcett (1990) hypothesized that problems in the automatization of new skills are at the core of the difficulties dyslexic children experience in different spheres of life. In their view, 'dyslexic children will suffer problems in fluency for any skill that should become automatic through extensive practice' (Nicolson & Fawcett, 2008: 29). The illustration of their conceptualization of dyslexia can be seen in Figure 2.6. If we consider the theories of automaticity presented above, this hypothesis claims that dyslexic children have problems in the proceduralization of skills in general, and that they find it difficult to reach the stage of automatic skilled performance not only in phonological processing but also in fine and gross motor skills. Nicolson and Fawcett also developed a neurological model that supports their hypothesis. In this model, which is called the Cerebellar Deficit Hypothesis, they argue that a specific part of the brain, the cerebellum, is responsible for procedural learning, and deficits in cerebellar functioning are responsible for the variety of symptoms dyslexic individuals display in acquiring different skills. Although Nicolson

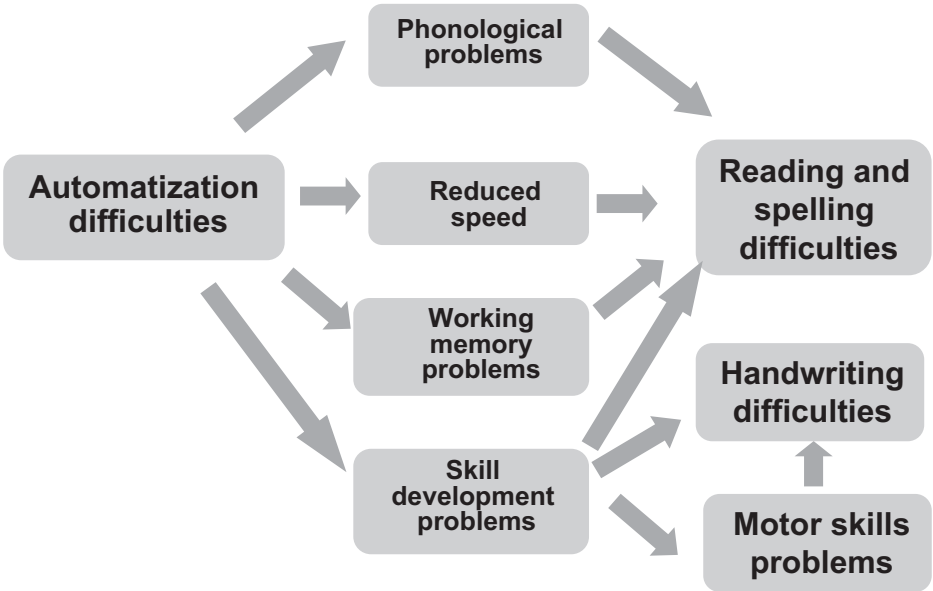


Figure 2.6 Illustration of the automaticity deficit hypothesis

and Fawcett’s hypothesis is compatible with the assumption that the cognitive cause of dyslexia is phonological processing deficit, it has been criticized on methodological grounds (for a review see Ramus, *et al.*, 2003). Nevertheless, it is worth noting that in a recent article Snowling (2008), who previously unequivocally supported the Phonological Deficit Hypothesis, acknowledges that ‘phonological deficits alone are insufficient to explain literacy difficulties, and it is children with multiple deficits (including language problems) that are more likely to succumb to reading failure’ (p. 142). Recent research in the field of behavioural genetics also suggests that learning differences do not only have specific effects on cognitive functioning but also on general functioning, and that learning differences restricted to one single module of cognitive processing are rare (Plomin & Kovas, 2005).

The present data suggest that it is not appropriate to question whether phonological deficit is necessary or sufficient to account for dyslexia – this kind of question depends on adopting arbitrary cut-offs for defining deficits. If instead dyslexia is viewed as a continuously distributed dimension, then those who fall at the lower end are more likely to have poor phonology. But they are more likely to have other cognitive deficits as well. This is not to deny that specific disorders exist; indeed individuals with pure disorders are more likely to be recruited to laboratory samples as the findings of our study make clear. (Snowling, 2008: 153)

Another neurological theory of dyslexia relates the causes of literacy problems to difficulties in processing visual and auditory stimuli in the cerebral cortex, which is the part of brain involved in understanding incoming speech. It was discovered that one of the pathways in the brain that transmits auditory and visual signals, called the magnocellular pathway, might be impaired in dyslexic people (Livingstone *et al.*, 1991).

Due to the fact that magnocellular pathways are responsible for processing both visual and auditory stimuli, two different theories of dyslexia were developed: one in which the visual pathway is affected (the Visual Magnocellular Hypothesis) and another in which the auditory pathway shows differential functioning (the Auditory Magnocellular Hypothesis). The Visual Magnocellular Hypothesis is based on Lovegrove's experiments, in which it was found that dyslexic people have difficulties in reading black print against a white background (Martin & Lovegrove, 1987). The Auditory Magnocellular Hypothesis claims that dyslexic children are slow in processing auditory stimuli. Neither of these theories has received sufficient empirical support (for a review see Nicolson & Fawcett, 2008).

Finally, we need to mention that dyslexia might have genetic origins. Research evidence suggests that male children who have either a dyslexic parent or a dyslexic sibling have a 50% chance of being dyslexic (Gayán & Olson, 1999). Advances in genetic research have also been made in terms of identifying the potential genes that might be responsible for dyslexia. Although the familial risk of dyslexia is very important in the diagnosis of dyslexia, environmental factors often override the role of genetics. Thus, a home environment in which literacy activities are supported and which creates optimal conditions for the cognitive development of the child might reduce the severity of reading difficulties associated with dyslexia. On the other hand, it is also worth noting that the effects of dyslexia in a family might be cumulative. It might often be the case that dyslexic parents cannot provide the necessary literacy and academic support to their children, which might predispose them to reading problems. Moreover, dyslexia is often the cause of reduced employability (see Chapter 9), and this might adversely affect the social and economic status of the family, which again might contribute to the development of reading problems in at-risk children.

In this chapter we provided an overview of the history of dyslexia research and outlined several definitions of dyslexia. We discussed the possible cognitive causes of dyslexia and related these to general theories of learning and models of reading development. The behavioural manifestations of dyslexia were also outlined in detail. We pointed out that although dyslexia is primarily associated with problems related to literacy skills, it is rare that dyslexia only manifests itself in the form of reading and spelling difficulties. Therefore, teachers also need to be aware of the challenges these learners face in other aspects of academic performance and in their private lives. The next chapter will acquaint readers with other types of learning differences that frequently co-occur with dyslexia.

Summary of key points

- The best available definition of dyslexia today is that of the International Dyslexia Association, according to which 'dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.'
- The mainstream position in dyslexia research is that, at the cognitive level, the cause of dyslexia is reduced phonological awareness.
- Dyslexia is a type of learning difference which is not only limited to reading and spelling. Literacy problems are frequently associated with other areas of cognitive functioning such as lack of sustained attention, difficulties in proceduralization and automatization of knowledge and problems with gross and fine motor skills. Even if dyslexic students have managed to overcome their literacy problems, their overall learning difference is not likely to disappear and it will affect them throughout their lives.
- Dyslexia is dimensional and not an 'all or nothing' state. Dyslexic difficulties might be of different degrees of severity and dyslexia might be associated with a variety of other learning differences, which means that dyslexic individuals might display very different strengths and weaknesses.
- Dyslexia needs to be considered in the context of education, the family and the socio-economic setting. Early identification and remediation of literacy problems is of key importance for dyslexic children not only to ensure their academic success but also to avoid the negative emotional experiences of failure. Family support in literacy activities and in creating a supportive atmosphere for the child's emotional and cognitive development plays an important role in reducing the effect of dyslexia on the child's future life and academic success. Children who are at-risk of dyslexia in disadvantageous social settings need additional support from the relevant educational institutions. Great care must also be taken not to over-diagnose dyslexia in specific social and cultural groups.

Activities

1. What definition of dyslexia is used in your country? Discuss the implications of this definition for diagnosis and teaching an L2.
2. What are the signs on the basis of which a language teacher might suspect that a student has dyslexia?
3. Discuss the different theories of dyslexia presented in this chapter in terms of their explanatory power with regard to the symptoms of dyslexia. Which symptoms can these theories account for and which ones remain unexplained by them?
4. Interview a parent who has a dyslexic child. What difficulties does the parent give account of concerning the child's experience in everyday life and in school?
5. Interview a dyslexic adult about the difficulties s/he experienced as a child in school and in everyday life and about the problems that persist in adulthood.

Further reading

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3

Associated Learning Differences

Introduction	42
Specific Language Impairment	42
Dyspraxia	44
Dyscalculia	46
Attention deficit and hyperactivity disorder	48
Asperger's syndrome	52
Summary of key points	55
Activities	56
Further reading	57

Introduction

In this chapter we will give a brief overview of a spectrum of learning differences other than dyslexia, which was discussed in the previous chapter. The selection of these differences is partly based on the definition of SpLDs currently used in the UK, which include dyslexia, dyspraxia (motor coordination difficulties), dyscalculia (mathematics difficulties) and ADHD (DfES Working Group, 2005). We have decided to describe an additional learning difference in this chapter, Asperger's syndrome, due to its high frequency among dyslexic individuals. We also provide a brief characterization of Specific Language Impairment (SLI) because it has very similar effects on reading as dyslexia, and consequently SLI and dyslexia are often difficult to distinguish.

The high co-occurrence rate of these SpLDs is remarkable and has led to a number of speculations concerning a common origin of these difficulties. In Chapter 2 we cited the recent views of Snowling (2008), who argued that learning differences do not seem to be restricted to one single module of cognitive processing. In the introduction of our book we also explained that we consider SpLDs to be a complex conglomerate of different types of learning differences, and therefore, here we are giving a brief description of particular difficulties associated with each SpLD, whilst not forgetting that they rarely appear alone.

Specific Language Impairment

Specific language impairment (SLI) is a learning difference that is often difficult to distinguish from dyslexia. SLI involves problems with comprehending and producing language (APA, 1994), and there seems to be a considerable overlap between dyslexia and SLI because a high proportion of students with SLI struggle with literacy-related problems (Tallal *et al.*, 1988). People with an SLI demonstrate difficulties with phonological processing, producing complex and grammatically correct utterances and they tend to have smaller vocabularies. One of the most apparent signs of SLI is delayed and often incomplete acquisition of grammatical morphology (e.g. omission of past tense endings or the auxiliary 'is' in English) (Leonard, 1998). Although dyslexic individuals share most of the characteristics of those with SLI, one of the major differences is that they generally show age-appropriate mastery of grammatical morphology. Recent research also shows that people with SLI tend to have more global speech perception problems than dyslexic students (see e.g. Joanisse *et al.*, 2000). It is important to note, however, that a small proportion of individuals who were diagnosed with SLI in childhood seem to overcome their difficulties, and no longer meet the diagnostic criteria for SLI, and hence they might not have reading problems (Bishop & Adams, 1990). Nevertheless, the difficulties students with SLI face in learning how to read and spell are similar to those of students who have dyslexia (Kamhi & Catts, 1986).

The diagnostic criteria for SLI were established by the American Psychological Association (1994) under the term mixed expressive and receptive language disorder. People can be considered to have SLI if they achieve significantly lower scores than the standardized average on tests of language comprehension and production. This criterion, however, might characterize a number of other conditions, and hence other exclusionary criteria also need to be met. These include a lack of hearing impairments, no history of otitis media, no signs of neurological dysfunction, and no anomalies in oral structure and oral motor function (Leonard, 1998). While there seems to be a consensus concerning the aforementioned diagnostic features, two additional criteria for SLI have been widely debated: age-appropriate level of non-verbal intelligence, and no symptoms of impaired reciprocal social interaction (Leonard, 1998). In Chapter 2 we have already pointed out that IQ tests might be socially and culturally biased, and consequently diagnostic criteria based on the discrepancy between IQ scores and other diagnostic tests might be problematic. It has also been found that people with SLI might underachieve in a number of non-verbal cognitive tasks, such as those involving mental imagery, hypothesis testing and non-verbal analogical reasoning (Leonard, 1998). This might be caused by the fact that language influences the way we think (see Chapter 1) and aids cognitive development. As a result, delays in language development might have noticeable effects on cognitive functioning (Johnston, 1991). Language is also a social tool used in establishing and maintaining relationships, and people with SLI might be disadvantaged in social life by their difficulties in comprehending and producing language (Gertner *et al.*, 1994). These social, linguistic and literacy-related difficulties might persist into adulthood and they might cause difficulties in language learning that are very similar to those experienced by students with dyslexia (see Chapter 4). Table 3.1 gives an overview of the potential difficulties of students with SLI.

The prevalence of SLI is approximately 7% (Tomblin, 1996). In common with all the other SpLDs that we discuss below, it is also more common among males than females. SLI seems to be genetic in origin and is hereditary (for a review see Leonard, 1998). The fact that SLI frequently occurs among members within the same family has often led to speculation that there is a ‘gene for language’, which is impaired in the case of individuals with SLI. The genetic origin of SLI, however, merely indicates that there might be a common genetic cause for SLI rather than indicating that there is *a* gene for language (Pembrey, 1992). It is important to point out, however, that approximately 30-60% of people with SLI do not have a close relative who has similar problems. This suggests that in addition to genetic predisposition, environmental factors such as the

Table 3.1 Overview of the difficulties experienced by students with SLI

Difficulties with phonological processing
Delayed or incomplete acquisition of grammatical morphology
Smaller vocabulary size
Difficulties with certain non-verbal cognitive tasks
Problems in social interaction

nature of the input the children receive from their caretakers might also play a role in the development of SLI (for a summary see Leonard, 1998).

Dyspraxia

A dyspraxic individual often comes across as uncoordinated in movement, lacking in attention and concentration and having speech production difficulties. Dyspraxia is defined as ‘an impairment or immaturity of the organisation of movement and in many people there may be associated problems of language, perception and thought’ (Dyspraxia Foundation, 1987, cited in Dixon & Addy, 2004: 8). Just like the word dyslexia, dyspraxia also has a Greek origin and means the poor performance of movements. Dyspraxia as a specific type of learning difference was first recognized by the American Psychiatric Association in 1987 and was given the label developmental coordination disorder, which is the term still widely used in the USA. It is important to note, however, that in modern psychological terminology, developmental coordination disorder and dyspraxia are not synonyms (Dixon & Addy, 2004). Developmental coordination disorders include general difficulties with the coordination of movement, whereas the source of difficulties in dyspraxia is in the planning and organization of movements, not in their actual execution. When one makes movements, three processes need to be performed in harmony: responding to incoming stimuli which require the movement (e.g. the request ‘Pass me a glass, please.’) and planning and organizing what one will do (e.g. lifting the hand, taking hold of the glass, handing over the glass), and finally executing the movement itself. Addy (2003) points out that in the case of dyspraxia, it is the ‘impairment of conceptualizing, planning and/or execution which is interfering with motor co-ordination’ (Addy, 2003: 8).

Dyspraxia occurs in approximately 5% of the population (for a review see Boon, 2000) and is approximately four times more frequent among males than females (Portwood, 1996). Research evidence suggests that almost every second individual with dyslexia also has dyspraxia (Montgomery, 2007). Due to the fact that dyspraxia sometimes affects fine motor skills alone, many children are only diagnosed as dyspraxic once they enter school.

In school, one of the most apparent signs of dyspraxic difficulties is when a child struggles with handwriting. Handwriting requires the orchestration of a complex series of movements as well as integrating different types of information (auditory, the sounds in words and visual, and the form of letters). Dyspraxic children find it very challenging to acquire handwriting skills (Ripley *et al.*, 2000) and might not be very good at drawing (Portwood, 1999). Hence, students with dyspraxia might experience difficulties in acquiring the writing system of another language, especially if the orthography is different from that of their first language. Some other everyday activities, such as handling cutlery and fastening buttons and zips while getting dressed, also involve fine motor skills, and hence might cause difficulties for dyspraxic children. In addition, dyspraxia might have an effect on speech production because articulation also involves the coordination of

fine-motor movement. Some, but not all, dyspraxic individuals have difficulties producing sounds in spontaneous speech and in repeating words (Boon, 2000), which can also cause problems in acquiring the sound system and pronunciation and speaking skills in a foreign language.

People with dyspraxia might also have problems with gross motor skills and therefore they might not be good at several types of sports, especially ball games (Portwood, 1999). As a result of gross-motor coordination problems, dyspraxic individuals often bump into objects and fall over things. Another frequent dyspraxic difficulty concerns the integration of sensory information (Ayres, 1972). This means that dyspraxic students find it challenging to integrate information obtained through the interaction of their body with the environment. For example, they can only carry out movements when their eyes are open, and they cannot listen to the teacher and write at the same time. They also have poor figure-ground awareness, which limits their sense of danger (their sense of heights and depths is often inappropriate) (Portwood, 1999). Problems with perceiving sensory information sometimes result in oversensitivity to noise or light (Portwood, 1999). Other manifestations of dyspraxia include limited concentration and attention span (Boon, 2000). Dyspraxic students find it difficult to sit still for more than five minutes and to engage in an activity for a long period of time. The co-occurrence of the predominantly inattentive type of ADHD (see below) and dyspraxia might be as high as 70% and approximately 35% of people with dyspraxia might meet the diagnostic criteria of the combined type of ADHD, that is, manifest symptoms of hyperactivity, impulsivity and inattention (Pauc, 2005). Portwood (1999) also describes a number of social consequences of dyspraxia such as problems adapting to school routine and difficulties in establishing relationships with peers (for a summary of difficulties that dyspraxic students might experience see Table 3.2).

The causes of dyspraxia are not yet fully known. The current position regarding its origin is that dyspraxia is ‘a developmental delay specifically in areas affecting motor function’ (Boon, 2000: 16) and that it ‘is the result of neurological immaturity in the cortex of the brain’ (Portwood, 1999: 11).

Table 3.2 *Overview of the difficulties experienced by students with dyspraxia*

Difficulties with handwriting
Problems in everyday activities that require the use of fine motor skills
Difficulties producing sounds in spontaneous speech
Lack of skill in certain sports especially ball games
Problems in integrating information from different channels
Limited figure-ground awareness
Shorter concentration and attention span
Difficulties in adapting to school routines
Difficulties in establishing social links

The programmes for supporting dyspraxic individuals include the development of fine and gross motor skills with the help of physiotherapists or occupational therapists. Dyspraxic children also receive speech and language therapy. Certain sports such as swimming and trampolining might have additional beneficial effects on motor-coordination and are therefore frequently recommended to dyspraxic children. It is very important that dyspraxic children engage in physical activities that can improve their motor coordination partly because practise improves their skills. Otherwise, due to their sense of failure, they tend to avoid these activities, which results in even more serious delays in the development motor-coordination skills.

Dyscalculia

Dyscalculia, which is a learning difference in mathematics, is an under-researched SpLD despite the fact that it might sometimes present more serious difficulties in the workplace than dyslexia (Bynner & Parsons, 1997). The reason for the neglect of this type of learning difference is manifold. First of all, it is not easy to identify dyscalculia because it often co-occurs with other learning differences such as dyslexia and ADHD (Gross-Tsur *et al.*, 1996), and hence it is difficult to ascertain whether dyscalculia is the sole manifestation of an underlying cognitive problem. Second, instruction in mathematics at primary school level is often inadequate (see for example Ginsburg's (1997) overview of mathematics education in the USA); consequently, children might fail to develop appropriate mathematical skills due to the poor quality of teaching. Finally, mathematical thinking is a complex skill, which draws on a number of abilities and cognitive processes such as the conceptual knowledge of numbers, proceduralization of arithmetic skills, phonological short-term memory, working memory, ability to divide and control attention and problem-solving strategies (Geary, 2004). Therefore, not only is it challenging to identify which ability or cognitive process is functioning differently in the case of children with dyscalculia, but it is also unlikely that there is a single cause of dyscalculia (Ginsburg, 1997).

In the new millennium there has been increased research interest in dyscalculia, and in the UK it was included among SpLDs in 2001 (DfES, 2001). The most recent definition of dyscalculia in the UK (SpLD Working Group, 2005) characterizes it in the following way:

Dyscalculia is a learning difficulty involving the most basic aspect of arithmetical skills. The difficulty lies in the reception, comprehension, or production of quantitative and spatial information. Students with dyscalculia may have difficulty in understanding simple number concepts, lack an intuitive grasp of numbers and have problems learning number facts and procedures. These can relate to basic concepts such as telling the time, calculating prices, handling change. (p. 5)

Whereas the definition of the SpLD working group is mainly a behavioural definition that lists the manifestations of dyscalculia, in an earlier definition provided in a booklet produced by the UK Department for Education and Skills (DfES, 2001) it is also mentioned that ‘Purely dyscalculic learners who have difficulties only with numbers will have cognitive and language abilities in the normal range and might excel in non-mathematical subjects.’ This shows that dyscalculia occurs in people whose IQ scores are in the normal range, and that dyscalculia might potentially exist as a single specific learning difference unrelated to reading and other literacy problems. Research evidence seems to suggest that 5% to 8% of school children have learning difficulties in mathematics (for a review see Geary, 2004), and approximately 60% of individuals who have dyscalculia also have dyslexia (Joffe, 1980).

Dyscalculia is neurological in origin (Kosc, 1974), and recent neurological research suggests that it is possible to identify the region of the brain that is responsible for dyscalculia (Dehaene *et al.*, 2003). There is also considerable support for the important role of genetic factors in dyscalculia. A study by Shalev *et al.* (2001) indicates that if a child has a parent or sibling who has dyscalculia, he or she is ten times more likely to develop mathematical difficulties than a child with no family history of dyscalculia.

As mentioned above, it is difficult to establish a reliable diagnosis of dyscalculia. For a long time, the presence of dyscalculia was merely identified by relying on a discrepancy between achievement in a mathematics and IQ test (for a review see Ginsburg, 1997). In Chapter 2 we discussed the problems of the IQ discrepancy-based diagnosis of dyslexia, and the same issues pertain to the identification of dyscalculia. Geary (1990) conducted a study, which involved first and second-grade children in the USA, who were defined as having dyscalculia in their schools. In the study the children received remedial mathematics instruction for 20 minutes every day. After one year, a considerable proportion of the students showed significant improvement and no longer met the inclusion criteria for dyscalculia. This highlights the problems with viewing learning differences solely in terms of deficiencies in the students’ cognitive abilities and points to the important role that instructional context and methods play in students’ difficulties in mathematics (see Ginsburg’s (1997) quote below). Ginsburg (1997) suggests that in order to identify students who indeed show serious difficulties in learning, experts should not only administer batteries of psychological tests in a laboratory, but also conduct classroom observations and examine how students respond to remedial teaching.

... learning disabilities cannot be understood in the overly simple terms of a defect or set of defects in need of repair. Cognition is “situated.” We cannot consider it apart from the many contexts in which it operates. To understand the child’s failure, we need to consider how his or her cognition functions in its context, particularly the context of schooling, which, as we have seen, cannot be assumed to be adequate. (Ginsburg, 1997: 28)

In discussing the cognitive factors in the development of dyscalculia, Geary (2004) explains that for the study of mathematics, students need to draw on a number of processing mechanisms and memory systems. In order to learn how to count, students should be able to remember and produce the name of numbers, which draws on

phonological short-term memory and the language system. The language system is also implicated in understanding mathematical problems that students need to solve. The visual-spatial system is responsible for learning the spatial aspects of mathematics. Working memory is involved both in attention control in solving mathematical problems and in keeping intermediary results of arithmetic operations in memory for further processing. The study of mathematics also entails the need for students to carry out mathematical procedures automatically (e.g. multiplications, additions and so on), which makes automatization of skills a key aspect in the successful learning of mathematics. Consequently, students who experience difficulties in mathematics might have underlying problems in cognitive functioning in any of these areas. Geary's (2004) summary of the existing research on dyscalculia indicates that children with mathematical difficulties have problems in attention control and also with representing and manipulating verbal information. This suggests a remarkable overlap between the cognitive characteristics of children with dyscalculia and dyslexia, and it might explain why these two learning differences frequently occur together. In Geary's (2004) view, although children with dyscalculia initially display difficulties in proceduralizing mathematical knowledge, they usually show improvement in this respect over the primary school years.

Individuals with dyscalculia might experience difficulties in learning numbers and expressing dates in another language. Their problems with manipulating and representing verbal information might also result in difficulties with word order and grammar rules.

Attention deficit and hyperactivity disorder

Another type of SpLD, which frequently co-occurs with dyslexia is attention deficit and hyperactivity disorder (ADHD). Whereas the previously described learning differences have no major influence on general behaviour, according to the official definition of both the American Psychiatric Association (1994) and the World Health Organization (1994), ADHD is a 'behavioural disorder'. Due to the central role of attention in cognitive functioning, however, ADHD also has considerable effects on learning. As the name suggests, the three major features of ADHD are inattention, impulsiveness and hyperactivity (APA, 2000). These characteristics can be detected in children at a young age, and one of the diagnostic criteria, which we will review below, is that they should manifest before the age of seven. Contrary to popular belief, ADHD is not a condition children grow out of. Difficulties associated with ADHD persist into adolescence and adulthood, although their severity might decline to the degree that adolescents and adults diagnosed with ADHD in childhood do not meet the diagnostic criteria for ADHD any more (Barkley, 2006). The prevalence of ADHD among children varies between 3% and 7% depending on the diagnostic criteria and on cultural and social attitudes to the symptoms

(Barkley, 1990; Szatmari, 1992). Recent comparisons of the frequency of ADHD in different countries (Barkley, 2006; Faraone *et al.*, 2003), however, clearly indicate that ADHD is not a learning difference that only occurs in Western cultures. This research also reveals that ADHD is not an artefact of modern civilization and of teachers' and parents' increased intolerance for inappropriately behaving children.

Statistics suggest that ADHD seems to be more common in males than in females. The ratio of boys diagnosed with ADHD compared to girls varies between 3:1 and 6:1 (Barkley, 1997; Ross & Ross, 1976). A careful examination of the diagnostic procedures and the associated behavioural problems indicates that one of the reasons why ADHD occurs less frequently among females might be that girls' behaviour tends to be less disruptive, and hence they might be referred to clinical assessment less frequently than males (Barkley, 2006).

A large number of children and adults are sometimes inattentive, impulsive and might have a tendency to be overactive, yet they cannot be characterized as having ADHD unless these characteristics have a serious impact on their quality of life. It is widely acknowledged in the current literature that ADHD is dimensional, that is, it can manifest in different degrees of severity (Barkley, 2006), but for diagnostic and remedial purposes a cut-off point needs to be established beyond which the symptoms need to be labelled as an SpLD. One of the criteria for SpLDs is that they should cause significant and persistent difficulties in social, academic or occupational functioning. Research evidence accumulated over the past thirty years indicates a number of long-lasting and detrimental effects of ADHD, which include poor academic achievement, behaviour difficulties in school resulting in suspension or expulsion, troubles in family and peer-relations, anxiety, depression and aggression (for a summary see Barkley, 2006).

The diagnostic criteria and the symptoms of ADHD are highly interrelated because ADHD is identified based on behavioural manifestations reported by teachers and parents, as well as on observations carried out by clinicians. In the Diagnostic and statistical manual of mental disorders IV (DSM T-R) (APA, 2000) the diagnostic features of ADHD are grouped into two main categories: those relating to inattention and those relating to hyperactivity and impulsivity (see Table 3.3 below). Six or more of the features in these categories need to be persistent in children for at least six months and need to manifest in two or more settings (e.g. both at school and at home). As mentioned above, other diagnostic criteria include that some of the features need to be present before seven years of age and that they should have a significant impact on social and academic life. The age-criterion in diagnosing ADHD is somewhat problematic because, on the one hand, some of the symptoms decline with age (e.g. running and climbing excessively might be an inadequate symptom for adolescents), and, on the other, for younger children some of the symptoms might be entirely age-appropriate (e.g. any seven-year old child might have difficulties organizing tasks and activities) (Barkley, 2006). Consequently, it is important to consider the developmental level expected in controlling attention and behaviour at a particular age. The criterion that the symptoms should manifest themselves in at least two settings requires agreement between parents, teachers and clinicians, which is often difficult to reach, and which, as a result, might undermine the reliability of the diagnosis (Barkley, 2006).

Table 3.3 *Symptoms of ADHD (DSM (T-R); APA, 2000)*

Symptoms of inattention

- a) Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- b) Often has difficulty sustaining attention in tasks or play activities
- c) Often does not seem to listen when spoken to directly
- d) Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behaviour or failure to understand instructions)
- e) Often has difficulty organizing tasks and activities
- f) Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
- g) Often loses things necessary for tasks or activities (e.g. toys, school assignments, pencils, books, or tools)
- h) Is often easily distracted by extraneous stimuli
- i) Is often forgetful in daily activities

Symptoms of hyperactivity and impulsivity

Hyperactivity

- a) Often fidgets with hands or feet or squirms in seat
- b) Often leaves seat in classroom or in other situations in which remaining seated is expected
- c) Often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- d) Often has difficulty playing or engaging in leisure activities quietly
- e) Is often “on the go” or often acts as if “driven by a motor”
- f) Often talks excessively

Impulsivity

- g) Often blurts out answers before questions have been completed
 - h) Often has difficulty awaiting turn
 - i) Often interrupts or intrudes on others (e.g. butts into conversations or games)
-

Based on the presence of symptoms in the two categories mentioned above, different sub-types of ADHD can be established. Although there is considerable debate concerning sub-typing, we will only describe the mainstream position, which is reflected in DSM-IV (T-R) (for further discussion of sub-types see Barkley, 2006). A person with ADHD might be characterized as predominantly inattentive (ADHD Predominantly Inattentive Type) or as predominantly hyperactive and impulsive (ADHD Predominantly Hyperactive Impulsive Type), or alternatively as a combined type who meets the criteria of diagnosis both for inattentiveness and for hyperactivity-impulsivity. If six or more features of inattention are prevalent, but diagnostic criteria for symptoms of hyperactivity-impulsivity are not met, the person is predominantly inattentive. If an individual displays six or more features of hyperactivity and impulsivity but limited signs of inattentiveness, he or she is classified as predominantly hyperactive and impulsive. Predominantly inattentive individuals are often described as having difficulties with focused and selective attention (daydreaming, being easily distracted, confused, losing things) and with processing information at an appropriate speed (slow in solving tasks) (Barkley *et al.*,

1990). Predominantly hyperactive and impulsive children are frequently perceived as restless, squirmy, fidgety, and as talking extensively and often out of turn (Barkley, 2006).

If we examine the features of ADHD in detail, we will see that problems regarding attention can manifest in different ways. Attention has different dimensions: alertness to new information and stimuli, the ability to select relevant information and divide attention, as well as to sustain attention (Hale & Lewis, 1979). Research evidence indicates that children with ADHD experience the most serious difficulty in sustaining attention, and that their problems might be further aggravated in situations when they have to engage in dull, boring and repetitive activities (Barkley, 2006). In school-contexts, however, children are often faced with monotonous tasks, and this explains why ADHD causes major problems in terms of academic achievement. Adults with ADHD also frequently report that they have difficulties with sustaining attention and can become easily distracted at work (Murphy & Barkley, 1996). Problems with attention-control also manifest themselves in learning another language. Language learners with ADHD might be prone to careless mistakes in writing in general and in spelling in particular. Although the speech they produce in a foreign language might be inaccurate, students with ADHD generally enjoy communicating orally in an L2, and they often become successful and fluent speakers.

Hyperactivity is evident among children through constant fidgeting, excessive talking, and the inability to remain seated in situations when it is inappropriate to leave one's place. These symptoms, which were also found to persist in adulthood (Murphy & Barkley, 1996), present problems in school, where children are required to remain seated and to be quiet for long periods of time. Impulsivity can be observed in situations when children give hasty answers before the instructions are finished or before they have fully considered the task and its possible solutions, which often results in careless mistakes. High levels of impulsivity also make it difficult for children to wait for their turns in speaking and playing with their peers, which often makes them appear to be rude and lacking in self-control. They also find it difficult to wait for feedback on their work and to persist in a task that does not have an immediate reward. Due to the fact that impulsivity seems to be one of the most pervasive symptoms of ADHD, the most widely accepted theory argues that the underlying cause of ADHD is the inappropriate functioning of behavioural inhibition (Barkley, 1997).

ADHD is hereditary, which indicates that it has genetic origins. Research evidence shows that the chance that a parent with ADHD will have a child with ADHD is 57% (Biederman *et al.*, 1995) and that the co-occurrence of ADHD is 81% among monozygotic twins. Genetic research has also identified the sections of DNA that seem to be responsible for causing ADHD (for a review see Barkley, 2006). ADHD is also associated with differential brain functioning and reduced activity in the prefrontal regions of the brain (Zametkin *et al.*, 1990). ADHD frequently co-occurs with other types of SpLDs such as dyslexia and dyscalculia. Depending on the system of diagnosis, the prevalence of dyslexia among children with ADHD is 8–39% and that of dyscalculia is 12–30% (Frick *et al.*, 1991).

It is important to understand that ADHD is a condition that will accompany an individual through life (Barkley, 2006). Symptoms of ADHD can be managed through behaviour therapy, which often involves parents and teachers. Medication, such as the use of stimulants, has also been effective in reducing the severity of symptoms of ADHD (for a review see Connor, 2006 and the quote below from the International Consensus Statement on ADHD). Parent training programmes focus on encouraging and improving parent-child relationships through a variety of techniques such as improving attending skills, avoiding conflicts, making transitions from one activity to another smoother, introducing reward and punishment systems and helping the child with self-regulation (Anastopoulos *et al.*, 2006). The basic principles of teacher intervention programmes include: giving clear and brief instructions; quick and prompt reaction to problems; rotating a variety of rewards for appropriate behaviour; using an array of incentives to keep children on task; giving immediate feedback on negative behaviour; anticipating difficulties; paying strategic attention to children with ADHD; modifying academic tasks; providing more frequent intervals between activities; and establishing efficient communication with parents (Piffner *et al.*, 2006).

This is why leading international scientists [...] recognize the mounting evidence of neurological and genetic contributions to this disorder. This evidence, coupled with countless studies on the harm posed by the disorder and hundreds of studies on the effectiveness of medication, buttresses the need in many, though by no means all, cases for management of the disorder with multiple therapies. These include medication combined with educational, family, and other social accommodations. This is in striking contrast to the wholly unscientific views of some social critics in periodic media accounts that ADHD constitutes a fraud, that medicating those afflicted is questionable if not reprehensible, and that any behaviour problems associated with ADHD are merely the result of problems in the home, excessive viewing of TV or playing of video games, diet, lack of love and attention, or teacher/school intolerance. (International Consensus Statement on ADHD, 2002, *Clinical Child and Family Psychology Review*, 5, p. 90)

Asperger's Syndrome

Asperger's syndrome is a sub-type of autism, which received its name after Hans Asperger, a Viennese paediatrician. Hans Asperger described a group of children who showed different characteristics from classic autism (Wing, 1981). His work was largely ignored until 1981, when Wing published her seminal paper on Asperger's syndrome and introduced the term itself to the field. The recognition of Asperger's syndrome as separate from classic autism was parallel to advances in re-conceptualizing autism from being a category (one either belongs to this category or does not) into constituting a spectrum ranging from severe to mild cases (Wing, 1981). Asperger's syndrome is often described as the triad of difficulties with social interaction, imagination and communication. Accordingly, the main features of Asperger's syndrome are: lack of empathy; difficulty in making friends; inappropriate understanding of figurative and non-literal language use; pedantic and repetitive speech; poor use of gesture and other means of non-verbal communication; intense absorption in certain subjects; and clumsy and ill-coordinated

Table 3.4 *Types of autism in the autism spectrum (based on Baron-Cohen, 2008)*

Type of autism	IQ	Language delay	Other
Asperger's syndrome	Above 85	No	
High-functioning autism	Above 85	Yes	
Medium-functioning autism	Between 71–84	Yes/No	
Low-functioning autism	Below 70	Yes/No	
Pervasive developmental disorder			Symptoms too mild for diagnosis, but higher than usual number of autistic traits

movements (Burgoine & Wing, 1983). Individuals with classic autism and Asperger's syndrome are similar in that they experience difficulties in social communication; they take great interest in narrow subjects and engage in repetitive actions (Baron-Cohen, 2008). In Asperger's syndrome, however, IQ is at least average and the individual does not exhibit delay in acquiring language as a child (APA, 1994) (Table 3.4 gives an overview of the different types of autism).

According to the latest statistics in the UK, one child in every hundred meets the criteria for the diagnosis of a condition that belongs to the autistic spectrum (Baird, *et al.*, 2006), whereas in 1981, this figure was only one or two in every 1000 children (Wing, 1981). The increase in prevalence is due to the re-conceptualization of autism as a spectrum, improved diagnostic criteria and enhanced public and professional awareness. Asperger's syndrome occurs approximately four times more frequently in males than in females (Ehlers & Gillberg, 1993).

Asperger's syndrome is genetic in origin and is hereditary (Gillberg, 1989). This is attested to by both twin and sibling studies, which have shown a high incidence of autistic conditions within specific families. Mutations and systematic variations in the genes and chromosomes of autistic individuals have also been found (for a review see Baron-Cohen, 2008). Recent neuroimaging research has revealed differences in the size, brain structure and blood flow in the brain of individuals with Asperger's syndrome when compared to people with no such condition (for a review see Attwood, 1998).

People with Asperger's syndrome perceive the world differently from everyone else. They find the rest of us strange and baffling. Why don't we say what we mean? Why do we say so many things we don't mean? Why do we so often make trivial remarks that mean nothing at all? Why do we get impatient when someone with Asperger's syndrome tells us hundreds of fascinating facts about the times tables, the individual numbers carved on lamp posts in the United Kingdom, the different varieties of carrots or the movements of the planets? Why do we tolerate such a confusion of sensations of light, sound, smell, touch and taste without getting to screaming pitch? Why do we care about social hierarchies – why not treat everyone in the same way? Why do we have such complicated emotional relationships? Why do we send and receive so many social signals to each other and how do we make sense of them? Above all why are we so illogical compared to people with Asperger's syndrome? (Lorna Wing's foreword to Attwood's (1998) book, *Asperger's Syndrome: A Guide for Parents and Professionals*, p. 9)

The quote from Wing on the opposite page vividly describes the world from the point of view of a child with Asperger’s syndrome. Individuals with Asperger’s syndrome experience a wide range of difficulties in social life, which include lack of interest in other people and a preference for being alone, atypical eye-contact, as well as difficulties in interactions due to excessive talking, lack of appropriate skills to manage a conversation and decreased abilities to read and interpret other people’s thoughts, emotions and gestures (Baron-Cohen, 2008). Other communication difficulties include the use of precocious vocabulary, difficulties with understanding implied and non-literal meaning, as well as the inappropriate use of language in the given social context (difficulties in pragmatics) (Attwood, 1998). Students with Asperger’s syndrome might also experience increased difficulties in the social aspects of communication in another language because the social and pragmatic conventions of the L2 might differ greatly from that of the L1. People with Asperger’s syndrome frequently engage in repetitive activities and have obsessive interests. They resist changes in routines and might have tantrums when modifications in regular activities are made. They often have unusual memory for certain things which are in their focus of interest and might develop great expertise in specific areas (e.g. mathematics, engineering, computer science) (Baron-Cohen, 2008). As regards language learning, this means that they enjoy acquiring those aspects of language that can be memorized and are regular, such as vocabulary and grammar rules, but they might find irregularities and unpredictable features of language confusing and difficult to grasp. People with Asperger’s syndrome might also demonstrate hypersensitivity to sensory stimuli such as sounds, textures, colours, smells and so on (for a summary of difficulties see Table 3.5)

Interventions for children with Asperger’s syndrome include social skills training, which entails explicit teaching of social behaviour and social rules as well as developing mind-reading skills. Behaviour, daily life and occupational therapy are also applied to help these children function in academic, work and private life settings. Additionally, music and art therapy have proved useful because they both rely on non-verbal skills and provide individuals with a sense of success (Baron-Cohen, 2008). Medical treatment of Asperger’s syndrome is only needed if the syndrome is associated with ADHD or depression (Ghaziuddin, 2005).

Table 3.5 *Overview of the difficulties experienced by students with Asperger’s syndrome*

Difficulties in social interaction
Problems in establishing social links
Pedantic and repetitive speech
Inadequate use of means of non-verbal communication
Difficulties in coordinating movement
Difficulties in managing conversations
Resistance towards changes in daily routine
Hypersensitivity to sensory stimuli

Children with Asperger's syndrome frequently study in mainstream classrooms and their special needs are not always easy to accommodate. Attwood (1998) lists a few strategies teachers can successfully apply to help the inclusion and the development of social skills of children with Asperger's syndrome. These strategies entail the use of cooperative games instead of competitive ones, teacher's modelling of relating to the child, using other children as models for appropriate classroom behaviour, and actively encouraging and helping friendship with other children. Baron-Cohen (2008) recommends that students' particular fields of interest should be exploited in the classroom by including activities that involve these interests (e.g. learning how to count using a catalogue of trains the child is interested in). He also suggests that rewards for students should include the opportunity to spend time on their interests (e.g. motivating the child to complete the task by rewarding him/her with time to study their train catalogue). It is also important to acknowledge and to accommodate these students' different learning style, which includes a preference for detailed analysis and facts as well as working alone in quiet and undisturbed settings (Baron-Cohen, 2008). Attwood (1998) highlights the importance of providing supervision at break times, which, due to the unstructured and unpredictable nature of the activities and noise in the playground, might be particularly stressful for children with Asperger's syndrome. Children with Asperger's syndrome might also be allowed periods of solitude in breaks instead of playing with other children.

This chapter reviewed the most common types of learning differences that classroom teachers might encounter: specific language impairment, dyscalculia, dyspraxia, attention and hyperactivity disorder and Asperger's syndrome. We described a number of characteristics students with these types of SpLDs might have in common and highlighted the challenges that are particular to the specific types of SpLDs. In the next chapter of the book we will discuss the language learning processes of students with SpLDs.

Summary of key points

- The SpLDs most frequently associated with dyslexia are dyscalculia (mathematics difficulties), dyspraxia (problems with motor-coordination), ADHD and Asperger's syndrome.
- SLI (specific language impairment) is difficult to distinguish from dyslexia and causes similar literacy-related difficulties.
- Most of these SpLDs (dyspraxia, dyscalculia and ADHD) as well as SLI occur with 3-7% frequency and are more commonly diagnosed among boys than girls. They are all predominantly genetic in origin. Remedial teaching and special therapy help to alleviate the difficulties caused by these conditions but their consequences persist into adulthood.
- The characteristic features of dyslexia, SLI, dyscalculia and dyspraxia frequently overlap.
- Dyscalculia can present serious difficulties at school and at the workplace. Students with dyscalculia find it challenging to understand, learn and work with number concepts.

Summary of key points (continued)

- Dyspraxia is an SpLD originating from problems with conceptualizing, planning and executing movements. It affects finemotor skills and might cause difficulties in articulation. Dyspraxic individuals find handwriting challenging and often struggle with certain every day activities that require coordinated movement such as handling cutlery and getting dressed. Dyspraxia might also cause difficulties in physical activities and in sports. Dyspraxic students find it demanding to integrate information presented through different sensory channels and have a limited attention span.
- ADHD has three key characteristics: inattention, hyperactivity and impulsivity; and three subtypes: ADHD Predominantly Inattentive Type, ADHD Predominantly Hyperactive Impulsive Type and ADHD Combined Type. Inattentive features include problems with focused and selective attention and slow information processing. Hyperactivity manifests itself in restlessness, fidgeting and excessive talking. Due to impulsivity, people with ADHD find it difficult to wait for their turn and to exercise an appropriate level of self-control. Teacher awareness and teacher intervention programmes are essential to accommodate children with ADHD in mainstream classrooms.
- Asperger's syndrome is a type of high-functioning autism, in which individuals did not exhibit language delay in childhood. Asperger's syndrome causes serious difficulties in social interaction and is characterized by narrow interests in a particular field and repetitive actions.

Activities

1. What are the difficulties that dyscalculia and dyspraxia might cause in learning another language? What kinds of language learning tasks are challenging for children and adults with dyspraxia and dyscalculia?
2. Which aspects of Asperger's syndrome make the acquisition of another language particularly demanding? What kinds of language learning tasks would students with Asperger's syndrome particularly enjoy?
3. What kind of adjustments are needed in the physical settings of the classroom when working with children with ADHD?
4. What kind of adjustments are needed in the physical settings of the classroom when working with children with Asperger's syndrome?
5. What kind of classroom management techniques can ensure the successful inclusion of students with ADHD in foreign language learning?

Further reading

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4

Cognitive and Emotional Aspects of Language Learning

Introduction	60
What processes are involved in language learning?	60
<i>Cognitive abilities in language learning</i>	61
<i>Affective factors in language learning</i>	64
An overview of the language learning difficulties of students with SpLD	65
<i>Vocabulary learning</i>	68
<i>Acquisition of grammar</i>	71
<i>Reading in L2</i>	72
<i>Writing in L2</i>	74
<i>Producing and understanding oral texts</i>	77
Towards success in language learning	79
Summary of key points	80
Activities	81
Further reading	81

Introduction

Learning another language either in a foreign language context or in a second language environment can prove to be challenging for students with an SpLD. In this chapter we will explain how cognitive factors associated with SpLDs influence language learning, and we will also demonstrate the emotional and motivational consequences these difficulties have on language learning processes. Our discussion of the cognitive and emotional aspects of language learning mainly focuses on foreign language learners in classroom settings, but many of the theoretical considerations and research findings also apply to language learners in second language classrooms in the target language environment.

What processes are involved in language learning?

Before we discuss the language learning processes of students with an SpLD, let us see what is involved in learning a language in general. When we acquire a language, no matter whether it is another second or foreign language, we need to learn a lot of words together with their meanings, spelling (orthography) and pronunciation (phonology). We also need to be able to form phrases, clauses and sentences, and for this we need to know the rules for how words can be ordered and conjoined to make an utterance. In other

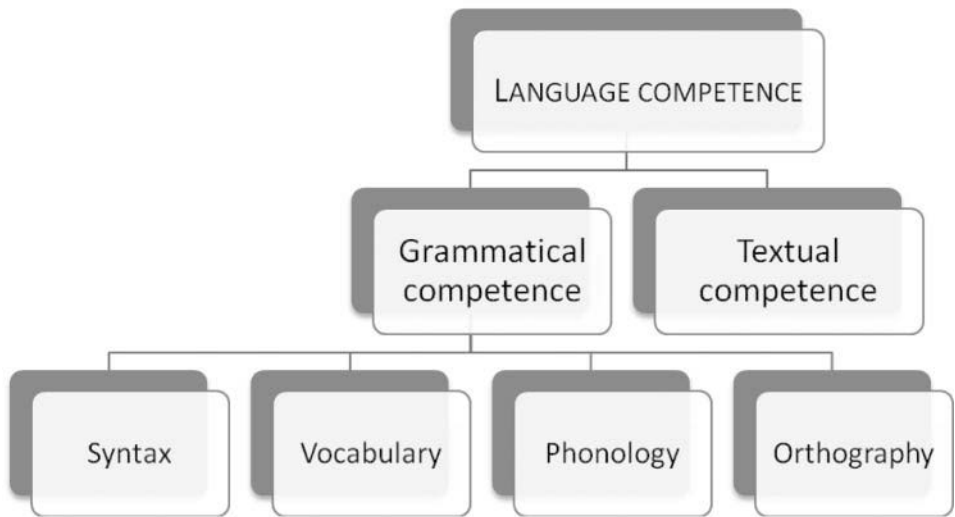


Figure 4.1 Components of language competence (based on Bachman & Palmer, 1996)

words, we have to acquire rules of syntax and morphology. Finally, we need to know how sentences are combined to form meaningful texts of different types, which helps us read and listen to longer stretches of discourse and produce texts both in writing and in speech (see Bachman & Palmer, 1996; Canale & Swain, 1980, for a more detailed discussion of these components). The graphic representation of the components of *language competence* below illustrates the most important components of language proficiency we have just listed.

Language learning, however, does not only involve the acquisition of knowledge. Speakers of the language also need to know how they can apply the knowledge they acquired because language use is a complex skill. When we read, speak, listen to others and write texts, we draw on all the types of linguistic knowledge presented above, and we use it to perform different communication tasks successfully. Therefore, it is not enough to have factual, or in other words, *declarative* knowledge of the language, but we have to be able to use this knowledge appropriately in the given context. The ability to apply knowledge is called *procedural* knowledge (for a description of how declarative knowledge becomes procedural and automatic see Chapter 2).

It is also important to note that not every type of L2 knowledge and skill is acquired through *explicit*, conscious learning. Much of L2 learning, especially in a naturalistic environment and in childhood, involves *implicit learning*. Implicit learning takes place in situations when the learner is not aware of learning, such as acquiring vocabulary through reading. The fact that students are not aware of learning does not mean, however, that implicit learning does not involve consciousness and attention. For implicit learning to take place, students need to receive a large amount of input in which they need to notice patterns of co-occurrences, from which they can draw generalizations. For example, in order to learn a new word from reading texts, students need to encounter a word several times and notice the new word and associate it with the relevant meaning based on the contexts in which it occurs (for a discussion of explicit and implicit learning in L2 learning see Hulstijn, 2003).

Cognitive abilities in language learning

Now let us consider what cognitive abilities are needed to successfully acquire all these different types of knowledge and skills. Language learning comes naturally to some people, whereas many others fail despite investing a lot of effort in studying. In layman's terms, this is called a gift for languages, but in the study of second language acquisition, the term *language aptitude* is used. Carroll, who developed the first language aptitude test, defined language aptitude as 'some characteristic of an individual which controls, at a given point of time the rate of progress that he will make subsequently in learning a foreign language' (1974, quoted by Sawyer & Ranta, 2001: 310). As the quote suggests, in Carroll's original conceptualization of aptitude, this cognitive factor was assumed to predict the rate of learning and not the actual success of second language acquisition. Carroll (1981) identified four components of language aptitude: (1) *Phonetic coding ability*, which is 'the ability to identify distinct sounds, to form association between those sounds and symbols representing them, and to retain these associations' (p. 105), (2) *grammatical*

sensitivity, meaning the ability ‘to recognize the grammatical functions of words (or other linguistic entities) in sentence structures’ (p. 105), (3) *rote learning ability*, which was defined as ‘the ability to learn associations between sounds and meanings rapidly and efficiently, and to retain these associations’ (p. 105), and (4) *inductive language learning*, that is, the ability ‘to infer or induce the rules governing a set of language materials, given sample language materials that permit such inferences’ (p. 105). Ehrman and Oxford (1995) found that among individual differences it is language aptitude that correlates most closely with foreign language performance. Moreover, Skehan (2002) also suggested that certain components of the traditional construct of aptitude such as grammatical sensitivity and deductive ability might assist L2 learning in naturalistic contexts, where learners have few opportunities to acquire L2 linguistic rules through explicit explanation, and acquisition processes tend to be mainly implicit. In sum, there seems to be evidence for the relatively strong link between language aptitude and ultimate achievement in language learning (see also Grigorenko *et al.*, 2000), and that aptitude influences the success of second language acquisition in a number of instructional settings (for a recent discussion of aptitude in language learning see Kormos & Sáfár, 2008).

Another key cognitive ability involved both in L1 and L2 acquisition is phonological short-term memory. In Chapter 2 we described the functioning of phonological short-term memory and its key role in literacy development. Phonological short-term memory is also a significant factor in L2 learning both in instructed and in naturalistic contexts. Service and her colleagues (Service, 1992; Service & Kohonen, 1995) found that the ability to repeat English-sounding pseudowords was a good predictor of English language learning success among Finnish primary school pupils during the first three years of training. Papagno and Vallar (1995) showed that phonological short-term memory and word-learning abilities are related among adults as well. In a study with university students, Speciale *et al.* (2004) found that both phonological sequence learning and phonological short-term memory capacity contributed to the success of vocabulary learning. Phonological short-term memory not only aids the acquisition of L2 words, but also the learning of syntactic structures. Ellis (1996) argued that learning sequences of different linguistic units (such as phonemes, morphemes, words and grammatical structures) is an important aspect of second language acquisition. As phonological short-term memory is responsible for remembering sequential information, the successful acquisition of syntax is influenced by short-term memory capacity. Furthermore, O’Brien *et al.* (2006) showed that there is a link between phonological memory and oral production skills in another language.

At the core of the above listed individual difference variables that can potentially influence the success of second language acquisition, we can find basic cognitive capacities that are also necessary to successfully acquire one’s mother tongue and literacy skills in the first language. Memory for verbal material, which is primarily associated with phonological short-term memory (see Chapter 2), helps us remember words in our first language as well as in a second language. Phonological short-term memory aids in decoding sequences of sounds and associating them with words and their meanings, which is essential in learning reading and spelling both in L1 and in L2. Verbal reasoning skills are related to grammatical sensitivity and inductive language learning ability, both of which

play an important role in the acquisition of syntax and morphology by helping students to discover rules and regularities of the language. The phonological deficit account of dyslexia argues that dyslexia is a type of learning difference, which is caused by the impairment of the speech processing system (Frith, 1985; Snowling, 2000; Stanovich, 1988; Vellutino, 1979). A number of studies (e.g. Fletcher *et al.*, 2006; Snowling, 2000) have found that students with dyslexia show problems in phoneme awareness and word-recognition and have significantly smaller ranges of vocabulary in their L1 than children with typical reading achievement. Accordingly, it is expected that students with dyslexia would score lower on tests of language aptitude than non-dyslexic students. Indeed, empirical research on the language aptitude of language learners with dyslexia shows that these students tend to achieve consistently lower scores on all the components of tests of foreign language aptitude than those with no apparent signs of an SpLD (e.g. Downey *et al.*, 2000) (see Figure 4.2). The phonological short-term memory capacity of students with an SpLD is also smaller than that of their peers (Fletcher *et al.*, 2006; Snowling, 2008;). As we will show below, problems with phonological short-term memory might cause difficulties in a number of areas of L2 learning.

In their Linguistic Coding Differences Hypothesis, Ganshow and her colleagues argue that ‘the primary causal factors in successful or unsuccessful FL learning are linguistic; that is, students who exhibit FL learning problems have overt or subtle L1 deficiencies that affect their learning of a foreign language’ (Ganschow *et al.*, 1998, pp. 248–9). It is widely acknowledged that linguistic skills in one’s first language provide the basic foundation for foreign language learning (Spolsky, 1989). We have to note, however, that

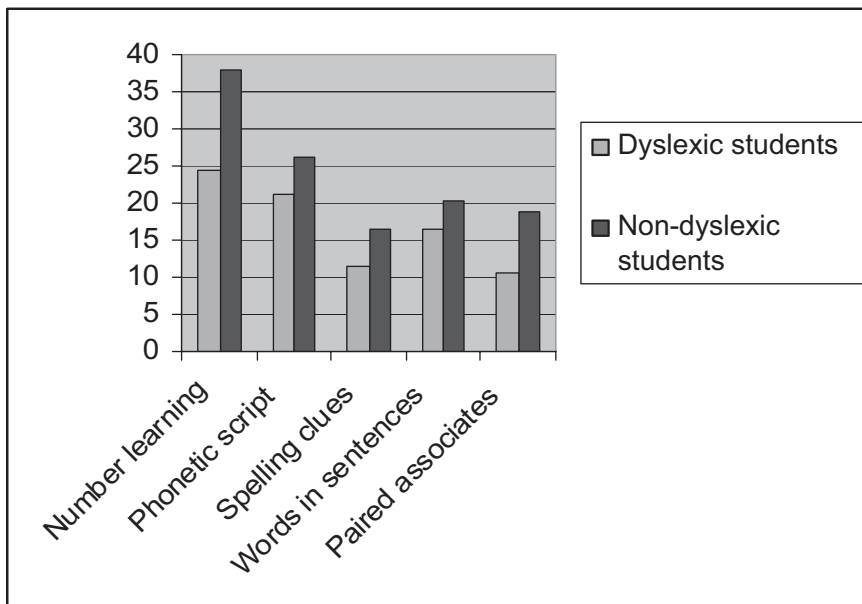


Figure 4.2 Differences between dyslexic and non-dyslexic students in the components of Modern Language Aptitude Test in Downey, *et al.*'s study (2000)

while it is certainly true that the foreign language learning difficulties of students with an SpLD primarily stem from the different functioning of their L1 processing skills, not all unsuccessful language learners have an SpLD. Failure to acquire another language might be explained by several other reasons in the case of students with no apparent signs of SpLD, such as lack of motivation or high levels of anxiety (MacIntyre, 1995).

So far we have only discussed how dyslexia affects the cognitive abilities necessary for second language acquisition. There is very little empirical research on how students with other types of SpLD learn another language. Fletcher *et al.*'s (2004) study, however, shows that students with dyscalculia score somewhat lower than the expected standard on tests of phoneme awareness and word-recognition. Jeffries and Everatt's (2004) research also indicates that children with different types of SpLD such as dyspraxia and ADHD might exhibit very similar cognitive profiles to children with dyslexia. Thus it can be assumed that learners with other types of SpLD might also have lower language aptitude scores and experience difficulties in language learning. In addition, children with ADHD, dyslexia and dyscalculia were found to have difficulties in sustaining attention (Fletcher *et al.*, 2006; Snowling, 2008). As described above, attention is key to both explicit and implicit language learning; therefore the reduced attentional capacities of these students are expected to influence the success of second language acquisition, which has important implications for language teaching and assessment (see Chapters 7 and 8). Finally, we have to consider that different types of SpLDs often occur in combination and have different degrees of severity, which can result in varying levels of cognitive abilities underlying L2 learning.

Affective factors in language learning

In addition to cognitive abilities, affective factors also play an important role in second language acquisition. Motivation, language learning anxiety and self-confidence are generally listed among affective factors that might potentially influence language learning outcomes. 'Motivation explains why people decide to do something, how hard they are going to pursue it and how long they are willing to sustain the activity' (Dörnyei, 2001: 7). The acquisition of a complex skill such as mastering another language is hardly possible without sustained effort and persistence, as well as strong goals. As a consequence, motivation has a significant effect on attainment in language learning (for a review see Dörnyei, 2005). Language learning anxiety is usually defined as 'a distinct complex of self-perceptions, beliefs, feelings, and behaviours arising from the uniqueness of the language learning process' in the classroom (Horwitz *et al.*, 1986: 128). In other words, language learning anxiety is situation-specific and occurs in classroom language learning contexts. Anxiety has significant effects on cognition. Due to worry and intrusive thoughts, the working memory capacity of anxious students is reduced, which can slow down the processing of input and the production of output as well as increase the error-rate in these processes (Eysenck & Calvo, 1992; MacIntyre & Gardner, 1994; Tobias & Everson, 1997). Anxiety might also hinder the encoding of new information in long-term memory. Self-confidence may be defined here as one's perception of the chances of succeeding in learning another language. Without a positive appreciation of one's abilities and chances of success, effective learning is unlikely to happen (Bandura, 1986).

Students with an SpLD, especially those with dyslexia, frequently experience failures in language learning, and hence are at a risk of losing their motivation to learn foreign languages (Kormos & Csizér, 2010; Csizér *et al.*, 2010; Kormos & Kontra, 2008), develop symptoms of foreign language anxiety (Piechurska-Kuciel, 2008; Sparks & Ganschow, 1991) and have low self-esteem and self-confidence (Crombie, 2000). In a recent questionnaire survey conducted with Hungarian dyslexic learners of English and German, Kormos and Csizér (2010) found that dyslexic language learners displayed significantly less positive motivational characteristics than their non-dyslexic peers. They argued that, 'language learners with dyslexia might easily get caught in a vicious circle because due to their problems in language learning, they lose their motivation, which then might lead to experiencing further failures' (p. 247). The findings of the study also indicated that dyslexic students have a negative self-concept in the academic domain of language learning. Kormos *et al.* (2009) conducted interviews with dyslexic language learners to examine their motivational characteristics. The interviews revealed that the motivation and language learning attitude of students with dyslexia were influenced by the instructional setting. The teachers' general in-class behaviour, method of instruction and attitude to dyslexia were found to have an important effect on the students' language learning attitudes and the effort they were willing to invest in language learning. These findings point to the high importance of instructional factors in creating favourable motivational conditions for students with an SpLD in learning foreign languages. This conclusion pertaining to language learning is also supported by Burden and Burdett's (2005) study in the general academic domain. In their research they convincingly demonstrated the positive effect of a supportive and dyslexia-friendly learning environment on learners' academic self-concept and self-efficacy.

An SpLD is often the cause of students' anxiety in academic contexts and in their private lives (McNulty, 2003; Riddick *et al.*, 1999). Piechurska-Kuciel (2008) investigated the language learning anxiety of dyslexic students in a Polish secondary school context and found that dyslexic students displayed significantly higher levels of anxiety throughout their language learning career than their non-dyslexic peers. The cognitive effects of anxiety might further aggravate the language learning difficulties of students with dyslexia. Moreover, due to the anxiety factors associated with foreign language classrooms, when having the choice, students with an SpLD might decide to opt out of language learning.

An overview of the language learning difficulties of students with an SpLD

As shown above, among the different types of SpLDs, it is dyslexic tendencies that cause the most serious problems in language learning because of the association with reduced phonological short-term memory capacity, slow and inaccurate word-recognition skills and

difficulties with phoneme awareness. These are key abilities in the successful acquisition of another language regardless of the environment in which the language is learnt. Dyslexic students, however, can show great differences in their phonological short-term memory and phonological processing skills. The fact that dyslexic students have different ability profiles is also reflected in their achievement in language learning. In a study conducted in Norway, Helland and Kaasa (2005) found that dyslexic children with good auditory processing skills performed worse only in tests of L2 spelling, grammar and word reading, whereas dyslexic participants with poor speech perception abilities scored lower on all the components of the test including L2 listening, speaking, vocabulary, grammar and sentence reading. This shows that dyslexic language learners cannot be regarded as a homogeneous group of students, and their individual cognitive profiles have to be considered carefully in instructional programmes and in assessment practices.

Among the other types of SpLDs, it is only ADHD that has been researched in the field of L2 learning. Sparks *et al.* (2005) found that if ADHD was not associated with dyslexia, students in US colleges with attention deficit performed just as well in language learning as their peers with no apparent signs of ADHD. Therefore, it would seem that ADHD alone has little effect on the success of second language acquisition. We have to note, however, that in the case of younger children with ADHD, reduced attentional capacities might have a more significant impact on how much attention they can devote to various aspects of the linguistic input, and these students might experience problems in language learning. An additional factor to consider with regard to Sparks *et al.*'s (2005) research is that many students with ADHD do not succeed in academic performance and do not receive college and university education. Thus, it might not be possible to generalize Sparks *et al.*'s findings to adult language learners outside university settings, whose attainment in learning another language might be negatively influenced by reduced attentional capacities.

Unfortunately, to our knowledge there is no research to date on the influence of dyspraxia and dyscalculia on L2 learning. However, as pointed out above, the high co-occurrence of dyslexia with dyscalculia means that learners with dyscalculia might also have problems with phoneme awareness, word recognition and sustained attention (see also Chapter 3), which might negatively influence the success of second language acquisition. Additionally, they might find it challenging to express number and quantity concepts and dates and, due to their sequencing difficulties, to understand and apply word-order rules. Dyspraxia commonly co-occurs with dyslexia; hence it is often difficult to separate the effects of these learning differences. It can be hypothesized that dyspraxia might cause problems in acquiring spelling and writing skills in another language and in learning how to articulate sounds particular to the L2.

An important question with regard to the general language learning processes of students with an SpLD concerns the extent to which difficulties in a first language that uses a different orthography are manifested in learning another language. It seems that because dyslexia is primarily associated with difficulties in phonological processing, the script system of the language does not influence whether students exhibit dyslexic problems in L2 learning. Ho and Fong (2005) provided evidence for this when they showed that

students in Hong Kong whose dyslexia manifested itself in their first language, Chinese, also had serious difficulties in acquiring English as an L2.

Certain languages might be easier to learn than others for students with an SpLD. For example, English has *non-transparent orthography*, which means that the same sound can be spelt in different ways and a letter can stand for different sounds. On the other hand, some languages, such as Italian, Spanish and Latin, have *transparent orthography*, in which one sound is usually denoted by one letter or letter combination. Based on the findings from comparative studies on reading acquisition in languages with different orthographies (e.g. Spencer & Hanley, 2003), languages with transparent orthography might prove easier to learn for students with an SpLD as reading and spelling cause fewer problems. To date, however, no studies have been conducted that have systematically investigated the difficulty involved in acquiring foreign/second languages with different orthographic systems (see Ziegler & Goswami, 2006 on the discussion of the acquisition of reading skills in different L1s). Nevertheless, it is to be noted that although the nature of the orthographic system of the language is an important factor in making recommendations about foreign language learning, students' motivation should also be considered. Kormos and Csizér (2010) found that even though German seems to be an easier language to study in terms of its spelling system, Hungarian dyslexic learners were still more motivated to learn English because of its international status.

Many language teachers and education policy makers believe that students with an SpLD, especially those with dyslexia, only have difficulties in acquiring spelling and reading in another language. Helland and Kaasa's (2005) research mentioned above, however, shows that in foreign language contexts students with severe symptoms of dyslexia seriously lag behind their non-dyslexic peers in almost every component of language proficiency. Kormos and Mikó (2009) replicated Helland and Kaasa's study in Hungary and found that dyslexic students performed significantly worse in almost every component of an English as an L2 test than their non-dyslexic peers. In an interview study conducted in Hungary, Kormos and Kontra (2008) asked language teachers with a wide range of expertise in teaching students with an SpLD what difficulties they noticed their students experience in language learning. They mentioned writing and spelling with the highest frequency, but they also gave accounts of problems in acquiring reading and listening skills, vocabulary and grammatical knowledge. Kormos and Mikó (2010) interviewed Hungarian dyslexic language learners, who reported the most serious difficulties in writing and spelling and also told the researchers that they had problems with learning how to read in an L2 and remembering words and understanding grammatical rules (see Figure 4.3).

In second language learning contexts, students with an SpLD might also experience difficulties with literacy related activities such as writing, spelling and reading, and might find it challenging to acquire vocabulary and grammatical constructions both in the classroom and from naturalistic input. The acquisition of pronunciation of new sounds and syllable patterns might also pose problems for these learners, but they may not face the same type or severity of problems with listening and speaking in L2 if they have extensive exposure to the target language and have to communicate in the L2 on a daily

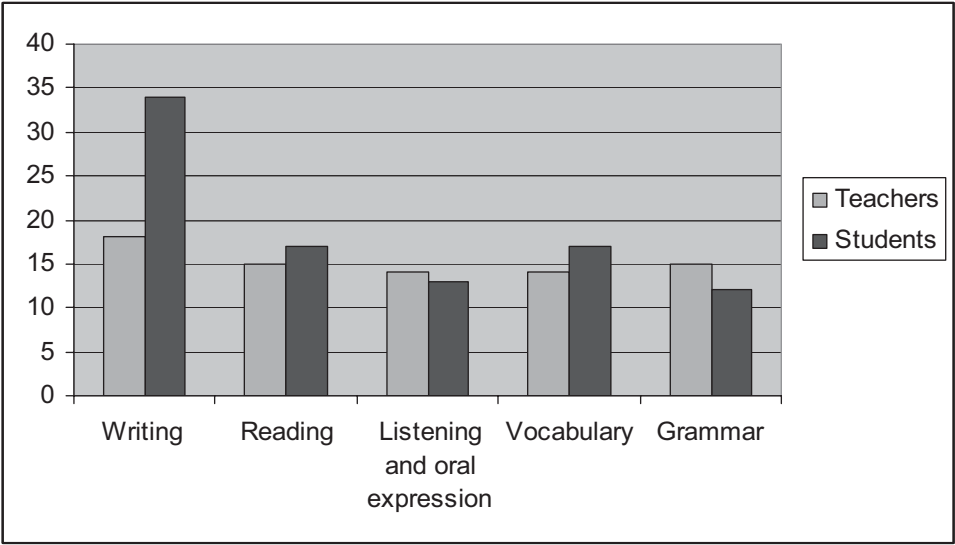


Figure 4.3 The number of times language learning difficulties were mentioned in teacher and student interviews (Kormos & Mikó, 2010)

basis (for a review see Martin, 2009). It is important to note, however, that second language learners, especially adult immigrants, can be quite isolated and might function almost exclusively in their L1 communities, in which case they share a large number of similarities with foreign language learners in their home countries.

Vocabulary learning

Learning a new word entails acquiring a number of different types of information: the knowledge of the meaning, spelling and pronunciation of the word, as well as all the grammatical information related to it (Nation, 1990). Committing words to long-term memory is often challenging for language learners even without an SpLD. For most learners with an SpLD who exhibit phonological processing problems, learning words in another language is a particularly demanding task. In acquiring L1 and L2 vocabulary, phonological short-term memory capacity plays an important role (Gathercole *et al.*, 1997). The phonological short-term memory of learners with an SpLD, however, can process and store considerably less information than that of students with no SpLD (Jeffries & Everatt, 2004; Snowling, 2008), which impedes vocabulary acquisition. For this reason, children with an SpLD usually have smaller vocabularies in their L1 (Fletcher *et al.*, 2007) and find it especially difficult to acquire words in L2 (Service, 1992; Speciale *et al.*, 2004). In the following we will examine how these difficulties manifest themselves in learning L2 vocabulary.

In learning another language, one can acquire words in two different ways: through *intentional learning*, when the learner pays conscious attention to establishing a link between the form and meaning of words, and through *unintentional learning*, which

might take place, for example, while reading or listening to texts (Hulstijn, 1997). This latter type of learning is called *incidental learning*. Incidental learning of vocabulary, however, is very difficult for foreign learners and adult second language acquirers with an SpLD due to their phonological processing problems, which means that they have to rely on conscious and intentional learning in acquiring L2 vocabulary (Schneider & Crombie, 2003). Some research evidence also suggests that learners with an SpLD tend to have difficulties with incidental learning (for a discussion see Jeffries & Everatt, 2004). Although in instructed foreign language settings, most L2 vocabulary is learnt explicitly, incidental vocabulary learning also takes place both in and outside the classroom when students acquire words through listening or reading texts. The fact that most students with an SpLD seem to have difficulties in learning L2 vocabulary incidentally restricts their learning opportunities and makes studying L2 words an effortful process for them. Difficulties related to the reduced capacity of phonological short-term memory might also have an impact on the vocabulary acquisition of bilingual second language children and adult second language learners.

The reduced phonological short-term memory capacity of students with an SpLD also makes the memorization of the word forms in another language difficult. Several tests of dyslexia use non-word repetition tasks, that is, tasks, in which students have to repeat non-existing words after listening, as one of the diagnostic instruments to assess the presence of dyslexia (see Chapter 5). Repeating non-existent words in one's L1 is similar to trying to memorize the phonological form of a word in another language with the added difficulty that, unlike L1 non-words, L2 words do not conform to L1 phonological rules. In memorizing the phonological form of an L2 word, one has to remember the sounds that constitute it and the order in which these sounds occur. This requires the appropriate functioning of phonological short-term memory and phoneme awareness. These abilities, however, often function differently in the case of students with an SpLD, which might cause several problems for these learners. Firstly, in order to successfully encode an L2 word in memory, students need more exposure to the word than learners with no apparent SpLD, and they need frequent revision. Secondly, not only is the memorization of words a slow process for students with an SpLD, but due to their phonological processing problems, they often mix up sounds while learning the words or leave out sounds from words. The quotes below illustrate teachers' and students' views of difficulties in learning L2 words.

They do not have this net in their memory, we have to teach the words again and again because there are holes in their nets, and we have to revise the material regularly because they forget it (quote from a teacher of English in Kormos & Kontra's (2008) study, p. 203).

I simply cannot learn words properly. I have tried different methods, and I just do not remember the words (quote from a dyslexic learner in Kormos & Mikó's (2010) study, p. 71).

It is not enough for me to learn a word once, I have to revise words at least ten times before I can say that I really know them (quote from a dyslexic learner in Kormos & Mikó's (2010) study, p. 71).

Table 4.1 Words frequently mixed up by an intermediate level dyslexic student in Sarkadi's (2008) study

Word intended	Word used
waist	wrist
caught	cough
split	spoil
protect	practice
waiter	water

An additional problem in vocabulary learning might be that, when retrieving words from their memory, learners with an SpLD might mix up similar sounding words and words with similar meanings (see Table 4.1). This stems from the problem of homogeneous inhibition, that is, the tendency to mix up similar looking, sounding and meaning items (words, letters and sounds), which was first described by the Hungarian researcher, Ranschburg (1939).

Teachers in Kormos and Kontra's (2008) interview study also noted that students with an SpLD find it more difficult to memorize abstract words than concrete nouns, and that they find it easier to learn nouns than verbs and adjectives. They also reported that, in the case of compound words, it is sometimes the case that students either remember the first or the second part of the word, but are unable to segment compound words. Learning the gender and plural form of nouns in languages such as German might also cause difficulties for students with an SpLD.

It is well documented in the field of second language acquisition research that L1 skills and knowledge are important foundations in L2 learning (Sparks & Ganschow, 1993; Spolsky, 1989). The L1 vocabularies of students with an SpLD are generally smaller than that of their peers with no apparent SpLD. Thus it is understandable that sometimes teachers working with learners with an SpLD first have to teach words in the students' L1 before the students can be expected to learn them in L2. The case study below illustrates the vocabulary learning difficulties of a dyslexic student.

Case study of dyslexic learner's vocabulary learning difficulties – Sarkadi (2008)

In her study, Sarkadi (2008) reported the vocabulary learning difficulties of a dyslexic Hungarian learner of English, called Anna, whom she had been observing as her private tutor for a number of years. The student, who could be considered a relatively successful learner, told the researcher that she did not like learning new English words and considered it a very difficult and tiring task. In the interview she reported that when studying words, she primarily concentrated on their spelling and she found it more challenging to learn the pronunciation of a word: 'I think learning the correct pronunciation is more difficult than learning the spelling. I can see the spelling in my vocabulary notebook, but I cannot see the pronunciation. If I write the pronunciation next to the word, it helps a bit' (Sarkadi, 2008: 117).

Sarkadi also noted that Anna tended to confuse similar looking and sounding words with each other. She observed that confusions were caused by both phonetic (e.g. *waist-wrist*, *caught-cough*, *split-spoil*) and semantic similarity (e.g. *bruise-sprain*). Anna often mixed up words both in speaking and in writing (e.g. she said *Practice the environment* instead of saying *Protect the environment*). Anna also reported in the interview that, 'I often forget what distinguishes *water* and *weather* and *waiter* and *weather* [...] Now I can pronounce them, and I know what they mean because I practiced them a lot. But I am not sure about their spelling' (Sarkadi, 2008: 119).

As the student's tutor, Sarkadi also observed another problem that aggravated Anna's difficulties with vocabulary acquisition. Anna sometimes misread the words she was studying and then memorized the misread versions (*electricat* for *electrician*, *preoparti* for *prepare*). Sarkadi found that this frequently happened in the case of longer words consisting of several syllables.

Acquisition of grammar

Students with an SpLD might face challenges in acquiring and using grammatical knowledge. First of all, these learners find it difficult, even in their L1, to understand certain grammatical concepts, such as what nouns and verbs are. Therefore, especially in the case of younger learners and adult immigrants in second language settings, teachers cannot rely on students' awareness of grammatical concepts and relations in their L1 when trying to explain L2 rules. Another problem causing difficulties in L2 learning is related to the ability to remember verbal material in the order presented, which is called *serial processing*. This might explain why students with an SpLD find it demanding to learn and apply word-order rules. SpLDs are also frequently associated with difficulties in implicit learning mechanisms. Although rules and regularities in syntax and morphology are often presented explicitly in an instructed foreign language setting, L2 learners also acquire these rules implicitly through reading or listening input both inside and outside the classroom. Problems with implicit learning might thus restrict grammar learning opportunities for students with an SpLD, which can also hinder the development of accuracy in the use of linguistic constructions in naturalistic language learning contexts.

Certain languages such as German, Russian and Italian have elaborate noun suffixation and verb conjugation systems. Suffixation and conjugation require the manipulation of morphemes in the appropriate order, which might cause difficulties to students with an SpLD due to their phonological working memory capacity limitations. Table 4.2 below summarizes the difficulties students with an SpLD might have in acquiring L2 grammar.

Table 4.2 Overview of grammar learning difficulties

Understanding grammatical concepts
Acquiring word order rules
Learning suffixation and conjugation
Difficulties in acquiring rules implicitly
Difficulties in applying grammatical rules (procedural knowledge)

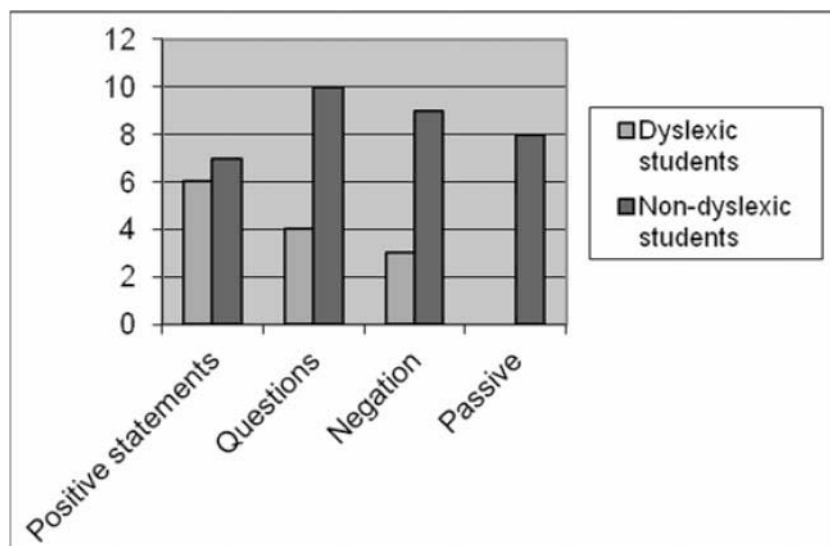


Figure 4.4 Comparison of the grammatical knowledge of dyslexic and non-dyslexic students (Kormos & Mikó, 2010)

In Kormos and Mikó's (2010) interview study, some dyslexic foreign language learners also explained that they do not have problems understanding grammatical structures and rules, yet it causes difficulties for them to apply these rules when they have to speak or write texts. This suggests that, for students with an SpLD, it is not only challenging to learn the rules of grammar in the form of factual or declarative knowledge, but also to use this knowledge in communicative situations (procedural knowledge). This might be related to the general cognitive difficulties students with an SpLD tend to experience in acquiring procedural knowledge (Fletcher *et al.*, 2004) and in automatization (Nicolson & Fawcett, 2008).

Kormos and Mikó (2010) investigated differences between dyslexic and non-dyslexic students concerning their knowledge of grammatical structures. They found that after four years of study in primary school, Hungarian learners of English with a diagnosis of dyslexia seriously lagged behind their non-dyslexic peers in terms of grammatical knowledge. None of the dyslexic students could construct a passive sentence. Making positive statements (declaratives) was less problematic for dyslexics than forming questions and using negation (see Figure 4.4). These findings show that as syntactic structures become more complex, dyslexic students have more difficulties in learning them.

Reading in L2

Reading in another language is even more difficult and complex than reading in one's L1. Orthographic differences between the L1 and L2 might cause problems in letter recognition, insufficient knowledge of morphology and syntax might hinder word recognition, and even when words are recognized, their meaning might not be available to L2 readers (for a review see Grabe, 2009). Understanding L2 texts is hardly possible

without adequate knowledge of syntactic structures and knowledge about how cohesion is created in L2. Lack of relevant cultural background knowledge might also make interpreting L2 texts difficult. Recent research theorizing the interaction of L1 and L2 reading skills suggests that although certain lower level reading abilities get transferred from L1 to L2, sufficient knowledge of the L2 is a prerequisite for skilled L2 reading performance (Alderson, 1984; Grabe, 2009). Comparative research on monolingual and bilingual children with dyslexia indicates that phonological processing and word-naming skills seem to be very highly related in L1 and L2, and these skills indeed transfer from L1 to L2, causing reading difficulties in both languages (Geva *et al.*, 1997).

Due to the fact that the basic cognitive mechanisms involved in L1 and L2 reading are similar (Grabe, 2009) and that reading in every language, even in Chinese, requires phonological processing and phoneme awareness (Chow *et al.*, 2005), language learners with an SpLD experience similar types of reading problems in L1 and L2. The severity of the problems in L2 reading, however, might be greater than in L1.

In L2 reading, the primary source of the problems for students with an SpLD is reduced phoneme awareness and phonological short-term memory capacity. Therefore, learners with an SpLD whose phonological processing skills might be impaired have problems with establishing letter-sound correspondences in L2 reading and in recognizing the phonological form of words. If the learners' L1 is a language with a transparent orthographic system, such as Italian, reading in another language, such as English or French, can be particularly challenging for students with dyslexia. These difficulties might slow down their speed of reading and take away attentional resources from decoding the meaning of the text, and this might result in students either not recognizing the L2 word at all, or in retrieving another word instead of the intended one. The phonological short-term memory problems of learners with an SpLD might also hinder reading by limiting the number of verbal units (L2 phonemes, morphemes, words, clauses) that the learner can hold in memory while reading the text. The quote below illustrates these difficulties from a student's perspective.

I have to read a longer text several times. At least three or four times until I understand it. If there are a few words I do not know I often panic and give up on understanding the text. But usually after several attempts I manage to get the main message (quote from a dyslexic learner in Kormos & Mikó's (2010) study, p. 72).

Sufficient knowledge of L2 vocabulary is of key importance for successful reading comprehension (e.g. Schoonen *et al.*, 1998; Verhoeven, 2000). As we pointed out above, learners with an SpLD tend to experience serious problems in acquiring L2 words and tend to have smaller vocabularies in L2 than their peers who have no SpLD. Thus their phonological processing difficulties do not only influence their L2 reading processes directly, but also indirectly through their vocabulary learning difficulties. In L1 reading research, Stanovich (1986, 2000) argued that L1 vocabulary and reading have a reciprocal relationship; namely, students who have larger vocabularies understand texts more easily, but also students who read more acquire more words. Consequently, students with an SpLD seem to be disadvantaged in two ways: due to their smaller vocabularies, they read

Table 4.3 Overview of L2 reading difficulties

Slow reading speed
Difficulties in establishing letter-sound correspondences
Not having enough attention for decoding meaning
Inaccurate word recognition
Small L2 vocabulary
Insufficient knowledge of syntax and morphology

less while expending more effort than students without an SpLD, and because they read less, they have fewer chances to encounter and learn new words.

The understanding of grammatical relations among words is also necessary in L1 and L2 reading. In comprehending L2 texts, grammatical knowledge seems to play a highly important role (Alderson, 1984; van Gelderen *et al.*, 2004). Therefore the difficulties of learners with an SpLD in acquiring complex grammatical structures in L2, which we described above, can also hinder their reading processes. For example, in Kormos and Mikó's (2010) research, dyslexic students were generally successful in understanding declarative sentences, but they scored very low on comprehending questions, negations and passive structures. Table 4.3 above provides an overview of L2 reading problems of students with an SpLD.

Despite these differences, learners with an SpLD can also overcome some or even most of their reading problems if they use appropriate reading strategies. Studies about good readers indicate that they rely on metalinguistic awareness, that is, on their knowledge of how language works (for a review see Grabe, 2009). As shown above, learners with an SpLD have reduced phoneme awareness and might have problems in morphological, word level and syntactic awareness, which might prevent them from using linguistic strategies to work out the meaning of L2 texts. There are, however, higher levels of metalinguistic awareness such as the ability to reflect on the discourse and informational structure of texts, which might be more readily available for learners with an SpLD. Readers also have other strategies at their disposal to help them understand L2 texts, such as reading selectively according to goals, reading carefully in key places, monitoring comprehension, using information about text-structure and background knowledge to guide understanding, and so on (Pressley, 2006). These strategies can be taught explicitly to learners with an SpLD to help them overcome their reading comprehension problems in L2.

Writing in L2

Writing both in one's L1 and in L2 is one of the most complex literacy activities. Although writing is unique in that it requires 'language use by hand' (Berninger, 2000), it shares some underlying cognitive and linguistic processes with reading, especially in the domain of lower-order processes (Berninger *et al.*, 2002, 2006). When writing, students express

their thoughts on paper, and they usually do it with the mediation of (silent) speech. In order to be able to write, one needs complex motor-coordination skills to be able to form letters. Phonemic awareness, that is, the ability to segment words into phonemes and convert them into letters, is a key ability in spelling and word writing (for a recent review see Berninger *et al.*, 2006). When learning to write, children also need to acquire morphological knowledge to help them spell the morphological variants of words. Syntactic knowledge is essential for constructing sentences from words and establishing clausal and sentence boundaries in writing. Once these lower-order writing processes are acquired, L1 writers can learn how to construct texts in different genres. Many L2 writers, especially in foreign language classrooms, bring their L1 writing experience and skills to the task of constructing L2 texts. In second language contexts, however, both younger and adult learners might lack writing experience in their L1. Furthermore, not all L1 writing skills can be transferred to L2 automatically. L2 writers might need to acquire a new script system and learn new motor-coordination skills. They also have to learn new sound-letter correspondences and phonological and morphological rules to be able to write down L2 words. Sufficient L2 vocabulary and syntactic knowledge are the prerequisites for constructing texts at and above the sentence level (for a recent review of the cognitive mechanisms involved in L2 writing, see Schoonen *et al.*, 2009). In addition to this, L2 writers need to be familiar with cohesive devices in the L2 and the culturally specific characteristics of different types of texts.

Writing is usually not constrained by time and is a recursive process in which writers plan, linguistically encode their plans and revise them cyclically (see Grabe & Kaplan, 1996). Therefore one might assume that, unlike in speech, the division of attention between different levels of writing processes is not as important as in speech. Research evidence from studies with writers with an SpLD (Geva & Ndlovu, 2008) and L2 writers (Silva, 1993), however, suggests that if writers struggle with lower-order writing processes such as spelling, the overall quality of the text will suffer and students will not be able to create elaborate and cohesive discourse. Just as in the case of other complex verbal skill performances, phonological short-term memory also plays an important role in writing by helping writers to keep pieces of verbal information (letters, morphemes, words, clauses) in working memory. As a consequence, writing cohesive texts in another language might be challenging for learners who have an SpLD associated with phonological short-term or working memory problems.

Due to their problems with phonemic awareness, learning the orthography (spelling) of words in another language is especially difficult for most learners with an SpLD. This can prove even more problematic in the case of languages such as English, which does not have a transparent orthography. Learners of English with an SpLD might find it particularly challenging to cope with the fact that, in English, specific sounds can be spelt in many different ways and letters might be pronounced differently. It might be demanding for learners with an SpLD to remember and recall letter-sound correspondences not only in L1 but also in L2. In a case study of a dyslexic language learner, Sarkadi (2008) asked her participant to list some features in English that made spelling difficult for her. The student mentioned the presence of vowel and consonant clusters in words, and explained

that in words containing vowel or consonant clusters she often leaves out or reverses letters.

I think words which contain *th* are very problematic, for everyone... I still do not really hear the difference between words that contain *th* and words that contain *t* . . . Well, I can hear the difference if I concentrate on it a lot, and someone pronounces it, but I cannot pronounce it myself, and I cannot hear the difference when I am writing (Sarkadi, 2008: 118).

The difficulties students experience in acquiring L2 spelling skills, especially in the case of English, can often be so serious that the learners might feel that their learning efforts are doomed to failure because no matter how much they learn, they still make mistakes. This might frequently happen in traditional language classrooms where there is a strong emphasis on written production, and students are mainly assessed in writing. These quotes from learners with an SpLD and their teachers illustrate how students can lose their motivation and self-confidence in language learning when their spelling difficulties are not taken into consideration, but also how students can be helped to overcome this problem.

I misspelt the words in my notebook, and I memorized the incorrectly spelt word at home. Of course I did not get the word right in the test, and this started a chain of negative reactions in me (quote from a dyslexic learner in Kormos & Mikó's (2010) study, p. 73).

So if your spelling is not assessed, it will be easier for you, and you don't have butterflies in your stomach anymore that you have to get this right. Once you are relieved of this stress, you will do better. It will be much better (quote from a dyslexic language learner in Kormos *et al.*'s (2009) study, p. 123.).

Just as in their first language, language learners with an SpLD often mix up and leave out letters in spelling. In addition, the frequently associated learning difference of dyspraxia can make students' handwriting difficult to read. Table 4.4 below shows some examples of how learners of English with an SpLD might spell some common words.

We have already shown that at the word level, learners with an SpLD often have spelling problems and frequently lack sufficient L2 vocabulary. At the sentence level, problems with serial processing and difficulties with grammar might hinder written expression. Due to seriality problems, students might also find it challenging to order their ideas in writing.

Table 4.4 Example of spelling mistakes by dyslexic learners (Kormos & Mikó, unpublished data)

Word intended	Examples of spelling by dyslexic learners
SHOULD	shut, shod, shout
MOUTH	maufe, mauf, mouns
HIGH	hy, hig
COULD	cude
BEAUTIFUL	butiful, buitful, beautiful

Students with an SpLD are frequently exempted from producing longer written texts, and writing extended texts in a foreign language might not form part of the curriculum in many countries until secondary school. Thus there is little research available on the specific writing difficulties of L2 learners with an SpLD. The only exception is Ndlovu and Geva's (2008) study, in which the authors compared the writing skills of L1 and L2 speaking children in Canada, assessed as being reading disabled or non-reading disabled. They found that regardless of language background, the students identified as being reading disabled had difficulty with spelling, punctuation and the monitoring of syntax. The results also indicated that these students struggled 'with higher level aspects of writing such as sentence structure constraints and the generation and coordination of vocabulary, as well as with aspects of the overall structure of their compositions including the ability to compose stories with interesting plots and story lines.' (p. 55)

Producing and understanding oral texts

Speaking and listening abilities in L1 and L2 seem to be less affected by different types of SpLD than literacy based skills such as reading and writing. If we examine the psychological processes involved in speaking and listening, the reason for this becomes clear.

Speech production has four important components, which follow each other in this order: (1) *conceptualization*, that is, planning what one wants to say, (2) *formulation*, which includes the grammatical, lexical and phonological encoding of the message, (3) *articulation*, in other words, the production of speech sounds and (4) *self-monitoring*, which involves checking the correctness and appropriateness of the produced output (Levelt, 1989). In L1 speech production, planning the message requires attention, whereas formulation and articulation are automatic. Processing mechanisms can therefore work in parallel, which makes L1 speech generally smooth and fast. From this description of L1 speech production, it is clear that phoneme awareness is not directly involved in speech production and, because L1 speech is largely automatic, phonological short-term memory also plays a limited role in it (although, as shown in Chapter 3, dyspraxic learners might also experience difficulties in L1 speech). L2 speech production, however, requires attention in the grammatical, lexical and phonological encoding phases, and as a consequence, part of the speech output can only be processed serially. In other words, encoding mechanisms are only partially automatic even in the case of advanced L2 learners. Hence attentional resources play a very important role in L2 speech production because L2 speakers have to pay attention to the content of the message as well as to selecting the right words, formulating correct grammatical units and phonologically encoding the utterance (Kormos, 2006). In L2 speech, different units of verbal material have to be kept in working memory to be able to create a sentence, as a consequence of which phonological short-term memory capacity also influences the quality of speech output in L2 (O'Brien *et al.*, 2006).

SpLDs that are associated with reduced attention span and phonological short-term memory capacity might cause difficulties in producing L2 speech. L2 speech production also requires sufficient levels of lexical and grammatical competence and not only in the

form of declarative knowledge, but also as procedural knowledge, because if the learners cannot access and use their knowledge in real-time, communication cannot be successful. Therefore the fact that students with an SpLD might have a narrow range of vocabulary and restricted knowledge of grammatical structures in L2 might cause speech production problems. Additionally, problems in proceduralizing knowledge, which are also frequently associated with SpLDs, might hinder fluent expression in L2 speech. Further difficulties in oral interaction can be caused by learners' problems in understanding and applying social conventions of language use in the L2, which is often characteristic of students with Asperger's syndrome (see Chapter 3).

Understanding speech is a complex interactive process, in the course of which listeners attend to the acoustic sound signals and associate them with the abstract representations of speech sounds, that is, phonemes. Having identified a string of phonemes, listeners retrieve words and construct meaning from the utterance by analysing the grammatical relations among words, using their background and textual knowledge. In L1 speech comprehension all of these processes are automatic and run parallel. L2 comprehension is often effortful partly due to learners' difficulty in identifying phonemes in the incoming string of sounds. They can also have problems associating phoneme sequences with words and, as a consequence of their limited syntactic and textual knowledge in the L2, the students might not be able to decode the meaning of the text they have heard. As we have shown, the major underlying problem causing reading problems is associated with phoneme awareness and phonological processing skills. These phonological difficulties are also apparent in the global speech comprehension rate of children with SpLDs in their L1 (Bowers & Swanson, 1991; Wolf, 1991), and they might present additional problems in L2 listening when students have to identify phonemes in another language and associate a string of phonemes with an L2 word. Phonological short-term memory is also a key cognitive component in understanding speech because it holds different units of auditory material in working memory for further processing. The reduced phonological short-term memory capacity of students with an SpLD might also account for the fact that the learners might not be able to remember a series of verbally presented information accurately or in the appropriate order.

The nature of problems students with an SpLD experience in understanding spoken L2 texts depends on their phonological processing skills and phonological short-term memory. Some learners find it easy to comprehend orally presented information, whereas others struggle with processing L2 listening texts because they perceive them to be too fast. Research evidence also suggests that students with an SpLD have varying degrees of difficulty with producing and understanding L2 speech. Learners with an SpLD who show smaller degrees of phonological processing problems and no associated auditory processing difficulties may not exhibit problems in speaking and listening in L2 (Helland & Kaasa, 2005). Those students who have serious difficulties in speech perception, however, might find it challenging to understand longer spoken texts and speak in an L2. In Kormos and Kontra's (2008) study, teachers' views also varied as regards the students' problems in producing continuous stretches of oral discourse. One of the German teachers interviewed said that her learners could only speak by using given sentence

frames, whereas other teachers remarked that some of their students could express themselves fluently but with a large number of mistakes. Other teachers noted that they had students with an SpLD who could not express themselves in long sentences, and that there were learners who were unwilling to say anything in a language class.

In an interview study by Kormos and Mikó (2010), some dyslexic students also reported that they can express themselves easily and successfully in English, whereas others said that they find speaking in another language challenging. One of the students explained that she finds it demanding to recall the appropriate words under the time pressure of oral communication, which indicates difficulties with word retrieval from memory. Another participant noted that, when constructing sentences in speaking, she cannot put words in the right order, a problem that stems from the difficulty, often associated with SpLDs, of activating and using verbal information in the required sequence (Fletcher *et al.*, 2007).

Towards success in language learning

In this chapter we have summarized how the cognitive and affective correlates of SpLDs might affect the success of second language acquisition. The readers were presented with difficulties in all major areas of language learning and, having read this chapter, they might think that the language learning efforts of students with an SpLD are doomed to failure. Although we must not underestimate the difficulties involved in learning another language, we have to note that a large number of students with an SpLD become competent L2 users. In our view, three factors are essential for the successful attainment of L2 skills. First of all, learners need a supportive classroom environment in which the teaching and assessment methods are adapted to their needs (see Chapters 6, 7 and 8). Second, students themselves must be aware that they can only overcome their difficulties if they invest sufficient energy and effort into the process of language learning. In many cases, the level of effort and persistence needs to be higher than for students with no SpLD in order to compensate for the differential functioning of cognitive abilities needed for language learning. Finally, the notion of success might need to be reconsidered in the case of learners with an SpLD, and realistic educational objectives in language learning have to be established for these students. For example, depending on the academic context, these learners might not need to attain high levels of writing skills in L2 but can be expected to communicate successfully in speech. The following chapters of the book will outline general principles and specific methods in order to ensure that language learners with an SpLD are not left behind and are ensured appropriate opportunities in language learning.

Summary of key points

- Phonological short-term memory, phonemic awareness and verbal reasoning skills are key cognitive abilities for the successful acquisition of both L1 literacy skills and L2 competence. These abilities, however, often function differently in the case of students with an SpLD.
- Attention to linguistic input and for monitoring output is very important in L2 learning. Students with an SpLD often have problems with sustained attention, which might hinder the noticing of new linguistic information in the input.
- Dyslexic tendencies cause the most serious problems in language learning because many dyslexic students have phonological processing difficulties.
- Students with an SpLD have different ability profiles, and hence have varying degrees of difficulties in language learning.
- Languages with transparent orthography might be easier to learn for students with an SpLD, but in the selection of foreign language motivational factors also need to be considered.
- Language learners with an SpLD might have difficulties in acquiring various aspects of an L2, not just spelling and reading.
- The memorization of words is difficult for learners with an SpLD, and they need repeated encounters with words and conscious effort to successfully encode them in memory. Students with an SpLD frequently mix up similar sounding words and words with similar meaning.
- Learners with an SpLD find it difficult to understand grammatical concepts. Due to their problems in serial processing, these students tend to have difficulties in learning and applying word-order rules. For learners with an SpLD it is not only challenging to understand the rules of grammar but also to apply this knowledge in communicative situations.
- The reading speed of learners with an SpLD tends to be slow and they frequently experience word recognition problems in L2. Lack of automaticity in low level reading processes, insufficient vocabulary and grammatical knowledge also hinder text comprehension.
- Learners with an SpLD find it demanding to produce longer written texts in L2 because of their spelling problems and lack of sufficient L2 vocabulary. Due to their difficulties with serial processing, they have problems in ordering their ideas and applying word order rules.
- Learners with an SpLD whose auditory processing skills are not affected seem to have fewer problems in speaking and listening in L2. Students with speech perception problems, however, find it challenging to understand longer spoken texts and speak in an L2.

Activities

1. Interview a student with an SpLD about his/her language learning experiences, difficulties and the strategies applied to overcome the difficulties.
2. Collect a piece of writing from a learner with an SpLD and one with no apparent SpLD on the same topic. Compare the type and frequency of errors in the students' compositions.
3. Ask a learner with an SpLD to read aloud a short text in L2. Make a note of the inaccuracies in reading. Check the comprehension of the text with a few questions. Observe how the difficulties associated with SpLDs might influence the L2 reading process in terms of low level reading skills and high level text comprehension.
4. Prepare a brief information sheet for language teaching colleagues on the most important difficulties learners with an SpLD might experience in the classroom.
5. Interview a language teacher working with students with SpLDs. Ask him/her about what difficulties s/he perceives that students with SpLDs experience in language learning.
6. Interview a parent who has a child with SpLDs. What difficulties does the parent notice that the child is having in learning another language? How does the parent try to help to overcome these difficulties?

Further reading

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5

Identification and Disclosure

Introduction	84
Identification	85
<i>Observation</i>	86
<i>Screening</i>	88
<i>Formal Identification</i>	90
Assessment in a second language context	93
Disclosure	95
<i>Disclosing assessment findings to the student</i>	96
<i>Passing on information to class teachers and external bodies</i>	97
<i>Sharing information with family</i>	98
<i>Disclosing to peers</i>	99
Student disclosure to an institution	99
Summary of key points	101
Activities	102
Further reading	102

Introduction

Although awareness of dyslexia and other SpLDs has been raised in recent years, studies show that few language teachers feel that their training and education has equipped them to be confident in identifying students with SpLDs and, most importantly, in knowing the best way to work with students who may experience difficulties in studying due to an SpLD (Matthews, 2009; Smith, 2008). This lack of confidence may be the result of the continuing pervasiveness of the medical model in many countries, which constructs learning differences as the domain of experts, implying that special training, that is not available to 'ordinary people', is required in order to understand the difficulties they can cause. For language teachers, being well informed about how SpLDs may be identified and accommodated is crucial, since SpLDs may manifest for the first time in the language classroom, when students try to apply their usual learning strategies in the new language context and find that they do not transfer adequately. It is not at all straightforward to disentangle general difficulties that arise when learning a new language from the specific difficulties that dyslexia and other SpLDs can cause with processing language. Of course, many pupils find learning a new language challenging, whether or not they have an SpLD, and make errors, even at advanced levels. However, there are certain other indicators that teachers can be alert to that may indicate the presence of an SpLD, and in this chapter these are explored and discussed. More formal assessment might follow observation of these indicators, which could entail psychological measures of various cognitive functions, and these are also outlined here. It should be noted that the aim of the first part of this chapter is not to provide guidance in how to assess learners, but to offer a general overview of the assessment process that learners may go through, so that teachers can be prepared to support them where necessary. The actual sequence of events in the process of assessment is very much determined by local systems, laws and funding streams, and no attempt is made here to describe any one particular system. Readers will need to ensure that they follow any guidelines for assessment and intervention which pertain to their contexts (for example, in England and Wales, the Special Educational Needs (SEN) Code of Practice (DfES, 2001) governs state funded education). In some contexts there may be a person responsible for overseeing that provision is made for learners with additional needs. In the UK each state school has a member of staff referred to as a 'Special Educational Needs Co-ordinator' (SENCo) who should be approached as soon as there is a suspicion that a student has an SpLD. Where there is no SENCo (or equivalent), subject teachers may have to enlist the support of external professionals who are qualified to identify SpLDs in order to ascertain whether the difficulties they observe their learners experiencing are due to an underlying cognitive difference, or some other cause.

Once a teacher is fairly sure that a student has an SpLD, the next problem is often how to broach the subject with the learner, to help them to develop an awareness of their strengths and weaknesses that could lead to compensatory strategies. In some cultures having dyslexia is so widely talked about that the stigma that was once attached to it has, to some extent, broken down. In other communities it is still viewed as unacceptable to

have what is perceived as a weakness, and this makes it a very sensitive issue for teachers to tackle (Deponio *et al.*, 2000). Particularly when working with older learners, a certain amount of psychological adjustment is necessary for them to become comfortable with this new aspect of their self-identity.

Conversely, it may be that a student already knows that s/he has an SpLD and needs to consider how best to share that information with tutors. It is also important to consider who else needs to know, and how to inform them. It might seem obvious that other members of staff would need to be informed, but that must be handled sensitively. In many cases, it can also be beneficial for the learner's family and classmates to have some understanding of what the SpLD means for them. This chapter explores ways of managing this situation, and aims to foster confidence in teachers so that they can draw on the interpersonal skills that they use every day in order to make the identification and disclosure of an SpLD a positive step forward for the learner, rather than a blow to his or her self-esteem.

Identification

There are many reasons why it is important to identify whether a learner's difficulties with language learning are due to an SpLD, rather than a general difficulty with that particular language. If an SpLD is raising barriers to learning, alternative routes need to be found to enable the learner to access the curriculum. These might take the form of adjustments to classroom management or study strategies (which will be discussed in more detail in Chapters 6 and 7), or changes in arrangements for assessments (see Chapter 8). Most importantly, as a result of the identification process, individuals who have an SpLD often learn more about themselves and their strengths, as well as begin to understand why they experience difficulties with certain aspects of daily life, including studying. They can also start to develop strategies to compensate for areas of weakness, which ultimately improves their self-esteem.

The issue of labels was touched on in Chapter 1, and the importance of the decision to use a label such as 'dyslexia' cannot be underestimated. Applying a label to an individual can have far-reaching consequences related to self-perception and the perceptions of others. Misapplying labels can be even more damaging, so great care must be taken before a definite identification can be made and shared. Diagnostic labels (i.e. those that indicate that an individual has a particular condition, for example 'dyslexia') are usually the least helpful, since the experiences of people who are given this label will vary considerably, as will their strengths and weaknesses. For this reason, Kirby and Kaplan (2003) suggest that it is more helpful to work with functional labels, which are more descriptive and individual, and which take into account the large overlap between the range of SpLDs discussed in Chapter 3. A person might then be said to have an auditory and/or visual processing weakness, or a weakness in working memory, or perhaps to be a

strongly visual learner, depending on what the identification process has revealed. This is more useful for the individual's teachers than a blanket description of 'dyslexia', but unfortunately, in some contexts it may not be sufficient for bureaucratic purposes, (e.g. for requesting exam access arrangements, or allowing access to resources such as funding for assistive technology).

The identification of an SpLD is often a process of discovery in three broad stages: from observation, through screening to formal assessment. This process typically involves a team of people including the individual, family members, teachers, educational psychologists and medical professionals (Lewis, 1993; Kirby & Kaplan, 2003). Ott (1997) adds that politicians also have a role to play since, without the political will to fund assessment and to provide resources for support following a positive identification of an SpLD, there will be little chance of schools and colleges following up the causes of a learner's difficulties. Although the end point is in many cases a formal assessment carried out by a psychologist or specialist teacher, the starting point, and the most important phase of the process, is usually observation of behaviours and habits on the part of the individual, a carer or a teacher.

Observation

The way in which people respond to everyday tasks and challenges reveals a lot about the way in which they see the world, even from a very young age. Family members and teachers who see a person on a regular basis in routine situations are in a good position to notice if she or he is having difficulty with something that most people find easy. At home, for example, children may have problems with dressing, which persist long after most children have learnt the order in which to put clothes on and how to manipulate buttons and other fastenings. In natural situations such as this, it may be assumed that there is no additional stress which may be compounding the difficulties exhibited, compared for instance to a formal assessment situation conducted by a stranger, so these kinds of observations are extremely valuable in identifying an SpLD at an early age. Family members and carers may notice that a child does not meet the expected developmental milestones in terms of language development, motor coordination, or social skills such as demonstrating empathy. Children, of course, develop at different rates and in different ways, but in the rigid educational systems that many countries have, if a child falls behind from the beginning, it becomes ever harder to catch up with his or her peers. Early identification of SpLDs is therefore important to prevent the downward spiral of confidence and lowered self-esteem that characterize and perpetuate educational failure. Sadly, it seems to be the case too often that a failure to succeed is one of the criteria required for appropriate intervention to be put in place (Miles & Miles, 1999). If parents express concern over the development of their child, these concerns ought to be taken seriously, and one way of doing this is to implement an observation framework, both at school and at home. This could take the form of a checklist, or a more open-ended log of unusual behaviour, such as the one illustrated here, kept by parents and teachers.

Behaviour observed in John, age 5.5	date first observed	subsequently		
		every day	2 or 3 x per week	once a week
Misnaming common objects e.g. 'jar' for 'jug'	DD/MM/YY		✓	
Turning door handles the wrong way	DD/MM/YY			✓
Problems with manipulating knife and fork	DD/MM/YY	✓		
Misinterpreting instructions (e.g. 'you can watch TV till 4' understood as 'you can watch channels 1-4 on the TV but no others')	DD/MM/YY		✓	

Figure 5.1 Example of an observation log that could be used by parents or teachers

For teachers working with learners who do not share the same first language or culture, disentangling language learning difficulties and cultural differences from underlying SpLDs is not easy. Even for teachers working with older learners from their own language community, this is not straightforward. The following text, written by one of the authors' students, exemplifies this

'When relating this to placement as we can that Mr X using the stress vulnerability we can able to find out the stress it can also help to record the stress. It also helps with trying to take out where the stress can be building up It also involve in the nursing team being able to support and to give out positive to ensure on the improvement he is making'

Readers familiar with English language teaching will recognize that the verb agreement errors, missing words, misused prepositions and malformed sentences are all common errors made by learners of English at all stages of proficiency. However, this extract comes (with permission) from a text written by a dyslexic adult learner whose first (and only) language is English, and whose spoken language is grammatically sound. As the kinds of errors made in writing by people with an SpLD are very similar to those made by language learners with no apparent SpLD, it is clear that it is necessary to look beyond the written language produced by learners to other, largely non-verbal indicators. As discussed in Chapter 2, there are some aspects of cognitive functioning that are not determined by language and which very often have different characteristics in people with an SpLD. For example, the short-term and working memory spans are generally shorter, and the speed of information processing is commonly slower in people with an SpLD; these can be considered as indicators of an underlying cognitive difference.

It is important to stress that observing one such indicator on its own does not necessarily mean that a person has an SpLD; the diversity of the human population is such that variation may be present in an individual without it causing any concern, and as Miles and Miles (1999: 26) put it: 'no signs are unique to dyslexia'. However, where several indicators are persistently observed in a learner in more than one situation (i.e. at home

and at school, or at a relative's house or a social situation), this should be enough to start alarm bells ringing, and for the next stage of identification to be implemented. This would normally be a semi-formal screening procedure, in which a teacher speaks to the learner about some of the difficulties that have been observed, and perhaps also carries out some preliminary assessment activities. For very young learners, it may be appropriate for teachers to liaise initially with the parents or carers, while older learners could be given the choice as to who is involved in the process.

Screening

The purpose of screening is to investigate the observations made previously by family members and class teachers, as well as those self-reported by the learner where possible, gathering evidence to determine the causes of the behaviour observed. It should be carried out by a qualified person, for example, a specialist teacher, and may consist of a semi-structured interview and perhaps some assessment activities designed to explore the difficulties reported. Some elements of literacy acquisition may also be investigated. An SpLD is only usually identified in the absence of other environmental or physical reasons for a person's difficulties, although this exclusionary criterion is open to criticism. For example, a visual impairment would obviously be a reason for difficulty with reading text, but that does not preclude a visually impaired person from having an SpLD, too. If, in the course of the screening procedure, it was established that the only problem the person had was difficulty focussing on text, the first course of action might be for the assessor to recommend a detailed eye test. If other difficulties were also established, consistent with the patterns of cognitive functioning often observed in learners with an SpLD, then the eye test would be just one avenue for exploration, alongside a formal assessment for an SpLD.

Other factors that need to be investigated are the person's educational background (i.e. how much access to schooling he or she has had, whether any difficulties have been experienced at any stage and how these have been addressed). It is worth exploring the student's subjective perceptions of his/her time at school, and if possible obtaining a self-comparison to peers. Many learners who experience difficulties are aware that they are falling behind their peers in terms of literacy development, or in terms of the speed at which they assimilate new skills, which can be significant. Given the option, people will normally choose to study subjects that they are good at and thus enjoy, so finding out about the choices older students have made helps to illustrate the profile of strengths and weaknesses, and it is worth also probing deeper to find out why they decided against pursuing other options. Whilst talking about education, it is important to gather information about any exams taken, so as to be able to gauge whether they posed any particular challenges, and if so, how these were met. Some learners may have had formal assessments for SpLDs before, in other institutions, although they may not have been fully aware of what the process was that they were taking part in. For this reason, it is worth thinking of different ways of asking the question, apart from '*Have you ever had a psychological assessment before?*'

Aside from any difficulties experienced in the academic arena, students who have an SpLD will often also report that their memory, coordination and organization problems affect their everyday lives in a variety of ways. These can be explored by offering scenarios and asking the student what strategies they have developed to help them in those situations. For example: *'When you have to take a message for someone else over the phone, do you always remember to pass it on? How do you make sure you do?'* or *'Are you good at making sure you always get to school / your classes on time? What helps you to do that?'*

Another key aspect of the screening process is to determine whether the learner's formal education has been disrupted by extended periods of ill health or unusually high levels of family mobility, and to explore whether any emotional or physical trauma may have affected cognitive functioning. Although emotional and behavioural issues that manifest themselves in the classroom may be the cause of the difficulties in concentration or memory that the student experiences, equally they may be the result of them, born of frustration at not being able to demonstrate ability in a conventional manner. These are necessarily sensitive issues to explore, and require careful handling, but it is vital to ascertain whether there are other possible causes for the difficulties being encountered before any 'SpLD' labels are applied. The screening process for a language learner should also include specific questions about the language learning process, since for some learners the experience of functioning in a second language may trigger the first manifestations of underlying cognitive differences that had previously been concealed in other contexts through sophisticated combinations of strategies. Of course, most language learners will report problems with remembering vocabulary or forming grammatically correct sentences, so these questions should focus on aspects of language that rely heavily on working memory, sequencing, organization and information processing.

The sample interview schedule found in Appendix 1 suggests a format that could be followed for screening an adult learner, but it is by no means the only format possible. There are many different schedules available on the market (for example Sunderland *et al.*, 1997, which is designed for bilingual language learners). As every institution varies in its data collection systems, no single schedule will be suitable for every context, and it is envisaged that each interviewer would have his or her own way of eliciting the required information using language appropriate to the age and proficiency of the learner.

In any interview situation the interviewer's communication skills need to be finely honed to get the best quality information from the interviewee. If the assessor and the student share a language, it is relatively straightforward to frame questions that yield the required information, although there will still be a certain amount of interpretation to be done regarding the answers and the manner in which the answers are provided, which can be as illuminating as the actual words used. In a situation where a learner is still at a low level of proficiency in the target language, where that language is the medium of instruction and the assessor does not share another language with him/her (i.e. in a typical EAL/ESOL/ESL situation) it may be felt necessary to recruit an interpreter, bearing in mind the issues of confidentiality that surround such a sensitive interview. For this reason, it is not normally appropriate to ask a fellow student to act as interpreter, unless the student being interviewed specifically requests it. If it is not possible to recruit

a neutral interpreter, the interviewer will have to draw on all the non-verbal means of communication at his or her disposal, and also to make use of communication ramps, such as calendars, diagrams and pictures to clarify both questions and answers.

After the screening process, the information collected can be used to implement some interventions in the classroom that are designed to address the difficulties the learner is experiencing. In some cases, in some contexts, this may be enough to enable the learner to succeed. However, in some cases (and if the evidence suggests that the learner's difficulties are not due to physical impairment, lack of educational opportunity or a trauma that has affected the student's ability to learn), it may be decided that it would be useful to move to the next stage of assessment: formal assessment by an educational psychologist or fully qualified specialist teacher. As MacIntyre (2005) points out, this is an important and not always straightforward decision. Taking the next step may have an impact on the individual's self image, as well as the perceptions of those around him or her. This may have a positive impact, in that difficulties experienced can be put into context and explained to some extent, or it may have a negative impact because of the stigma attached to disability. On the other hand, if no further action is taken, the learner may well become frustrated that nobody is taking the problems she or he is experiencing seriously, and feel that nobody wants to help. Each case needs to be carefully considered before proceeding to a formal assessment, or not, as the situation warrants.

Formal Identification

There are several reasons why a formal assessment might be required, not least the fact that a positive identification of an SpLD is often the key to accessing funding to implement curriculum adjustments and arrange exam access accommodations. Although the application of a label may not always be desirable, in many countries education systems are set up in such a way as to make this a requirement for allocating resources. Educational psychologists (and specialist teachers who hold appropriate qualifications), therefore, hold an important gate-keeping role through their authority to determine the 'diagnosis' and decide who will receive support and who will not. Apart from these bureaucratic reasons, many learners are also keen to have a clear answer as to what is at the root of any difficulties they are experiencing; a formal psychological assessment is designed to throw light on all areas of cognitive functioning, and can therefore help learners to understand their own performance.

Thompson (1984) points out that another reason for a formal assessment is to confirm that any difficulties are due to dyslexia, as opposed to other sensory, emotional or environmental causes. Most importantly, as Miles and Miles (1999) assert, formal assessments should identify specific areas of weakness and plan strategies for the learner to develop good techniques for study.

Most psychological assessments make use of several batteries of assessment tools, with the majority of these tools based on a normative model of testing (i.e. they are designed to measure certain skills and compare individuals' performances to that of the average for their age peers). This does not take into account the large variations that are found in

young children of the same age, so assessing very young children (below school age) is seen as problematic. As we mature, these variations tend to become less pronounced. There are some tools that are based on a criterion-referenced model of testing so that they assess whether an individual can perform specific tasks, which is then used to determine the kind of intervention that might be appropriate. For a full picture of a person's cognitive profile to be clear, both types of tests are important. Many formal assessments designed to identify an SpLD such as dyslexia are based (however loosely) on an analysis of ability (or 'IQ'), attainment (development of literacy practices) and other cognitive processes such as phonological processing and working memory.

Literacy is assessed using a range of measures. Typically these include a test of spelling of individual words, graded from very common two and three letter words ('he', 'and') to much less common polysyllabic words ('pusillanimous') including some which do not follow regular spelling conventions. The ability to produce continuous text is also tested by asking the person to write a piece of free writing under timed conditions (usually

Table 5.1 *List of assessment tools commonly used in the USA and UK*

Name of test	age range (years.months)	use
Wide Range Achievement Test 4 (WRAT 4)	5–94	1:1 test of reading, spelling and mathematical computation
Wechsler Individual Achievement Test-Second UK Edition (WIAT-UK)	4–85.11	1:1 test of reading, language (including speaking and listening) and numerical attainment
Test of Word Reading Efficiency (TOWRE)	6–24.11	1:1 test of reading,
Helen Arkell Spelling Test (HAST)	5–19+	Group / 1:1 test of spelling
British Spelling Test Series (BSTS)	15.6–24+	Group / 1:1 test of spelling, dictation and proof-reading
Wide Range Intelligence Test (WRIT)	4–85	1:1 test of verbal and visual ability
Wide Range Assessment of Memory and Learning – 2 nd Edition (WRAML2)	5–90	1:1 test of verbal, visual ability and attention/concentration
Test of Memory and Learning – 2 nd Edition (TOMAL2)	5–59.11	1:1 test of general and specific memory functions
The Digit Memory test	6–adult	1:1 test of short-term and working memory
Comprehensive Test of Phonological Processing (CTOPP)	5–24.11	1:1 test of phonological awareness
Symbol Digit Modalities Test (SDMT)	8–adult	1:1 test of processing speed
Morrisby Manual Dexterity Test	14–49	1:1 test of fine motor control
The Beery-Buktenica Development Test of Visual-Motor Integration – 5 th Edition (Beery VMI)	2–99.11	1:1 test of fine motor control and visual perception

about ten or fifteen minutes). This writing is then analysed for speed of writing (in words per minute), accuracy of spelling and syntax, regularity of handwriting and layout and complexity of ideas. Reading skills are assessed through an individual word reading activity which tests both sight vocabulary and decoding skills, and this may include a test of reading non-words (i.e. strings of letters that follow the rules of the language but are not known words; English non-words might include examples such as 'tep', or 'plinfer'), to see if a student can apply the rules of phonological decoding to unfamiliar words. Reading comprehension is commonly tested using multiple choice questions or sentence completion activities, and it is interesting to observe that students who are found to have an SpLD can sometimes score higher on the comprehension of continuous text than on the decoding of individual words, suggesting the greater use of holistic strategies than of word-decoding to make sense of text. Speed of reading is also measured by setting a time limit and then counting how many words can be read out in the time given (or alternatively asking the person to read a passage aloud and timing how long it takes to read a certain number of words). In this test, the dual challenges of decoding and comprehending the text are compounded by the need to articulate the sounds, and many people with an SpLD find this too great a cognitive load to manage easily. However, many older learners who have an SpLD and who have had support through their education have been enabled to develop effective strategies and literacy practices commensurate with their age-peers. This may mean that their difficulties with phonological processing are masked, so that their literacy scores are relatively high, even if they are not able to demonstrate their true intellectual ability in the way they handle text, thus leading to a false negative identification. For this reason, an investigation of discrepancies between dimensions of underlying ability is crucial.

Underlying ability is often assessed on several different dimensions, including visual perception, working memory, speed of processing and verbal comprehension. Visual perception is assessed using visuo-spatial problem solving activities, for example asking students to recreate a picture that is presented to them, using coloured shapes that they are supplied with. It is also common to present learners with a sequence of abstract designs and then require them to choose one, from three or four offered, which would best continue the sequence. There is one 'correct' answer for these problems, but it could be argued that this disadvantages people who have an SpLD, who may make instant connections that individuals without any apparent SpLD cannot see. This would lower the overall ability score, perhaps bringing it in line with the literacy score, and therefore resulting in a false negative identification.

Working memory is most often assessed using a digit span test, although visual tests are also becoming more widely used. The premise of the digit-span test is that the learner is required to repeat a string of digits, which the assessor reads out in a steady manner with no intonation. The number of digits in each string increases gradually, and the longest string that can be repeated accurately is noted. This tests short-term memory span; working memory is tested by requiring the learner to repeat the digits given, but in the reverse order to which they were heard. For example, if the assessor reads out '4 - 5 - 3' the learner should repeat back '3 - 5 - 4'. Some people, particularly older students, may have developed strategies for remembering numbers (using finger movements, chunking

them together, or spotting relationships between numbers) because of their importance and prevalence in daily life. If these strategies do not relate to other areas of life, the student may succeed in scoring highly on this test despite having a poor working memory generally. Since this is one of the key indicators that assessors look for in determining the presence of an SpLD, students who have well-developed number recall strategies may find that their SpLD remains formally unidentified.

Processing delay is another key indicator of underlying cognitive differences, and there are a number of tests that seek to measure a person's processing speed, both verbal and visual. Visual processing may be assessed by timing how long it takes to copy symbols into corresponding boxes, or to separate strings of similar symbols (ffffffffffhhhhhh-hhhlllllll), or strings of words (wentheadlefhouse). Verbal processing speed is often measured using rapid naming activities, where students are presented with pictures of common objects, numbers, or colours, and asked to name what they see as quickly as possible. Phonological processing and manipulation are two important areas for assessment, and there are many different tests to measure these skills, such as reading non-words, repeating words with one phoneme missing ('table' - /t/ = 'able'), and asking the student to produce spoonerisms of names they know.

Verbal reasoning ability is measured by activities such as asking the individual to define common words, or to state what the connection is between two items, and supply the missing item (e.g. 'cat is to kitten as dog is to ____' where the expected answer should be 'puppy'). Some standardized 'IQ' tests make use of these types of tasks and equate a large vocabulary and the ability to define words to high levels of intelligence. This discriminates against people with an SpLD, who may not read as widely or be able to articulate their thoughts concisely under pressure, with the result that they are deemed to have a lower overall IQ. If an assessor is looking for a significant discrepancy between high IQ and lower literacy levels, false negatives must be quite common. These tests are particularly unsuitable for learners who are being tested in a language that is not their first or strongest language, for example, in an ESL context.

Assessment in a second language context

In bilingual and multilingual settings one is constantly challenged by the difficulty of teasing apart phenomena associated with normal second language (L2) reading acquisition from authentic warning signs of reading failure. (Geva, 2000: 13)

When students are learning a language in a situation where the target language is the medium of instruction and the dominant local language, for example, in an EAL/ESL/ESOL context, there are additional factors that need to be taken into consideration when using the assessments described above. Some students arrive in the ESL context with an assessment already done in their home countries, and this can be very useful, as long as it can be translated and authenticated, so that it can be accepted by authorities in their

new country. Those who come from countries where their SpLD has not been identified are clearly at a disadvantage in terms of accessing support and reasonable curriculum adjustments. Very few assessors would feel comfortable conducting their assessments in a language other than their first language, and yet there seems to be little consideration given to individuals who are required to respond in a second (third, fourth...) language. Sometimes the caveat is made that they have been in the country for a few years and seem to be functioning well enough to cope with a formal test. For most students being assessed in a country where the main language is not his or her L1, tests that rely on knowledge of the second language structure and vocabulary may not be suitable, and may well give false positives. Geva (2000) reports that, because of this, some local education authorities in Canada adopted a policy of not formally assessing young learners until they had been in the education system for at least five years, in order to reduce the high number of false-positive identifications of SpLDs among the ESL community, and the subsequent inappropriate interventions. Moreover, Limbos and Geva (2001) found that teachers' assessments could not be relied upon to accurately identify bilingual learners who may be experiencing difficulties due to an underlying cognitive difference, since many problems with developing L2 literacy practices were attributed to a lack of L2 oral proficiency. The result is that very often those L2 learners who do have an SpLD are not able to access the early intervention that may reduce longer-term problems.

Some research studies have suggested that tests of phonological awareness and single word recognition (decoding), even when conducted in the L2, can be successfully used to identify developmental differences in these areas (Everatt *et al.*, 2000; Geva, 2000; Hutchinson *et al.*, 2004; Miller, *et al.*, 2003). It is believed that these particular skills, which underpin reading, transfer readily from the L1, and hence develop ahead of general second language competence. Although the standardized norms for these tests were not used, and instead comparisons were made within the language groups, it should be noted that all of these studies were conducted among students who had been full-time in the L2-medium education system for at least two years. Miller *et al.* (2003: 69) acknowledge that using the same assessment methods and materials for L1 and L2 learners may only be possible if the L2 learners have had 'sufficient exposure to the majority language'. Therefore there is still a question as to how appropriate it is to use these tests to assess underlying cognitive functioning in learners who have not been in the L2 environment for very long, or who have limited exposure to the dominant language, despite living in the country for a long time. There is no consensus on how much contact with the language a learner would need to assimilate the L2 phonological rules, and it is likely to vary between individuals. In order to avoid inadvertently assessing L2 proficiency along with phonological awareness and processing, it is essential that assessment materials are used that are not based on L2 words or sounds.

Apart from the language proficiency implications of using L2 phonological awareness tests to determine which ESL/ESOL students may have an SpLD, the limited range of cognitive functions that these task-types assess fits only with a narrow definition of what it means to have an SpLD. Ideally, a more complete battery of tests would be employed, such as '*Cognitive Assessments for Multilingual Learners*' (ELT well, 2011) to examine other

areas of cognitive functioning such as auditory and visual memory, processing speed and phonological awareness.

Processing speed, could be assessed using a symbol-coding task that uses symbols that are not specific to any particular writing script, and memory span, could be measured using non-verbal sounds or visual input. These assessment tasks are more likely to provide a true picture of the individual's abilities and areas of weakness than tests that rely on language proficiency. In order to explore the student's language development, some of the assessment activities described above can be adapted to make them more suitable for the ESL learner. For example, free writing can be produced in the first language, and although it may not be possible to assess the accuracy or complexity of the writing, some information can still be gleaned from the text produced. The text can be compared to others from the same language group to determine the relative speed and regularity of handwriting. If a student who reports having had the usual educational opportunities produces very little text, then some other explanation needs to be sought, either physical or cognitive. Speed of word retrieval can also be assessed using the learner's first language, even if the assessor does not speak it. Although the scores will not be standardized, the way in which the task is approached and completed should reveal the degree of automaticity with which the learner is able to retrieve the words. Speed and fluency of reading aloud could also be assessed at a superficial level, using a text in the learner's first language, which would be freely available from the internet. In all of these cases, the emphasis would be on a qualitative assessment of the learner's performance, rather than a quantitative, standardized measure.

Following identification of an SpLD, it is imperative that the information is shared with the student and that any adjustments that are required are put in place as quickly as possible. For this to happen, it is usually necessary to share the information with other members of staff, and perhaps other people, such as the student's family, peers, and external bodies such as exam boards. As the findings of the assessment may include information that will change a student's self-image, and perhaps the perception of those around them, it is important that the disclosure is handled as sensitively and professionally as possible.

Disclosure

Finding out that an SpLD is the cause of difficulties that have been long-term barriers to learning affects people in different ways. On the one hand, it may come as a relief that there is a real reason for their difficulties; knowing what the reason is, solutions can be sought that allow students to let go of failure and guilt. On the other hand, it may also come as a shock, and take some time to come to terms with (Klein, 1993; Huws & Jones, 2008). The later in life that the identification is made, the more pronounced both the positive and the negative emotional responses may be. While for younger learners professional staff may take care of sharing the information with people who need to

know, adult learners might have to take responsibility themselves, or enlist the help of a support team at their school or college. Most educational establishments will have procedures in place for passing on confidential information, but it may be that not all students – or indeed, members of staff – are familiar with these procedures.

Disclosing assessment findings to the student

As soon as the results of the formal assessment are known, they ought to be shared with the student – to do otherwise is simply unethical. Huws and Jones (2008) report cases where disclosure of an SpLD to children was delayed by up to 10 years, while educational interventions were put in place for reasons that they did not understand. The impact on these young people’s developing sense of self can only be guessed at, but the intensity of the shock, disbelief and disappointment when they were eventually included in the circle of information came through clearly in their responses in the research. Although having a label may enable a person to ‘own’ their impairment and access services, thus potentially leading to new opportunities, plans for the future may have to be changed on the basis of this new information, and result in an altered self-image. It is essential that assessors or

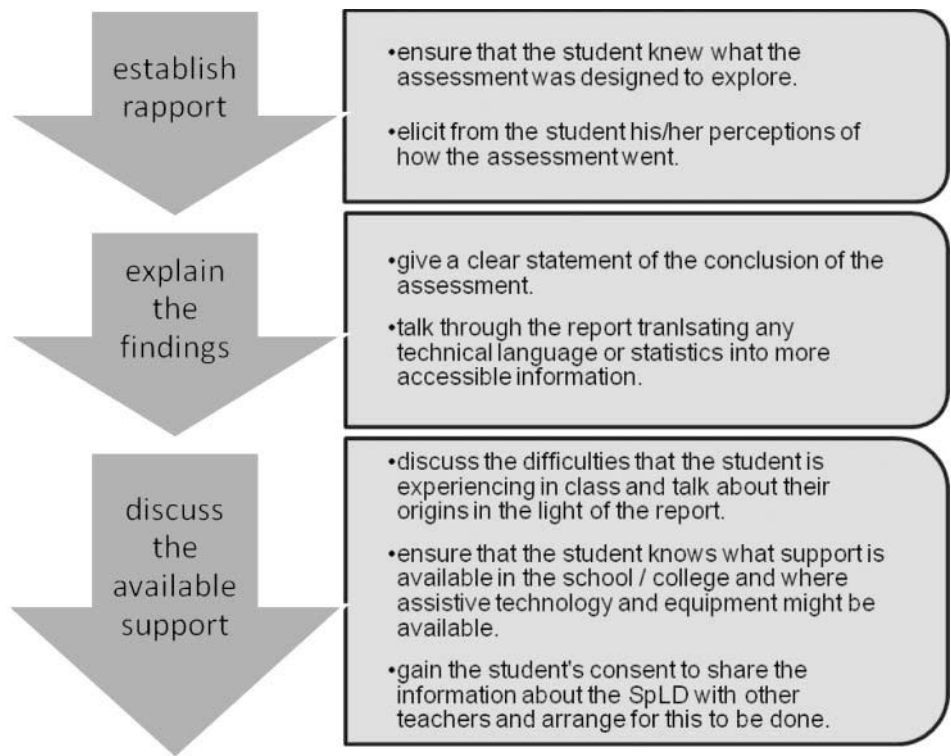


Figure 5.2 Outline of procedure for disclosing assessment findings to a student.

tutors who are responsible for disseminating the information take into account the student's level of knowledge regarding SpLDs, rather than assuming that they will understand all the implications of a positive identification. The assessment results should be used to allow the student to develop an understanding of his or her strengths and weaknesses and to explore connections to general daily difficulties. Reports of the findings should be written in accessible language, explicitly stating what the effects of the identified SpLD could mean for study and other areas of life, rather than just reporting the statistical data. Cultural differences should be taken into account, too, including sensitivity to differing views of disability. Although there may be some initial difficulty in accepting the findings of the assessment, generally students can be helped to see the formal identification of an SpLD as an important point in their education from which they are able to move forward more effectively. Pollack and Waller assert that 'with help and hope children are normally very willing to work hard' (1994: 3); in many contexts it may largely fall to the language teacher to ensure that appropriate support is provided and that there is no suggestion that an SpLD may signal the end of academic achievement.

Passing on information to class teachers and external bodies

After explaining to the student what the findings of the assessment mean, the most important disclosure is to the teachers who will work with the learner, followed by external bodies such as exam boards, funding sources and possibly placement hosts. In many countries there are legal requirements to share information, and certainly there are strong pedagogical and ethical imperatives to do so.

The information that is sent to teachers needs to be relevant and comprehensive, but not overwhelming; for example, statistical data could be interpreted and put into context rather than reporting the unprocessed figures. Rocco (2001) warns that it is not enough simply to hand over the relevant documents, with no opportunity for discussion of the implications of the data. Teachers need to be made aware of what the findings mean for the class, what can be done to make the curriculum more accessible, and what can be expected in terms of support for the learner. The adjustments that teachers can make in classroom management and strategies that can be successfully used with language learners who have an SpLD are discussed in depth in Chapters 6 and 7. Chapter 8 covers assessment in some detail, but here it is worth pointing out that exam boards need to know well ahead of the assessment series what accommodations will be required, and they will usually demand evidence of an SpLD before putting them in place. Funding bodies, too, will usually want proof of a positive identification before releasing funds to pay for equipment, specialist tuition or classroom support. Each organization will have its own application systems, which need to be followed meticulously in order to avoid delays in putting adjustments in place. Figure 5.3, below, is a suggested format for circulating information within an organization.

INFORMATION REGARDING A SPECIFIC LEARNING DIFFERENCE
Name of student
Course
Class / personal tutor
Date of assessment
Summary of results (nature of SpLD)
Main areas of strength
Main areas of difficulty
Classroom accommodation required
Equipment required
Exam access arrangements required

Figure 5.3 Example of a pro forma that could be used to circulate information to staff

Sharing information with family

The nature of SpLDs is such that many parents may well be aware that their children process information and perceive the world differently in some respects. Some may even have guessed the reason for this and participated in the observation process that led to formal assessment. Others may not have any understanding of what it means to have an SpLD, and may therefore require some support themselves in coming to terms with the information. Hasnat and Graves (2000) found that parents of children with a development difference felt more satisfied if the discloser used a direct manner, was clear, understood their parental concerns and offered lots of information, even to the point of overwhelming them at first. Students who have just had an SpLD identified would probably benefit from the support of a network made up of family, tutors and friends if they are to begin the assimilation of their new identity, and the development of compensatory strategies. For students who are studying abroad, for example on residential language programmes, this network could include their classmates, flatmates or host family. The way in which the disclosure is made to the support network is crucial in setting up a positive framework in which the student can make the necessary psychological adjustments, since the attitudes of parents and friends affect the degree to which any interventions that are implemented are embraced. MacIntyre (2005) suggests that one way to share the information is to enlist the help of parents at the observation stage, so that early on in the assessment process the idea that their child may have an SpLD begins to form. Having been ‘drip-fed’ information throughout the screening and assessment stages, a positive identification of an SpLD is no longer a shock, and they are better able to support the learner.

Disclosing to peers

One of the responsibilities of a language teacher is to foster an environment in which all learners are able to succeed. This includes building a sense of community within the class, such that collaborative and cooperative work is fruitful. When a learner has an SpLD, it can affect the way they interact with classmates, and this can be difficult for some to understand. It is easier to understand an individual's unorthodox or unsociable behaviour if the cause is known, and the implications are clear. Pollock and Waller (1994) suggest that a functional label can be helpful in this situation to help peers understand that it is not laziness or lack of ability that is at the root of any undesirable behaviour or erratic performance. In most cases, other students will be sympathetic, once they understand the situation. However, the student who has the SpLD needs to be prepared to share this information with the class and to have thought about how to answer questions regarding the SpLD, whatever the given label is.

One way of approaching this is to offer a straightforward statement of the SpLD, with an explanation of its implications in terms of a functional description of what it means for work and study, stating the positive as well as negative characteristics. It would also be helpful to set out what adjustments to classroom management may be needed, and enlist the support of the class in helping to implement them. Running some classroom activities that help to raise awareness of how it feels to have the SpLD could also be considered. An example is provided in Appendix 2.

Student disclosure to an institution

When considering the situation where a student has information about a disability, such as an SpLD, to pass on to an institution, Rocco (2001: 12) describes disclosure as 'a process that includes decisions on whether, when and how to disclose'. There are perceived risks in disclosing, such as having to deal with attitudes that stereotype individuals and prejudge them based on the one fact of their impairment. Some students might fear that their tutors or peers would not believe them, see the disclosure as an excuse for poor performance or even deny them access to their course. Some students may want to forget about their previous difficulties when they move to a new institution, and prove to themselves that they can cope without support (Gilroy & Miles, 1996). Unfortunately, keeping quiet leads to the greater stress of constant fear of failure and discovery. Lingsom (2008) applies Goffman's (1963) terminology of 'passing' as non-disabled (i.e. keeping the SpLD secret) and 'covering' (i.e. playing down the effects of having an SpLD). For this to succeed, accomplices in the form of a close friend or classmate, or even a tutor, are sometimes recruited to help in implementing 'passing' or 'covering' strategies including planning exits or rests when needed, prioritizing workloads, or even telling lies to cover difficulties. It is often noted that the energy put into 'passing' in one sphere of life detracts from the quality of other domains. Lingsom (2008) also notes that some students

may resist disclosing not out of fear of the stigma associated with disability, but out of consideration for others, in order to avoid awkwardness, or possibly attracting undue attention which leaves others feeling neglected. Matthews (2009) correctly points out that although non-disclosure may seem irrational and self-defeating, it is the student's right to decide which identity he or she presents to the world. However, it is clear that if the school or college is not aware of the difficulties the learner experiences, any interventions or accommodations that the learner might otherwise be entitled to cannot be put in place.

There are, however, many reasons why a student might be keen to disclose that they have an SpLD: in order to gain access arrangements to help them in their course, to strengthen the relationship with their tutors, and to alleviate any anxiety that they are feeling because of the difficulties caused by the SpLD. Roberts and Macan (2006) suggest that other reasons for disclosure include finding out what the staff reaction might be, to determine whether it would be worth pursuing the course, and enhancing self-esteem by being open about their disability and not treating it as something to be ashamed of.

It is, therefore, extremely important that students have plenty of genuine opportunities to disclose their disability to an institution when they enter it. The first opportunity should be on the application form, but many students may see that as risky in case it reduces their chances of being accepted onto the course. Students who are applying to study in a different country where the application forms are in the target language may not understand the terminology used to elicit this kind of information, as unfamiliar discourses may be employed. Other opportunities should be offered during enrolment, induction and early in the course for students to talk in confidence with their personal tutor or a member of the support team who can reassure them that their difficulties will be taken seriously, and that reasonable adjustments will be put in place. The way in which the information is received by the institution is likely to affect the subsequent attitude of the student to the course and 'can determine whether the student persists and completes the program' (Rocco, 2001: 11).

Lingsom (2008) Motives for disclosure of an unseen impairment

1. Desire for experience (accommodation may be needed for access)
2. Reducing demands (flexibility may be required for completion of tasks)
3. Altering evaluation standards (sympathetic marking which focuses on content may be requested)
4. Personal integrity and cohesion (desire to be open)
5. Value transformation and political activism (desire to raise awareness of disability issues)
6. Health care and service encounters (need to access support).

From the institution's point of view, it would obviously be best to have the information early on, preferably prior to the start of the course, although for the reasons outlined above, it is often only received later on during the course. Lingsom (2008) suggests that disclosure of an unseen impairment, like an SpLD, is often an ongoing process because of the lack of visible signs to remind people.

Once the identification of an SpLD has been made and the information has been shared with all the relevant people, it should then be possible to put into action the reasonable

Table 5.2 *Advantages and disadvantages of disclosing at various points on a course, after Roberts & Macan (2006) and Lingsom (2008)*

Timing	Advantages	Disadvantages
Before the course	Tutors are able to put all the required arrangements in place.	Tutors have preconceived ideas about the student; student loses the right to assert his/her own identity and choice of how to present to peers.
Early on in the course	Student appears confident and comfortable with disability, honest and upfront, not trying to conceal anything.	Disclosure may appear out of place. Student seems to disclose to everyone – perhaps s/he is obsessed with own impairment?
Late on in the course	Student makes it clear she/he is not looking for sympathy and is happy to work independently, but chose to disclose because she/he trusts the staff.	It may be too late to do anything, leading to frustration on tutors' part, and a sense of inadequacy that it was not spotted.
Frequently during the course	Student keeps tutors mindful of the need to keep reviewing the adjustments in place.	Student appears to be a chronic complainer who is looking for sympathy.
Seldom during the course	Student appears independent and not attention seeking.	There is a risk of tutors forgetting about the hidden impairment and assuming that all is well.

adjustments required to enable the learner to access the curriculum and succeed in the language classroom. Chapters 6, 7 and 8 discuss the forms that these adjustments might take in the classroom and in assessment situations.

Summary of key points

- Language teachers may be the first to notice that a student is experiencing difficulties beyond the usual language learning challenges because in the language learning situation, a student who has a previously unidentified SpLD may be facing new demands that his or her existing learning strategies may not be able to meet.
- It is extremely hard to disentangle the kinds of difficulties that all language learners face from those that originate from an SpLD, and teachers should not rely too much on the written language of the student to identify the SpLD, but rather look at the underlying cognitive functioning.
- As soon as a language teacher begins to notice some of the key indicators of an SpLD, systematic observation should be implemented, involving the family too, in the case of young learners.
- If the observations seem to show a pattern of behaviours consistent with an SpLD, a screening interview could be carried out to determine whether there are any reasons for the behaviour, apart from the presence of an SpLD.

Summary of key points (continued)

- If the screening process does not uncover any other reasons such as prolonged illness, absence from school or sensory impairment, then a more formal cognitive assessment could be conducted by an appropriately qualified professional to ascertain the range of strengths and weaknesses that the student has.
- The results of the formal assessment must always be disclosed to the student in a sensitive manner, taking into account the age and cultural background of the individual. Possible sources of support should also be flagged up as appropriate.
- With the student's permission, information about the results of the assessment should be passed on to all teachers who have contact with him/her, and also to family and peers who could act as a support network.
- In the case of students arriving at an institution with an existing identification of an SpLD, it is important that several opportunities are made available for disclosure to the staff, and that all staff know how to respond to such a disclosure, and where the information should be passed on to.

Activities

1. What are the difficulties that the majority of your language learners experience in class? Are there any students who have difficulties beyond what you would expect?
2. Draw up an observation schedule for one learner that you have noticed is experiencing difficulties in class. Follow it for a few sessions and note the kinds of behaviours that seem to be consistent with an SpLD.
3. What opportunities do your language learners have to disclose an SpLD to you or other members of staff? Are they linguistically and culturally appropriate?
4. How might you approach the subject of SpLDs in your language class, so as to raise awareness in the group without singling out any individual who has an SpLD?

Further reading

Geva, E. (2000). Issues in the assessment of reading disabilities in L2 children –Beliefs and research evidence. *Dyslexia*, 6, 13–28.

Rose, C. (2006). *Do you have a Disability – Yes or No? Or is There a Better Way of Asking?* London: Learning and Skills Development Agency.

6

Accommodating Differences

Introduction	105
Environment	105
<i>Light, temperature and volume</i>	106
<i>Furniture</i>	107
<i>Equipment</i>	107
<i>Materials</i>	109
Curriculum	111
<i>Organization of subject matter</i>	111
<i>Classroom tasks and assessments</i>	112
<i>Differentiation</i>	113
Communication	114
<i>Instructions</i>	115
<i>Feedback</i>	115
<i>Self-esteem</i>	116
Classroom management	117
<i>Grouping</i>	118
<i>Routine</i>	118
<i>Pace</i>	119

Developing learning skills	119
<i>Study skills</i>	119
<i>Metacognitive thinking skills</i>	120
Summary of key points	123
Activities	123
Further reading	123

Introduction

In a truly inclusive education system, no special accommodation for students with an SpLD would be necessary, as diversity in all its forms would be accepted as the norm. Until we reach this utopian situation, however, some adjustments may be needed to enable all students to access the curriculum on an equal footing with their peers. These adjustments may be necessary because of the different ways that learners with an SpLD respond to the environment of the classroom. The physical environment and the furniture and equipment that are available is often beyond the control of the classroom teacher, but having an understanding of some of the factors that are significant in creating a suitable environment may help teachers to make the best of the conditions they are working in.

Likewise, the curriculum may be set by the school management, or external agencies like the government or examining boards, but there are still measures that the classroom teacher can take to ensure that the way in which the curriculum is presented makes it as accessible as possible for all learners. This chapter will touch briefly on the way that tasks may be organized, but will not cover task types in any detail (see Chapter 7 'Techniques for Language Teaching' for more information on this).

One area which is usually well within the control of the classroom teacher is the way in which the class is managed, in terms of who interacts with whom, and how learning is facilitated. This chapter will therefore focus particularly on how teacher behaviour can positively affect the language learning experiences of students with an SpLD. Many of the suggestions made here may seem to experienced teachers like general good practice, and this is indeed the case: what is good practice for learners with an SpLD is usually good for all students in a class, with some variations to account for individual strengths and weaknesses.

Environment

As has been discussed above, students who have an SpLD may perceive the world differently, and this is particularly important to keep in mind when considering the physical environment of the classroom. It is well documented that people who experience some difficulties due to an SpLD can be very sensitive to light levels, and particularly to temperature and volume levels of the immediate environment (Bogdashina, 2003). There is also evidence that a heightened sensitivity to physical contact is a characteristic of some of the SpLDs under consideration in this book.

Because of their heightened sensitivity to sensory stimulation, adults with ADHD are particularly prone to both sensory over- and underload. They are highly sensitive to light, noise, temperature, tactile sensations, odors, and strong tastes. All of these can have direct influence on their moods, alertness, and performance level—often without the person’s awareness or understanding (Gutman & Szczepanski 2005: 24).

Light, temperature and volume

When light levels are too bright, they can cause a range of visual distortion problems and ultimately, migraines. Visual distortion may take the form of a perception that text is blurring, shimmering or disappearing, and this makes it impossible to read. Fluorescent lights can also cause problems for some people, to the extent that it becomes impossible to work. Many of us will have experienced discomfort from the flickering that indicates that a light bulb or fluorescent tube is about to die, and this seems to be the kind of effect that people with an SpLD experience regularly, even when others do not perceive it. Natural light is usually the best light to work in, but when that is not possible, ‘natural’ or ‘daylight’ bulbs are available and can alleviate some of the problems mentioned here. Using a coloured overlay or tinted paper can also reduce the glare from black print on white paper; changing the students’ position may be helpful in reducing the reflection of the lights on the whiteboard. If this is a persistent problem, the student might try wearing sunglasses in class, and in the long-term, if funding is available, investigate tinted lenses from a specialist optometrist.

Working in a classroom that is slightly chilly or slightly too warm may seem irritating to many of us, but for those who are hyper-sensitive to temperature, even a small variation may be extremely distracting, or even intolerable. It is worth checking that everybody is comfortable at the start of the lesson, and setting out clearly what etiquette should be followed if an adjustment of temperature is required. This should be designed to avoid conflicts arising from one individual deciding to open a window or adjust the heating, without consulting other members of the class. (It also provides a good opportunity for practising polite social language and negotiating skills!) Although it seems obvious, it may be helpful to suggest to the student that dressing in several layers might be advisable, to allow for individual adjustments to be made as required. Some teachers may feel that advising their students on what to wear is beyond their professional remit, but students with an SpLD may actually welcome some friendly suggestions, if sensitively offered.

Some people who have an SpLD, and who are prone to distraction, find it hard to focus if there is anything moving in their line of vision. The same is true of noise, especially for those individuals who are hypersensitive to volume. Noise coming from outside the classroom may be easy enough for most learners to filter out, but for some learners who have an SpLD it will be distracting, and divert a lot of their attention away from what they are studying. Equally, what may seem to the majority of the class to be the purposeful working ‘hum’ of pairs and small groups discussing topics and practising the target language may be perceived as a cacophony to individuals who are sensitive to volume. If a separate area is available for these students to work in with their partner, this would be an ideal solution, but otherwise, it is important to make sure that the ‘hum’ does not

become a ‘roar’, and that the rest of the class are made aware that high volumes are distressing for their classmate.

Furniture

If the particular SpLD that the student experiences manifests itself with aspects of dyspraxia, it is worth taking into account how the physical layout of the furniture might impact on his or her learning.

Although most modern classrooms are equipped with flat tables that are shared by two or more students, many students will find it more comfortable to lean on a sloping surface when writing. It seems with hindsight that the individual sloping desks of 19th and early 20th century schoolrooms had a lot to recommend them, although they were usually arranged rather too rigidly for modern teaching methods. Leaning on a slope enables the writer to keep the hand naturally in the ideal position for clear handwriting, while supporting the wrist and forearm. If a student seems to be having trouble producing clear handwriting, it is worth checking the pen grip and hand position, as it may need adjusting, particularly if the student’s first language is written in a different script (Sassoon, 1995). If the pen grip seems to be appropriate, adjusting the slope of the page may also be helpful. Writing slopes are commercially available, but using a ring binder or lever-arch file can work just as well in the short-term.

Personal space is important for some learners who have an SpLD, and sharing a table may not be the ideal situation for some. Students who are having trouble managing their own workspace (juggling a notebook, textbook, dictionary, pens, etc.) may find it inhibiting having to share with a neighbour (and their neighbours might also find it uncomfortable). Students who have traits of Asperger’s syndrome may find it more natural to work individually, and those with ADHD traits might find it easier to concentrate if they are not too close to other learners. The layout of the classroom depends to a great degree on the physical constraints of the room, of course, but being aware of these issues may enable the teacher to plan the arrangement of the furniture to the best advantage. If it is at all possible, students with Asperger’s syndrome or ADHD may appreciate having a designated ‘retreat’ they can go to if the classroom environment becomes too overwhelming for them; this could be a quiet corner within the classroom or a separate space elsewhere. The procedure for using this space should be agreed at the start of the course and – if appropriate – other members of the class should be made aware of the situation.

Equipment

Over the last decade or so, the range of equipment available for supporting classroom language teaching in general, and for accommodating disability in particular, has grown enormously. Technological advances have meant that ICT is available in many classrooms, and that electronic devices are not only cheaper, but smaller, more portable and much more sophisticated. However, although new technology can be extremely helpful for learners with an SpLD, and will be discussed in some detail in this section, it

is worth remembering that, actually, older paper-based technologies also still have a role to play, and can be a useful back-up when more advanced electronic systems fail.

A characteristic shared by many students who have an SpLD is a weakness in short-term and working memory, as discussed in Chapters 2 and 3. This means that they are prone to forgetting what work had been set as homework, or to bring particular information or books to class. A simple solution is for the student (or, indeed, all students in the class) to carry a small notebook or diary in which homework can be recorded, by the teacher if necessary, as well as other points to remember. Of course, mobile phones and electronic personal organizers are taking over this role to a large extent in many places, but there is still an argument for the quickly-accessed pocket diary that both teacher and student can write in, even if only as a back-up system. Paper-based materials such as these have a tactile quality that electronic devices lack, and thus contribute to a more multi-sensory experience that benefits many learners. For kinaesthetic learners, one of the most useful learning aids is a set of Cuisenaire rods (plastic or wooden sticks of different lengths, with each length having a different colour), which can be used in many different ways to help strengthen memory and make abstract concepts more concrete. For restless students, for example those with ADHD traits, a Cuisenaire rod is also useful as a ‘fiddle peg’ to help them concentrate. Other useful ‘fiddle pegs’ include a lump of blu-tac, a plastic ‘tangle’ or any other object that can be manipulated silently to keep fidgeting fingers busy and thus help concentration.

If there is access to a computer in the classroom, there are many ways in which it can be used to the benefit of students with an SpLD. Using a basic word processor reduces many of the pressures associated with writing, as Gilroy and Miles (1996) suggest: eliminating worry about neatness of handwriting, enabling easier organization of ideas and correct spelling leads to higher self-esteem and greater confidence. Singleton (1994) also notes that these positive effects of using a computer improve motivation and determination in students who may previously have had negative experiences in the language classroom. Even without specialist software, most computers offer a range of tools that can be useful, such as the facility to change the appearance of text, making it larger, using a different font, or altering the background to reduce the glare. With a scanner connected, any text can be adjusted to suit the learner’s preferences. Schneider and Crombie (2003) point out that technology-mediated language learning enhances the students’ autonomy; they can work at their own pace, can go back to material as many times as they like, and in some cases are free to access the material at a time that suits them best. This is beneficial for all learners, but particularly for those with an SpLD.

Despite the clear advantages of using a computer, it should be borne in mind that without specialist software packages few word processors are sophisticated enough to differentiate between homophones in English (for example, if a writer types ‘there’ instead of ‘their’, the spell checking function is unlikely to highlight it, since it identifies only ‘non-words’ and not misused words). There are several programs on the market which are more discerning and offer the writer a choice of spelling options, along with the meanings; perhaps the best known in the UK is ‘TextHelp’, which also incorporates screen-reading software to reduce the cognitive load of accessing information. Voice recognition software enables students to produce text of a high quality without having to

worry about spelling, or focussing on the physical demands of either writing or typing. Software that allows learners to plan their work using mind maps is available in many formats, some of it as freeware from the internet (e.g. Bubbl.us) and because these programs are very visual and colourful, as well as allowing for frequent changes and development of ideas, they are often very useful for learners with an SpLD.

Small handheld devices are also becoming more sophisticated, so that mobile phones and personal organizers may also have a built-in electronic dictionary which can pronounce words for the learner, and make high quality digital recordings of meetings or lectures that the learner can then access later, thus removing the need for note-taking at the same time as listening, which can be problematic for learners with weaknesses in auditory memory and / or poor motor control. Some digital recorders are also able to play back the recording at a slower pace, to facilitate comprehension. There is also software available that can analyse the recordings into small chunks that can be represented visually on a screen, allowing the student to focus on one small section of an oral text at a time, and even add notes about the content before moving on to the next.

The development of these sophisticated systems has made life a lot easier for many people who have an SpLD, and allowed them to learn alongside their peers who have no apparent SpLD, where before they may have been 'exempted' from language learning (in other words, excluded and not given the same opportunity as their peers). However, even with the full array of technological support available, there is still a need for the language learner to develop effective study skills, and this will be considered later in this chapter.

Materials

Although the choice of materials may be beyond the teacher's control, it may be possible to modify the way in which they are presented to the learners. Ideally, the appearance of materials should cause as little stress as possible; keeping in mind that the learners may be prone to sensory overload or visual disturbances and may find it difficult to focus on too many items at once, it follows that materials should appear uncluttered and easy to navigate. Unfortunately, the current trend in language teaching materials is towards a bright, busy page, mimicking a magazine style. These often feature text printed over an image, with small sections of text arranged in no clear order over the double page spread. This style of textbook can be quite confusing for a learner with a visual processing difficulty, but there are a number of things that the teacher can do to mitigate the problematic aspects of these types of materials.

One option is to produce a 'text window', which can be as simple as cutting a hole in a piece of paper, that is then placed over the page, to block out a lot of the unnecessary information and allow the learners to focus just on the part of the text they need to work with at the time. A more flexible text window can be made by using two 'L' shaped pieces of paper that can be slid apart to change the size of the window.

The most important thing is to always ensure that the text is large enough and in a font that the learner can easily read. A learner having trouble reading text written in fonts at or above 10 point might be wise to seek an eye examination, but many learners with an SpLD will prefer a larger font, at 14 or 16 point, since they find it easier to track the



Figure 6.1 Two types of text window

thicker lines, and having larger spaces between the words means that there is less chance of them merging. Wider spacing might also be helpful, and the choice of font is crucial, as illustrated in the box below.

Most people agree that a font without serifs (curly additions to the letters) is easier to read than one with serifs.

Compare these words in 12 point Times New Roman – a very commonly used serif font

to these words in 12 point Arial, which appear bigger even at the same point level.

Another element of the font that can be confusing, particularly for learners who are relatively unfamiliar with the Latin script, is the difference between handwritten lower case ‘a’ and the typical print style: ‘a’. Some fonts replicate the handwritten style:

Comic Sans MS is a relatively informal font,

whereas Century Gothic can be used in more formal contexts.

These fonts may be preferred to Times New Roman, and even Arial, in producing materials for language learners.

If the learner does have trouble accessing text because it is not presented in an accessible font, the teacher could consider scanning the pages required and re-formatting them, or even typing out key sections in a more accessible style (keeping copyright law in mind, of course!).

As noted above, the background colour of classroom materials can have a big impact on accessibility for learners with an SpLD, so producing handouts on pastel-tinted paper might be helpful. If the whole class receives coloured handouts, the learners with an SpLD are more likely to feel fully included in the class, and there may be other learners who find that the off-white background reduces the effort required to read the text, even though they have no SpLD identified.

Curriculum

Organization of subject matter

As noted above, the actual content of the curriculum is usually not decided by the teacher. The way in which the content is presented and organized, however, is arguably the prime responsibility of the classroom teacher. Textbooks are often designed to fit courses of an arbitrary number of weeks' duration, with a certain number of hours taught per week. This design may not, of course, suit every context and it is important that the classroom teacher has the confidence to re-evaluate how much can be covered in each lesson and where breaks should be made, without necessarily following the prescribed pattern laid out in the book. Providing extra activities and materials to allow for additional practice of certain language points is crucial for learners with an SpLD, as it often takes them longer to assimilate new information and transfer it to long-term memory.

The key to enabling this to happen is to provide ample opportunities for 'over learning' – that is, revisiting the same information in different contexts so that automaticity can be developed through the chunking of single actions or sub skills into one action, that then in turn can become a sub-routine in a more complex task. Schneider and Crombie (2003) recommend working from reception to production and from oral language to written text.

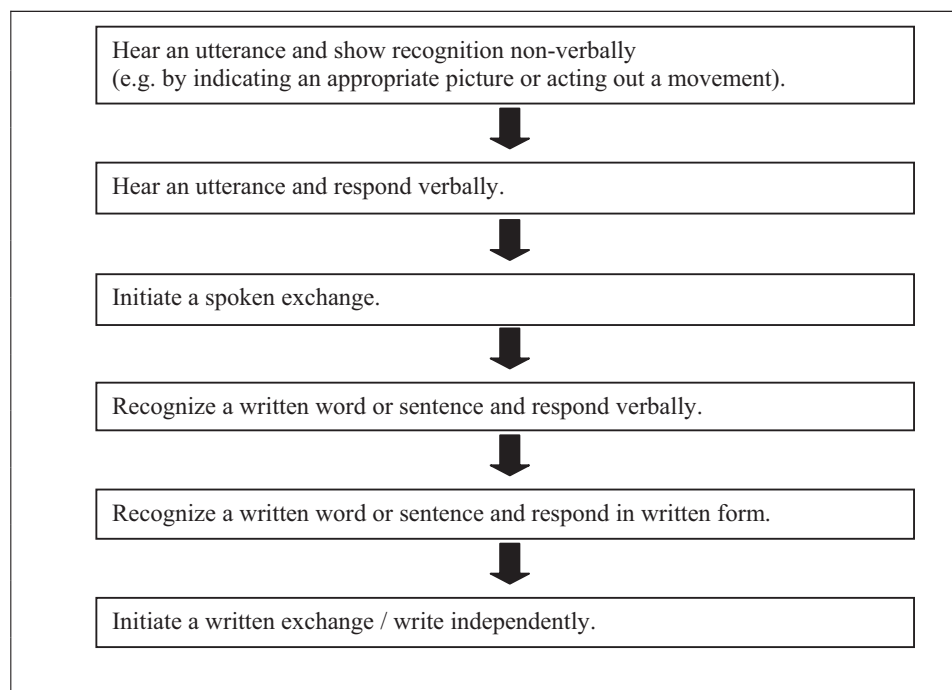


Figure 6.2 *Recommended progression of tasks*

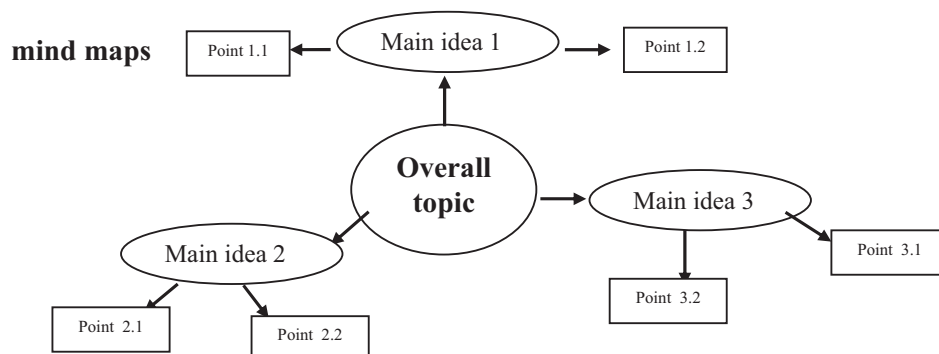
Many teachers now accept that finding out about learners' preferred modes or channels of learning and presenting material in a way that suits them best is an efficient way of working. The disadvantage of this is that, while working to the learners' strengths is clearly advantageous, it does mean that their weaker learning channels are neglected. Moreover, in any class there is likely to be a mix of visual, auditory and kinaesthetic learners, as well as the teacher's own preferred modality to take into account. A multi-modal approach is therefore likely to be of most benefit to the class as a whole. Using multi-sensory materials, incorporating audio-visual and tactile materials, enables dyslexic learners to use their stronger input channels and at the same time develop other channels that they may not otherwise use as much. Dunn *et al.* (1989) point to evidence that suggests that learners, with or without an SpLD, who access information through a range of sensory modes are likely to learn more successfully.

Another dimension of learning styles that is useful to consider is the holistic vs. analytical distinction. Holistic learners like to be able to see the bigger picture from the outset of a piece of work, and are unlikely to be able to begin until they know where they are heading. Teachers can help these learners by setting out the structure of the lesson at the start of the session, and setting medium and long-term goals. The use of mind mapping techniques is particularly useful for them, so that they can plan out an entire essay or even a project quite quickly, and use the mind maps as a framework, working on the parts they feel most comfortable with. These learners are likely to start work on several sections of an essay and move from one to another as ideas occur to them – Chinn (2001) aptly likens these intuitive learners to grasshoppers. On the other hand, the 'inch worms' of the class prefer a more sequential approach to learning, and can be confused by seeing too much of the overall picture at once. Teachers can best help them by setting out clear stages that the lesson will pass through, and breaking large tasks into smaller chunks. For them it is better to look only one step ahead at a time, to focus on each stage and complete it before moving on. For these learners, Mortimore (2008) recommends the use of grids or chains for planning, rather than mind maps. She suggests encouraging learners to use a simple framework such as: Situation, Problem, Solution, Outcome, which can be adapted to a wide range of text types. These are more formulaic and sequential methods that nevertheless allow for capturing ideas and forward planning of written work.

Another important strategy for facilitating the long-term acquisition of new material is to help the learners make links with other topics and information that they already feel secure about. This is even more effective if they are encouraged to make their own connections and record them visually, or by discussing them with their peers. The connections that learners with an SpLD make might be surprising to their classmates, but that can also be beneficial to the class as a whole, as ideas that seem unusual are more likely to be memorable.

Classroom tasks and assessments

Whatever tasks are chosen, they should have the potential to provide a lot of opportunities for repetition and revisiting material previously met. Ideally, they should incorporate a range of multi-sensory activities. A clear focus on the phonological / orthographic



grids / chains

Situation	Problem	Solution	Outcome
Overall Topic	→	→	→

Figure 6.3 Comparison of a mind map and a grid

relationships of the language is essential for many learners with an SpLD who may need a lot of explicit instruction in matching sounds to symbols. The kinds of tasks that are used in class should ideally be reflected in assessments, too, so that there is no additional cognitive burden of learning how to approach the assessment task. A range of evidence of understanding could be accepted, in addition to – or even instead of – more formal written tasks. For example, the students might be asked to produce mind maps, diagrams, bullet points, pictures, models or even short dramatic performances which demonstrate how much of the target language they have understood and assimilated, without complicating the task by introducing complex literacy practices into it.

Differentiation

Although much is spoken and written about differentiation, it seems that less is actually implemented in the classroom. Teachers commonly report feeling that they do not have the time to spend with learners who require more attention, and that, if they do support one learner more than another, it is somehow ‘unfair’ (Smith, 2008). In fact, in order to be fair to all learners, it is necessary to treat them all differently, rather than all the same, and it does not need to be excessively time consuming in the classroom. Effective differentiation can be achieved by considering four dimensions: materials, task, expectation and support.

Differentiating in terms of materials does not mean providing a whole different set of materials for different learners, but rather it is a matter of directing each student’s attention to appropriate sections in their books, and to additional exercises if they have practice or workbooks. Teachers might allocate different parts of a given text (or different

texts) to different learners, based upon their reading ability. Students who find reading straightforward should be encouraged to read a follow up text, if available, or to complete more of the written exercises. Students who need longer to process information should be encouraged to complete what the teacher deems to be the minimum necessary for the class, but have the opportunity to work on the same materials at home if they wish. Differentiating materials is of course closely linked to task differentiation, whereby students might be set different amounts of work to complete, or even different tasks completely, using the same materials. An example in an extremely mixed-ability group might be to give a newspaper article to the class, asking some students simply to highlight all the names they can see in the text (i.e. by identifying capitalized words that do not start new sentences), others to read for gist, and others to read for detail. Feedback could consist of asking the first group to say who the text is about, the second group to say what happened, and the third group to supply the details ('when' and 'why'). In that way everybody contributes to the discussion at the level they can work at in the target language. Alternatively, students might be allocated different roles in group work, to work to their strengths. A dyslexic or dyspraxic learner who does not feel very confident with writing could then avoid that task, and concentrate instead on contributing creative ideas to the group task, if that is his/her forte. (A student who has Asperger's syndrome may conversely prefer to be the group scribe or secretary, and record exactly what the others say.)

These two forms of differentiation are also clearly linked to the expectations that teachers have of their learners, and sometimes teachers can be surprised by what learners can accomplish, given the optimum circumstances. On the other hand, it is very disheartening for learners to be constantly asked to achieve what is beyond their ability. Therefore, differentiation of expectation can be used as a means of encouraging students to progress, without setting unachievable goals. This can be accomplished by giving ongoing feedback while students are engaged in an activity, and if the teacher feels that the standard of work is not yet what could be produced, explicit guidelines could be given, for example on the structure of a piece of writing, or the range of vocabulary, or the reading strategies being used. This is where differentiation of support begins, bearing in mind that all individual learners (whether or not they have an SpLD) are likely to require different kinds and levels of support. Some learners need time to concentrate, and work best if left undisturbed; others will forget what the task is or experience a block about getting started – these are the learners who will need more support at the beginning of an activity. Some may need reminding to stick to the topic or the task (as the teacher perceives it, rather than as they do), others may need encouragement with the surface features of writing: spelling or layout.

Communication

The key to any good practice in language teaching is clear communication, and this is particularly important for students who have an SpLD. As auditory processing may be

slower in some learners, it is even more important to make sure that they understand what is being said as the lesson progresses, with frequent checks of comprehension. If a student does not seem to have understood, it is better to give them a little longer to process the information, and then repeat the same phrase if necessary. Rephrasing should be used only when they have had ample time to process the information and it becomes clear that they do not understand the vocabulary being used. It may be helpful to give important information in both written or graphic and verbal form, so that they have a record that they can refer to at a later date.

Instructions

Giving clear simple instructions is something that every teacher aims for, but it is – unfortunately – all too easy to pitch the language at too high a level, or to make them more complicated than necessary. In the case of students who have an SpLD, it is essential that there is no ambiguity at all, and if possible it is best to avoid the use of metaphorical language. Students who have traits of Asperger’s syndrome may take everything that is said literally, which can have surprising consequences. One way to improve the clarity of instructions is to invest time in planning them out before the lesson, and even write or type them out and provide copies for those students who find that helpful. In this case, they should be in the form of a list of bullet points, with one action per bullet point. Each action should be explicitly described, and time scales could also be given to guide the learners. Some learners with an SpLD might want to make sure that every step is completed thoroughly before moving on to the next one, and not be aware of the time passing. Once the task or activity has been explained, it should be conducted in the way set out, with changes being avoided as far as possible. Changes of plan due to interruptions (for example, fire drills or visitors) are common in classrooms, but it is much harder for learners with an SpLD to change direction or understand a new set of instructions than it is for most other learners. After an interruption, these learners may need more support in the form of recapping to get back on track with their work.

Feedback

Students who have an SpLD often appear to perceive the world in a different way from the majority of people and so are able to make connections that others do not readily make. For this reason, when ideas are elicited from the class, it may be that the learners with an SpLD contribute ideas and suggestions that seem slightly tenuous or even totally irrelevant. However, it is important for the teacher to be ready to acknowledge and praise all ideas, even if it is not immediately apparent how they are related to the discussion. Even if the link is not clear to the teacher, other members of the class might benefit from exposure to the different thought patterns and processes that are being demonstrated.

When giving feedback to students with an SpLD on work they have completed or are working on, it is important, as when giving instructions, to be absolutely explicit about which aspects are good, and what needs further work. When suggesting improvements, again, it is important to be very clear, and perhaps even model how the work could be improved.

It is generally accepted that, when giving feedback either in oral or written form, it is good practice to begin with something positive before mentioning something that requires more work, and if possible to end on a positive note, too. Sometimes when giving feedback the desire to be sensitive and encouraging can lead a teacher to be overly positive about the quality of the work, and of course it is important to protect the student's self-esteem. Positive feedback plays an important role in building a learner's self-esteem, which is an essential element of language learning. However, it is better to be open and honest and offer constructive advice and examples of how the work could be improved, than to allow the student to develop an unrealistic view of their proficiency levels.

Self-esteem

For a learner who has always had difficulty with some of the basic elements of formal education, such as memorizing facts or working with text, it is not hard to imagine that self-esteem might be quite low, particularly where language use and acquisition is concerned. Self-image can also be negatively affected by major life experiences such as the upheaval of migration (particularly relevant to ESL situations where it may be associated with extremely traumatic incidents) and/or changes in socio-economic status. Negative self-image and low self-esteem can manifest in a number of ways, such as behavioural problems (which may be compounded by traits of ADHD or Asperger's syndrome, which can make a student appear uncooperative or disruptive), or simply withdrawing from the classroom environment, either physically or emotionally. Times of transition such as the start of a new school year, or the first weeks in a new institution can be particularly difficult for learners with an SpLD, and this is considered in some detail in Chapter 9. If self-confidence is low, it may negatively affect a student's ability to socialize with unfamiliar people, fearing ridicule and failure in the social setting as well as the academic. Students will often find ways to avoid starting an activity that they do not believe they can succeed at. Teachers need to be sensitive to this, whilst not allowing students to 'exempt' themselves from important learning opportunities. They need to anticipate activities that may present challenges and find ways of setting them up so as to instil confidence in every learner.

For example, reading out loud in class is an activity that is sometimes incorporated into language classes to give learners the opportunity to work on pronunciation without worrying about formulating grammatical sentences themselves. Many learners with an SpLD find reading aloud in their first language extremely stressful and difficult to manage, and the challenge is multiplied when reading in the target language. Although their peers may also mispronounce and trip over words, this is likely to be of little consolation to students who believe themselves to be the worst in the group at reading. Teachers could avoid putting pressure on students in this way by allowing them time to prepare the passage they are to read. All students are likely to benefit from this measure, and pronunciation is likely to improve as a result, since they will have time to read the passage, practise tricky sections and gain an understanding that will enhance the

intonation of their reading. The feeling of success thus generated should enhance self-esteem. Similarly, calling on students to answer questions in a formal manner can be a risky strategy unless the teacher is reasonably sure that the learner can answer the question. It is important to remember that students who have traits of ADHD may not be able to control their emotions as well as most of their age group, and their reactions to perceived failure may be more extreme. If possible, it is good practice to allow learners to maintain their public 'face' in front of their peers.

Generally, teachers can help to build confidence and self-esteem by setting tasks that the students are already easily capable of, before then leading them to the next stage and helping them to succeed, with support at first. Small tastes of success can help to motivate and give confidence to all learners, but to those whose egos are especially fragile, this is invaluable. Of course, language learners make mistakes sometimes, and these should come to be seen as learning opportunities if correction is done sensitively. Reformulation of an utterance is a subtle way of acknowledging that it is understood but not quite accurate, and is a very natural way of helping learners to improve. In correcting written work, it may be helpful to the learners to focus on one or two aspects of their work that they need to work on, and not highlight every small error, which can be demoralizing.

Classroom management

One very important responsibility that the classroom teacher has is to develop a culture within the group that enables effective learning. Classroom dynamics play a very significant role in the quality of learning that takes place, and although to some extent the learners themselves contribute most to this, the teacher must be alert to the social dynamics in the group, and try as far as possible to facilitate a positive learning environment. This can be done by moderating behaviour, organizing interaction and establishing norms and routines. When working with students who have an SpLD, especially traits of Asperger's syndrome or ADHD, it is sometimes necessary to be more tolerant of some inappropriate behaviour or reactions than would normally be the case. However, it should be made clear to the class from the outset where the boundaries are and what is never acceptable (e.g. aggression, breaking safety rules etc.). Any sanctions in place to counter unacceptable behaviour should be quickly and consistently implemented, but offering immediate rewards for good behaviour may be more effective than punishing poor behaviour, particularly for younger learners. Although it may be a sensitive subject, it can be extremely valuable to inform peers of a classmate's SpLD. If they are aware of the situation they can be more helpful and tolerant than if they do not understand why their classmate seems to be working so slowly or forgetting so much (see Chapter 5 for more on disclosure.)

Grouping

Pair and small group work has become a standard characteristic of most modern language classrooms, since it maximizes the amount of productive language practice the students experience in each session and develops skills of cooperation. Students seem to naturally gravitate towards people who are most like them in a classroom, and tend to sit in the same seats each lesson, if possible. For the language learner who has an SpLD, there may not be anyone in the group who seems to be very similar, and so there is a danger that this learner may become isolated from the main group. The teacher's responsibility in this case is to ensure that students pair up with different partners on a regular basis, so that they all have the opportunity to work with a range of different personality types and ability levels. Some learners with dyslexia or another SpLD may feel reticent about showing people their writing, or indeed even talking to them, if they do not know them well. Therefore, it is good practice at the start of a course to set up activities in which the learners find out a little about each other and work together in as non-threatening a situation as possible before starting on any serious project in groups. It might even be worth investing some class time in allowing the students to chat informally, if they share a language other than the target language, so as to break down some barriers and help them to form social bonds that will support their learning. In any pair or group activity, the members will fulfil different roles in completing the task, which could be in terms of language proficiency, creativity, or group/task management. The teacher should observe how different pairings or groupings interact, and note which ones seem to be most productive. Providing opportunities for regrouping, which allows relocation around the classroom, can be very helpful for learners who need movement to maintain concentration.

Routine

Many learners benefit from having a classroom routine, but students with an SpLD might benefit most from knowing exactly what is expected of them at any given time. Establishing a regular pattern to the lesson does not have to mean that it becomes boring and predictable, since the content of each lesson will differ. However, it makes classroom management much easier if there are well-established sub-routines that can be set in motion at various points in the lesson.

In many institutions it is considered good practice to open a lesson with an overview of what will be covered in that session, and to close with a summary of what has been achieved. Some teachers will deal with homework matters at the start of a lesson, or with announcements and administrative issues. These routines become familiar to the group very quickly, and help to provide a framework for the language content. Dividing the lesson into shorter sections with breaks is an effective use of time, since students with an SpLD are likely to have problems maintaining concentration. The most memorable phases of a lesson are the beginnings and endings, and introducing breaks offers additional beginnings and endings, so that more of the lesson content is likely to be retained.

Apart from the timing and structure of the overall lesson, it can be helpful to establish sub-routines for checking written work, for completing activities or for using time between activities. For example, at first students may need to be encouraged to use a dictionary or spellchecker to check their work when they finish, and then to exchange papers with another student who has finished, and to offer constructive feedback to each other before revising their work. Once this pattern has been established, by focussing on the stages explicitly, they can be ‘chunked’ into one checking routine which needs only one prompt from the teacher, or becomes an automatic part of any written task. Knowing what the next step is at any given point allows students to feel secure in the class, and to develop autonomy, by following classroom routines without needing direction from the teacher. This allows the teacher to focus on students who need more individual attention.

Pace

There is a fine balance to be struck in any language classroom between maintaining a good, stimulating pace, and rushing through the material too quickly for all but the most able learners to assimilate it. Breaking tasks into small chunks is likely to be beneficial for all learners, but particularly, as mentioned above, for the ‘inch worm’ learners who need to assimilate each concept as they meet it before moving on. Allowing learners to work at their own pace through a sequence of tasks has many advantages, as long as the sequence is clear and accessible (i.e. available for learners to refer to as needed), and the predefined progress points to be met by all learners are achievable. Although courses often have time constraints built in, a creative teacher can develop ways of covering the necessary material in the time available, whether this is by prioritizing the most essential topics or structures, setting out self-study tasks to supplement the work done in class, or devising tasks that practise two or more elements at once.

Although a teacher may decide that a group is ready to tackle a particular aspect of the target language, it may be that not all the students are ready to assimilate the concepts involved. It is therefore good practice to develop a spiral structure to a language course, such that topics are returned to frequently, in different contexts, and structures are revisited several times. In this way, there is more chance that each learner will encounter the target structure at a time when s/he is mentally ready to absorb it and relate it to already consolidated language use.

Developing learning skills

Study skills

Perhaps the most important aspect of developing skills for study is that the strategies need to be taught in context. This is partly because few students will have the luxury of free time to devote to developing their study skills independently of their coursework, but

mostly because many students with an SpLD may respond best to a practical, hands-on approach where they can actually see that the techniques being practised relate directly to their work. There are already many books and resources available on the market that focus on developing good study skills, so only a few key strategies will be highlighted here (references to general study skills texts are given below in the 'Further reading' section).

Using colour can be helpful for students with an SpLD (or even those with none), if they are strongly visual learners. For example, at a macro level, using different colours (of text, folders or paper) for different subjects or modules might help them to remember what work needs to be done for which class. At a micro level, using different colours for different parts of the language can help to reinforce patterns that they might otherwise not perceive so strongly (see Chapter 7 for more details). In addition, for learning vocabulary, colouring words by function (verb, noun, adjective, etc.) allows the learner to see common endings, and the colour may act as a visual trigger to enable retrieval of the correct form of the word at a later stage. These strategies for learning can be introduced to the whole class, and may be helpful to many learners regardless of whether they have an identified SpLD.

One aspect of study skills that is often overlooked is time management, which many people with an SpLD find difficult; not only do some not seem to perceive the passing of time accurately, but there is a tendency to underestimate how long a task might take to complete, commonly coupled with a slower processing speed which means that most tasks will take longer than they will for classmates with no apparent SpLD. Explicit coaching in organizing their work and planning their time may be required, using timetables, personal organizers, mobile phones, diaries and whatever other means the student feels comfortable with. When an assessment task is set, deadlines should be clearly specified and it may also be helpful to map out a timetable of stages that need to be completed, working backwards from the deadline (e.g. for an assignment, the planning, reading, drafting and checking stages could all be laid out, as in Figure 6.4 below).

Learning styles preferences need to be acknowledged in the development of effective study skills, as do natural work rhythms (an individual's best times of day for concentration), the environmental considerations noted at the beginning of this chapter, and any other personal responsibilities that a learner may have, especially for adult learners. To begin with, it is probably best to allow students to work within their comfort zones as far as learning style is concerned, while always seeking to enlarge that zone by introducing new techniques drawing on different learning styles in a scaffolded situation, such as a tutorial or workshop. In particular, one of the most important study skills that a dyslexic learner can be encouraged to make use of is a metacognitive approach.

Metacognitive thinking skills

'Metacognitive' loosely means 'about thinking', so these techniques are ways of exploring how we are thinking and learning, making the process explicit so that we can examine it, discuss it and improve it where possible. Reid (1998) describes this as developing self-awareness and self-monitoring of the learning process so as to develop greater control

ESSAY TITLE: 'My country.'

Describe the country you come from, comparing the cities, countryside, food and customs to this country. Include pictures and diagrams.

**Due Date:
March 25th**

TASK	ACTION	DATE TO BE DONE
PLAN ESSAY	Look at title and highlight key words. Identify main task. Identify useful sources of information. Plan using mind map or chain.	January 20th
RESEARCH	Go to library and find sources, e.g. map of my country / official statistics.	January 21st
FIRST DRAFT	Start writing the main sections.	February 4th
INTRODUCTION AND CONCLUSION	Revise the main sections and add the introduction and conclusion.	February 18th
SECOND DRAFT	Revise the whole essay, checking for accuracy.	March 4th
FINAL PROOF READING	Ask a classmate or tutor to look through the essay to check for spelling errors.	March 20th
PRINTING	Print out copies and collate.	March 24th
HAND IN	Take 2 copies of assignment and CD of additional material to school office.	March 25th

Figure 6.4 *Help with time management – mapping out a study schedule from the deadline backwards*

over it. He advocates thinking out loud as one possible technique to facilitate this, and certainly this is one method that a tutor could use to model metacognitive strategies. Retrieving information, which students may have assimilated into their long-term memory, can be challenging for learners with an SpLD, and so they may need a method of working through the process each time. Schneider and Crombie (2003: 26) recommend developing an approach to compensate for auditory and visual weaknesses that they describe as an 'inner self-correction dialogue'. This is perhaps what adult learners should be aiming for, although in the early stages it may help to audibly vocalize the train of thought.

Essentially, the learner needs to become aware of the steps taken in reaching a particular decision in solving a problem, whether that be in choosing to use an article ('a' or 'the') before a noun phrase, or to use present perfect instead of simple past. While many learners of English struggle with these particular aspects of the language, there are rules that can be followed which in the majority of cases will lead to an appropriate choice. Most advanced learners will internalize these rules and thus the decision-making becomes automatic – they may even be unable to articulate why they have chosen a particular usage, citing 'gut feeling' as their guide. For learners with an SpLD who may find it harder to develop this automaticity, it may be beneficial to develop routines that enable them to work out the answer each time, and check their choices. This may involve asking themselves questions such as 'Have I come across this situation before?' 'How did I

resolve it last time?’ ‘What options are available to me?’ ‘What are the main factors I need to take into account?’ and ‘Does my choice of language use work in the context of the whole text?’

The language teacher can help to develop these metacognitive thinking strategies by modelling the thinking process (as in the example below), eliciting what the student already knows and asking questions that should lead to the correct choice. It is also useful as a diagnostic strategy to discover where the problems are encountered; working through these questions may highlight areas that need additional practice.

Example text:

To make toffee apple. Make a toffee using sugar butter and syrup. Take a apple. Get a long stick. Put stick in to apple. Put apple in to toffee, cover it all. Let it get hard.

Example of the meta-cognitive process of checking article usage:

To make toffee apple.
Is it one apple? Or many? If many, how do we show that? → ‘+s’
If only one, how do we show ‘one’? → ‘a’

Make a toffee using sugar butter and syrup.
Can we count toffee? Or is it uncountable like sugar and butter?
If it is like sugar and butter, do we need ‘a’?
What other word could we use here? → ‘some’

Take a apple.
Just one apple at a time, so ‘a’ is right.
Does it sound easy to say?
Why not? How could we make it easier? → ‘an’

Get a long stick.
Just one stick at a time, so ‘a’ is right.
Does it sound easy to say? That’s OK then.

Put stick in to apple.
Do we know which stick, and which apple?
If we do, how do we show that? → ‘the’

Put apple in to toffee, cover it all.
Do we know which apple, and which toffee?
If we do, how do we show that? → ‘the’

Let it get hard.

Linked to this is the development of explicit memorization techniques such as mnemonics and visualization. Through discussion, learners can be encouraged to set up their own mnemonics (see the example in Chapter 7) or to state how they remember something they have already learnt, looking for connections to things they still need to learn, and to discern patterns in the language that they may not have noticed, but which may help them to use a structure more accurately. All of these techniques can have a dramatic effect on the learners’ rate of progress in acquiring the target language; success – and the accompanying boost to self-esteem – is extremely motivating.

This chapter has considered how to develop a learning environment that can benefit language learners with an SpLD. In the next chapter some specific teaching strategies and techniques are outlined that can be implemented in any language classroom.

Summary of key points

- It is the classroom teacher's responsibility to ensure that the physical, social and academic conditions are optimal for language learning for all students, taking into account the specific needs of those in the group who have an SpLD.
- The physical environment, including the furniture, materials and equipment, may not always be entirely within the control of the classroom teacher, but even if the resources are not ideal, they should be utilized in the best way possible to cater for the needs of the group members.
- Even if the curriculum is set by external agencies or determined by outside factors, the classroom teacher can usually have some control over the way in which materials are presented and can differentiate activities to suit learners in terms of task, material, expectation and support given.
- Communication needs to be clear and unambiguous at all times, and important information should preferably be made available in more than one mode (e.g. oral and written).
- Feedback should be given in such a way that it helps to foster a positive self-image and does not knock a learner's confidence in their abilities.
- Teachers can help learners with an SpLD succeed by being aware of how the classroom dynamics are helping or hindering an individual, setting up and maintaining routines and adjusting the syllabus to ensure that plenty of recycling of target language structures and additional practice is possible.
- Language teachers should also try to incorporate more general learning strategies into the syllabus, whereby learners can develop effective study skills and metacognitive techniques in the context of their studies. These will help them not only succeed at language learning, but also in other areas of their lives.

Activities

- 1) Assess your own teaching style (or work in a small group and assess each other's), considering the amount of emphasis on visual, auditory and kinaesthetic elements of teaching.
- 2) Discuss to what extent a teacher's teaching style can or should be modified to accommodate the different learning styles in the classroom. What would the practical and psychological implications be of modifying one's teaching style?
- 3) Reflect on any class you have taught that included a student who may have had an SpLD. What small changes in classroom management could have made a difference to that learner?
- 4) What barriers are there to implementing changes in classroom management to accommodate learners with an SpLD? How can they be overcome?

Further reading

Cottrell, S. (2001). *Teaching Study Skills and Supporting Learning*. Basingstoke: Palgrave Macmillan

Schneider, E. & Crombie, M. (2003). *Dyslexia and Foreign Language Learning*. London: David Fulton Publishers

7

Techniques for Language Teaching

Introduction	126
Multi-sensory teaching methods	126
<i>Teaching the sound and spelling system of the L2</i>	130
<i>Teaching vocabulary</i>	132
<i>Teaching grammar</i>	134
<i>Teaching reading</i>	135
<i>Teaching listening</i>	137
<i>Teaching speaking</i>	139
<i>Teaching writing</i>	141
Summary of key points	143
Activities	143
Further reading	144

Introduction

In this chapter we will outline language teaching methods that can enhance the success of language learning of students with an SpLD. The methods and techniques we describe here can be used both in foreign and in second language settings. In applying these teaching techniques it is important to keep in mind that teaching learners with an SpLD needs to follow the same basic pedagogical principles as general good teaching practice which is appropriate in the given context. We believe that the role of the teacher in working with students with SpLDs is best conceived as a facilitator who provides assistance and guidance to the students not only to learn the language, but also to learn about how language works and to learn through using the language (Halliday, 1993).

We will start this chapter with a detailed description of the multi-sensory structured learning approach, which is one of the most widely applied methods in teaching reading and spelling skills in English as L1 and in foreign language education for students with an SpLD. This teaching method, however, is also suited for second language learning contexts and is an excellent example of how students can learn the language as well as learn about the language at the same time. In the subsequent sections we will demonstrate how the principles of this approach can be applied in teaching grammar and vocabulary as well as the four skills: reading, writing, speaking and listening.

Multi-sensory teaching methods

One of the most frequently recommended teaching methods for dyslexic language learners is the so-called multi-sensory structured learning (MSL) approach, which was developed by Sparks *et al.* (1991) based on the dyslexia remedial programme of Gillingham and Stillman (1960) (for recent descriptions of the applications of the MSL approach in foreign language teaching, see Nijakowska, 2010; Schneider & Crombie, 2004; Schneider & Evers, 2009). Gillingham and Stillman (1960) built on the pioneering work of Orton, who was one of the first researchers to devise a systematic reading instruction programme for dyslexic students. The Orton-Gillingham (OG) approach, as it became known, gives children explicit and direct teaching in sound-letter correspondences and activates different sensory channels simultaneously. The OG approach is highly structured, proceeds in small and cumulative steps and provides dyslexic learners with sufficient practice and revision opportunities. Its aim is to develop children's phonemic, morphological and syntactic awareness, and thereby help them to acquire reading and spelling skills. The OG approach has a large number of variations such as the Alpha to Omega programme (Hornsby *et al.*, 1999), the Hickey Multi-sensory Language Course (Combley, 1977), and the Bangor Dyslexia Teaching System (Miles, 1989), which all share the basic principles of the original OG approach.

As its name suggests, the MSL approach teaches elements of the L2 (the sound and spelling system, vocabulary and grammatical structures) through the activation of

auditory, visual, tactile and kinaesthetic pathways. For example, when learning a new word, students repeat the word several times after the teacher (auditory channel), draw a picture to facilitate memorization (visual channel) and act it out (kinaesthetic channel). The parallel use of several sensory channels facilitates encoding in memory for two main reasons. Firstly, the active use of senses in the learning process makes the event of learning memorable and enjoyable, and consequently aids anchoring information in the memory not only for students with an SpLD but also for learners with no apparent learning difficulties. Secondly, as described in Chapter 4, many students with an SpLD have weaker phonological processing skills, and, as a result, have difficulties encoding verbally presented information. If, however, they have the opportunity to learn through additional sensory channels, their weaknesses in phonological processing can be counterbalanced.

The MSL approach also takes another important characteristic of students with an SpLD into consideration, namely their general difficulties in committing verbal information to long-term memory. Learning another language requires the memorization of different types of verbal information: sound sequences, letter combinations, words, phrases and larger linguistic constructions, which might be particularly challenging for learners with an SpLD, whose phonological short-term memory might be able to hold less information than that of their peers. Nevertheless, they can succeed in encoding these elements of language in their long-term memory if they are presented in small units and are practised extensively in different settings. Progress in small steps and overlearning are, therefore, key components of the MSL approach. The MSL approach stresses the importance of practising different aspects of the L2 until they become automatic, yet learning is not boring and monotonous due to the application of a large variety of multi-sensory teaching and learning tasks.

The MSL approach also places emphasis on the demonstration and practice of the use of language learning strategies (Schneider & Crombie, 2004), which are ‘techniques, approaches or deliberate actions that students take in order to facilitate the learning, recall of both linguistic and content area information’ (Chamot, 1987: 71). Although students with no apparent SpLD also benefit from learning strategy training (see e.g. O’Malley, 1987), they are more likely to be able to find the strategies that suit the learning task as well as their learning styles and personality without guidance. Students with an SpLD, however, need assistance in applying learning strategies, organizing their learning and controlling their feelings in the learning process. Therefore, it is of great importance that teachers provide different examples of cognitive strategies that aid the memorization of new linguistic material and the inferring of information from the input such as reading and listening strategies, as well as metacognitive strategies that help students to plan and monitor their learning processes (O’Malley & Chamot, 1990). Additionally, the modelling of affective strategies, such as rewarding oneself when completing a task, might assist language learners with an SpLD to overcome any anxiety and stress they might experience. Learners also need opportunities to experiment with learning strategies and should be encouraged to find the techniques that match their individual strengths and weaknesses. Once students have found the appropriate learning strategies, it is advised that teachers monitor how the learners apply these strategies until they can use them autonomously.

An additional element of MSL is the use of dynamic assessment (Ganschow & Schneider, 2000), which is a form of continuous classroom assessment that teachers apply to adjust the learning materials and the pace of learning to the progress of the students. Dynamic assessment is not only a method of testing what students have acquired, but it also provides a means to help students develop learner autonomy. Ganschow and Schneider (2000) list five stages of the teaching process that are based on dynamic assessment (see Figure 7.1). In the first two stages the teacher elicits information from the students and instead of giving direct feedback on whether the answer was correct or not, guides the students through the process of discovering the solution to the task. For example, the teacher might want to elicit the spelling of the word ‘cut’ from the students, who initially spell it as ‘kut’. The teacher does not correct the spelling directly, but asks the learners to remember how other words beginning with the /k/ sound (e.g. cat, cup) are spelt and highlights the vowel that follows the /k/ sound. This process helps students discover sound-letter correspondences and regularities in the spelling system, and thereby develops their metalinguistic awareness. The next stage involves the explicit comparison of the linguistic structure to be learnt in the target language with the learners’ L1. Although this might not always be feasible in multilingual classrooms and in situations where the teacher does not speak the students’ L1, contrasting L1 and L2 linguistic patterns might

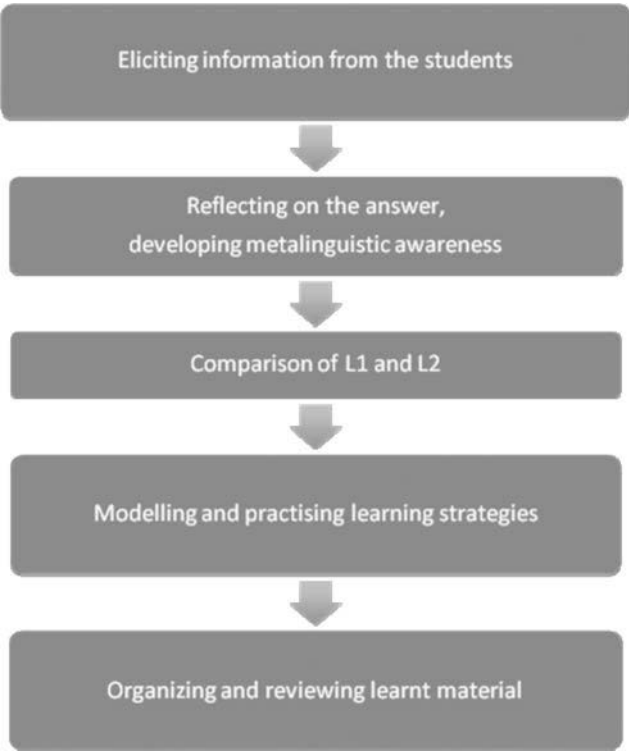


Figure 7.1 Stages of the teaching process using dynamic assessment

promote learners' understanding of the phonological, syntactic and morphological structure of the L2. In the final two stages, learning strategies are taught and practised, and learners are given explicit guidance on how to organize and review the material they have acquired.

Despite the fact that the MSL approach shares a number of similarities with general language teaching methods, it also has a few distinctive features. One of these is the direct and explicit teaching of the L2 rule system, which is very different from communicative language pedagogies, which provide learners with ample communicative opportunities and input and expect them to deduce regularities of the language from these encounters with the L2. Students with an SpLD tend to have difficulties in finding linguistic regularities both in their L1 and in L2, hence they need explicit explanation at all levels of the L2 linguistic system: phonology, spelling, morphology and syntax. In foreign language contexts where the teacher shares the language of the students, the L1 of the learners can be used to facilitate the understanding of rules and regularities and to teach word meanings, whereas in second language settings, this often might not be possible.

Another important difference between current language teaching methods and the MSL approach is the use of drills, which are simple substitution exercises used for practising grammatical structures. Drills focus on one particular aspect of L2 grammar at a time and require learners to carry out minimal structural changes in an utterance. For example, when teaching how to answer yes-no questions, the teacher presents the question 'Do you like apples?' and students have to answer either 'Yes, I do' or 'No, I don't' depending on their individual likes and dislikes. In a drill the teacher would repeat the same question with different types of food ten to fifteen times until the students are able to provide a grammatically accurate answer. This type of drilling, which has somewhat fallen out of use in modern language classrooms, due to its perceived lack of communicative value, provides language learners a sentence frame that they can memorize and use with minimal changes, and thereby helps the acquisition of syntactic and morphological system of the L2.

If we review Table 7.1, which summarizes the basic principles of the MSL approach, we can see that the majority of the principles are similar to the general characteristics of good practice in language teaching (Turner, 2001). Indeed, teaching languages to students

Table 7.1 *Basic principles of the MSL approach (based on Schneider & Evers, 2009)*

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- multi-sensory
 - carefully structured
 - cumulative
 - frequent revision
 - explicit explanation of linguistic structures
 - ample practice, drills
 - learning strategy training
-

with an SpLD does not require radically different methods and techniques from the ones used in mainstream language classrooms. The main differences between teaching languages to learners with an SpLD and students with no learning difficulties lies in the importance of explicit teaching of linguistic structures, slower pace of progress and frequent revision.

There is substantial research evidence that supports the effectiveness of MSL instruction. In a series of pioneering studies, Sparks and his colleagues (Sparks *et al.*, 1992; Sparks & Ganschow, 1993) investigated how components of L1 and L2 learning aptitude develop as a result of classroom instruction using the MSL method. They found that participants made more significant gains in aptitude measures if they received MSL instruction both in L1 (English) and in L2 (Spanish). This finding highlights the importance of developing students' L1 language skills parallel to L2 teaching, as abilities in the native language are important foundations for L2 acquisition. In a later study, Sparks *et al.* (1998) also analysed how the MSL method affects the acquisition of L2 speaking and writing skills. Their results revealed that the dyslexic learners of Spanish participating in an MSL programme outperformed dyslexic learners who received traditional classroom instruction. Moreover, the linguistic gains of the control non-dyslexic group, which was also instructed using traditional language teaching methods, were not significantly different from the improvement the dyslexic MSL group made. Similar findings were obtained by Downey *et al.* (2000) in the case of students who studied Latin with the help of the MSL programme.

The success of the MSL programme was also proven for other languages such as English, the orthographic system of which is considerably less transparent than that of Latin or Spanish. Nijakowska's (2008) experiment, in which Polish dyslexic students' English spelling and reading skills were developed in a small group setting, showed considerable improvement in the targeted aspects of L2 competence. Even if Nijakowska's study only involved a small number of participants, and thus has limited generalizability, it indicates that the dyslexic students who participated in a six month-long MSL programme made significantly more progress than non-dyslexic learners in the traditional classroom context.

Teaching the sound and spelling system of the L2

The principles of MSL teaching play a central role in teaching L2 spelling and pronunciation. Learners with an SpLD greatly benefit from explicit explanations on how to pronounce sounds, and on how sounds correspond to letters and spelling rules. Hence it is useful to demonstrate how the vocal apparatus is used to produce specific sounds and give learners practice opportunities to experiment with the new sounds of the L2. It is also important to provide explicit teaching on how sounds correspond to letters, especially if the orthographies of the L1 and L2 differ, and if the spelling system of the L2 is non-transparent. Although teaching sound-letter correspondences, in other words, phonics, is usually done in L1 literacy classes, the teaching of spelling is a neglected aspect of foreign language pedagogy. The English spelling system is often regarded as irregular, but in fact, there are a number of rules which might assist learners to cope with spelling. A useful list of such rules with examples can be found on

http://www.dyslexia.org/spelling_rules.shtml. It has to be acknowledged, however, that the spelling of a large number of words need be rote-learned (Ziegler & Goswami, 2006). Mnemonic exercises such as remembering the spelling of 'because' through the phrase: 'Big Elephants Can Always Understand Small Elephants', or the use of drawings that incorporate the letters that make up the word, can greatly aid the memorization of these words (see Figure 7.2). Students with an SpLD also benefit from activities that raise their phonological awareness in the L2, such as segmenting words into syllables and sounds, adding and deleting sounds and syllables in a word and differentiating different sounds (Nijakowska, 2010 provides excellent examples of these activities).

In order to avoid students confusing similar sounds, or letters that look similar, it is advised that similar sound-letter correspondences and similar letters are taught in separate and non-consecutive sessions. For example, if students need to learn the orthography of the Latin alphabet, the letters 'p' and 'g', 'd' and 'b' and 'u' and 'n' should not be introduced together. Sound-letter correspondences such as the pronunciation of the letter combination of 'oa' and 'oo' can also be mixed up easily by learners with an SpLD (Schneider & Evers, 2010).

Extensive practice using multi-sensory techniques is of key importance in teaching L2 spelling and pronunciation. Activities that help learners anchor new information in memory through the use of different sensory channels, as well as practice tasks that involve movement and visualization are greatly beneficial. Students with an SpLD can memorize letters by tracing them into the air, making model letters from clay or drawing

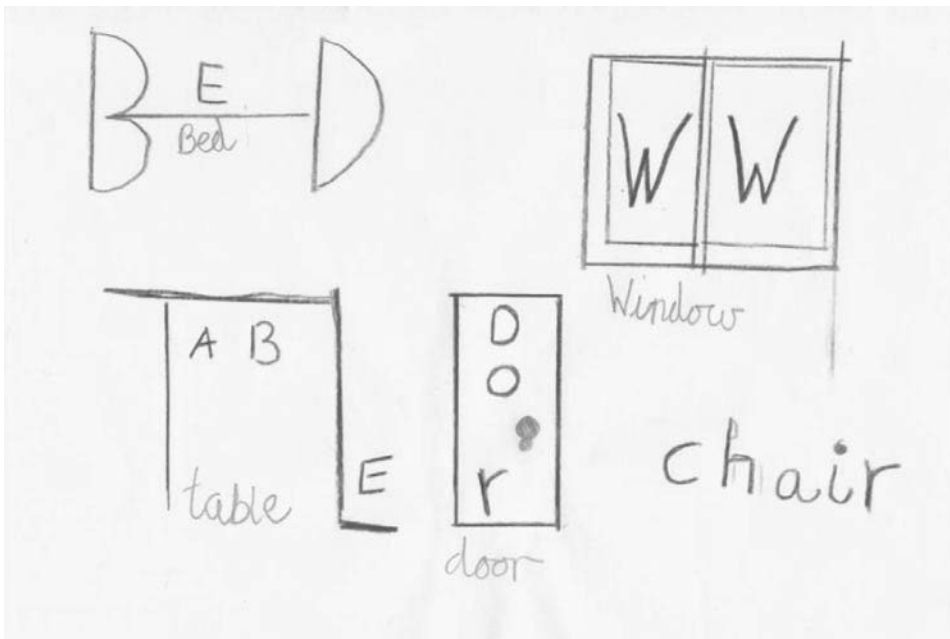


Figure 7.2 Illustration of visual techniques that can help memorizing words

them on sand (Schneider and Evers, 2009). Additionally, students can be helped to associate letters with sounds through movements and drawing. For example, in order to remember the letter 'o' students can be asked to act throwing a ball (which looks like the letter 'o'), and for the letter 'c' they can draw a cat, the back of which forms the letter 'c'. Finger tapping and clapping can also aid learners to count the number of syllables or sounds in a word. Spelling activities in which students manipulate letter cards or blocks with letters or syllables printed on them, such as combining letters or syllables to form words, deleting or adding letters or syllables, changing the order of letters or syllables, stimulate different sensory channels and make practice activities more memorable and enjoyable (for examples see Nijakowska, 2010). These cards and blocks can be colour-coded either to highlight potentially difficult sounds or spelling, to focus learners' attention on a specific letter combination, or to differentiate vowels from consonants. A plethora of word-spelling games, interactive tasks teaching sound and letter correspondences and spelling regularities, and games that raise students' awareness of syllable structure are available on the internet that can provide additional in-class or out of school practice for students with an SpLD (e.g. <http://www.bbc.co.uk/skillswise/words/spelling/>; <http://www.woodlands-junior.kent.sch.uk/interactive/literacy.html#7>; http://cambridgeenglishonline.com/Phonetics_Focus/). These computer games are also an enjoyable means of practising and automatizing spelling and involve different sensory channels.

Frequent revision of sound-letter correspondences, spelling rules and irregular words (which need to be memorized as a unit) also promotes the development of students' spelling skills. Playful activities such as word-dominoes and memory games can be used for revision as they break the monotony of spelling tasks. Finally, it is useful if students keep a record of spelling rules with examples and a list of the words to be rote-learned because they can refer to it when working on their own.

Teaching vocabulary

As mentioned in Chapter 4, students with an SpLD may find it particularly difficult to acquire L2 words. The vocabulary learning problems of students with an SpLD are caused by their reduced phonological awareness and the smaller capacity of their phonological short-term memory, which impedes encoding verbal information in long-term memory. Students' difficulties in this area of language learning are also apparent because learning a word involves memorizing a number of different types of information: the meaning, pronunciation and spelling of the word as well the syntactic, morphological, idiomatic and pragmatic information associated with it (Aitchison, 1987). Therefore, in order to facilitate the acquisition of L2 words, it is important to teach only a few new vocabulary items in a lesson (a maximum of six to eight new words) and to practise the words extensively. Students with an SpLD usually find it difficult to acquire new words implicitly from reading and listening to texts, accordingly, it is suggested that vocabulary teaching should mainly be explicit. Frequent revision of vocabulary items is also necessary in order to help learners to store new L2 words in long-term memory. New vocabulary taught in one session needs to be revised repeatedly on at least three to four consecutive occasions,

and a periodic review of recently learnt words at least fortnightly is also useful. It is recommended that similar sounding words and words that have very similar meanings should not be taught within a single lesson, otherwise students might easily mix them up. Students with an SpLD should not be overloaded with all the different information concerning a particular word in one lesson. In the case of languages in which the spelling of the word cannot always be deduced from pronunciation, it is helpful if students first learn the phonological form and the most frequent meaning of the word, and further information about the word (spelling, less common meaning, morphological and syntactic characteristics) is only taught once the form-meaning mapping is successfully made by the learners. Table 7.2 summarizes the basic principles in teaching vocabulary to students with an SpLD. Appendix 2 contains a description of two lesson plans demonstrating how vocabulary can be taught to learners with an SpLD.

Multi-sensory methods involving the auditory, visual and kinaesthetic modalities are particularly helpful both in the teaching of new words and in practice tasks. In presenting new vocabulary, it is recommended that the teacher repeats the words orally parallel to using either visual or kinaesthetic channels to demonstrate the meaning of words. Common kinaesthetic/tactile vocabulary learning activities are miming (Robinson-Tait, 2003; Schneider & Crombie, 2003), tracing words on paper, on a desk, or in the air (Nijakowska, 2010). As for techniques stimulating the visual channels, the use of flashcards (Schneider & Crombie, 2003), and the preparation of drawings next to words in the vocabulary list (Robinson-Tait, 2003) can also facilitate the memorization of words. Mind maps might also help students with an SpLD to remember and review L2 vocabulary (Nijakowska, 2010). Just like other language learners, students with an SpLD also learn vocabulary better if words are presented in a context and not in isolation because this aids anchoring words to the mental image of the situation in which they were encountered. Interactive computer games (e.g. http://eslbears.homestead.com/contact_info.html; <http://iteslj.org/v/ei/>) and games on portable electronic devices such as mobile phones and Nintendos are also excellent and motivating ways to practise vocabulary.

Students with an SpLD need to use efficient learning strategies in order to successfully encode words in long-term memory and to be able to retrieve them with ease. Mnemonic devices that might facilitate vocabulary acquisition are visual illustrations, sound and letter clues that help the recall of pronunciation and spelling, acronyms, and stories containing

Table 7.2 *Basic principles of teaching vocabulary to students with an SpLD*

-
- Limited amount of new vocabulary in a lesson
 - Explicit teaching
 - Extensive practice
 - Multi-sensory presentation and practice techniques
 - Frequent revision
 - Separate the teaching of similar sounding words and words with a similar meaning
 - Teach sound-meaning correspondence first
-

words with difficult spellings. Other learning strategies include the use of keywords, which are words that belong to the learner's active vocabulary either in their L1 or in L2, and which, if a new word is mentally linked to them, can assist the recall of pronunciation, spelling and/or morphology (Schneider & Crombie, 2003).

Language learners with an SpLD can also be helped in keeping a systematic record of words by using vocabulary notebooks, word cards or computer programs (e.g. <http://quizlet.com>). It is important that teachers routinely check these records in order to avoid incorrectly spelt words or vocabulary with inaccurate meaning being memorized by the learners. Students should also be encouraged to review words regularly outside the classroom. Ideally, revision of L2 vocabulary should form part of the daily routine of learners with SpLD, and they are advised to spend ten to fifteen minutes on practising words every day. A low-tech strategy, which is very effective, is the use of small vocabulary cards that the student can carry in a pocket, to review new words frequently in quiet moments of the day, such as on the bus, or when waiting in a queue.

Teaching grammar

The teaching of grammar to language learners with an SpLD is most effective if it is done explicitly. Although students might be able to deduce regularities of language from the input, it is important that they also receive clear and concise explanations on grammatical rules (Schneider & Crombie, 2003). It is helpful if grammar is presented in context and structures are related to their communicative functions. The use of complicated terminology is, however, to be avoided as students with an SpLD often struggle with grasping abstract linguistic constructs such as verbs, nouns or adjectives. The teaching of grammar also needs to proceed in small steps from simple to complex structures, and should build on learners' existing knowledge. New grammatical structures should not be introduced until previously taught ones are sufficiently automatized.

Multi-sensory techniques can also be applied in the teaching of grammatical structures. The colour-coding of words or phrases that have different grammatical functions helps students understand grammatical concepts without using linguistic terminology. For example, we can decide to use red for the subject of the sentence, blue for the predicate and green for the object. If this kind of colour-coding is consistently followed, students will soon learn that words in red express the agents of actions, blue stands for the action itself, and green represents the object of the action. Additionally, large coloured Lego blocks and Cuisenaire rods can be used to illustrate word order (Schneider & Evers, 2009), and assigning students phrases and asking them to form a line in the appropriate order can also help the understanding of grammatical structures (see the lesson plan in Appendix 4). Interactive whiteboard activities, such as tasks in which students have to order words to form sentences, are also enjoyable and useful means of teaching and practising grammar.

Once students seem to have understood the presented grammatical structure, several practice sessions moving from controlled to free practice are needed. As already mentioned above, drills using a variety of formats can greatly assist in learning sentence

frames and in the automatization of linguistic structures. It is recommended that controlled practice should first be done orally and not in writing in order to avoid students' attention being divided between the grammatical structure to be practised and reading and writing. Controlled written practice might first involve tasks that use short sentences and do not require extensive writing (e.g. matching, ordering or gap filling tasks). Tasks in which students have to choose the correct alternative from among a number of options might confuse learners and might potentially lead to the memorization of incorrect options, and hence should be avoided (Schneider & Crombie, 2003). A number of grammar games are freely available on the internet, but many of them use multiple choice option tasks, which makes them less attractive to students with an SpLD (but as an exception see the activities on <http://learnenglish.britishcouncil.org/en/grammar-exercises>). In free practice tasks such as oral communicative tasks or short pieces of writing, if the focus of the activity is on a given grammatical structure, students' attention should not be overloaded with the expression of complex content, otherwise learners cannot heed grammatical accuracy. Therefore, it is helpful if students first have the chance to plan what they will say or write about, or if they are provided with samples of utterances that they can use in these communicative activities. Appendix 4 shows a sample grammar lesson for beginners.

Teaching reading

As mentioned in Chapter 4, reading consists of two important phases: (1) lower order decoding processes, which involve recognizing letter-sound correspondences and words as well as processing morphological and syntactic structures, and (2) higher-order processing, in the course of which readers understand and evaluate the information conveyed by the text. In Chapter 4, we also discussed that the reading difficulties of students with an SpLD mainly derive from problems in lower-order decoding processes. Higher-order processes, however, build on the efficient functioning of lower-order decoding processes; subsequently, students with an SpLD may also demonstrate global comprehension difficulties. As reading in L2 might prove particularly challenging for language learners with an SpLD, it is suggested that, if the teaching context and the requirements of the curriculum allow for it, students with an SpLD should only start reading texts above the sentence level after a longer oral language teaching phase. This helps learners to gain confidence in language learning and can serve as a foundation before reading is introduced. It is also recommended that an intensive development of L2 word reading skills precedes the teaching of text-level reading, and L2 word reading should also be practised regularly even after students start reading longer texts. Frequent and consistent practice on word recognition promotes the development of word decoding skills, which is essential for successful reading.

When selecting reading texts for students with an SpLD, several considerations might need to be taken into account. First of all, the length of the text should be increased gradually in the teaching process, starting with short paragraphs. Even if students have reached higher level proficiency, longer texts might be challenging and demotivating for students with an SpLD; hence it is useful to break longer texts up into smaller sections

and work with them in several phases of the lesson. Second, texts should be motivating to read and should arouse the interest of the learners. Creating a need for reading the text and awakening learners' curiosity in the information conveyed is crucial, otherwise students might be reluctant to engage in the potentially demanding activity of reading. The choice of text should also take into account the social and cultural context in which the language is learnt. Third, it is of great importance that the level of difficulty of the reading text is commensurate with the learners' level of proficiency. Texts which are far beyond the level of the learners, even if the task is to gain a global understanding, might be discouraging for learners with an SpLD. Due to the vocabulary learning difficulties of students with an SpLD and the fact that they find it challenging to guess the meaning of unknown words from context, it is suggested that the text should not contain a high number of unfamiliar words. Similarly, the text should be carefully checked for grammatical structures that are new to the students as too many unfamiliar syntactic and morphological constructions can also hinder understanding. Finally, as mentioned in Chapter 6, the layout, format and presentation of the text needs to be adjusted to the needs of students with an SpLD. Well-selected texts available on the Internet easily meet the criteria of accessibility described above because digital texts are usually short, are accompanied with pictures and often with an audio content and allow students to select the font and the size of the letters.

Although every language learner seems to benefit from pre-reading activities, their use is particularly helpful for students with an SpLD. In order to give students with an SpLD a sense of accomplishment and provide them with successful reading experiences, it is vital that they get sufficient support before they start reading. First of all, it is greatly beneficial if students' background knowledge concerning the theme of the text is activated before reading as this helps them build expectations as to what the text will be about. This can be done in the form of a discussion task, in which the students are given the topic of the text and share with the teacher or with each other in a group what they already know about the topic. Alternatively, brief quizzes on the theme of the reading might also be a useful and enjoyable means of stimulating expectations about the reading material. Giving learners a purpose for reading by asking them to find specific information in the text might also create motivation to read and can guide learners' attention while reading. Finally, the pre-teaching of key vocabulary items that might be unfamiliar to the students can help learners focus on the information content of the text and aid global text comprehension. In addition, this might reduce the potential anxiety that students with an SpLD might experience when they encounter an unknown word while reading. Alternatively, the unknown words can be highlighted and colour-coded in the text and glosses on the meaning of the words can be given. It is, however, advised to take the vocabulary learning difficulties of the students into consideration and not to pre-teach more than six to eight words. Students will also benefit from the pre-teaching of unfamiliar grammatical structures.

As already mentioned in Chapter 6, students with an SpLD should not be asked to read aloud and be expected to understand what they read at the same time, as this is particularly challenging for them and might potentially be humiliating in a class where the other students do not have reading difficulties. It is advised that the actual activity of

reading for students with an SpLD should be short but focused, and each reading phase should be followed by a discussion of what students have understood and learnt from the text. If students have great difficulties in reading, the teacher can first read out the text to the students. As a next step (or as a first one), students can be asked to read in order to understand the main informational content of the text, and on second reading students might look for specific pieces of information. The comprehension of the text can be checked by using questions that require short answers or with the help of tables, diagrams and flowcharts. Multiple-choice tasks with a high number of possible options might be confusing for the students, and gap-fill tasks that require extensive additional reading might also place an additional strain on them. A number of multi-sensory tasks can also be applied in the teaching of reading. Students can be asked to prepare illustrations for the reading or act out the story using not only words but also bodily movement. After students are familiar with the content of the text, students can work on the detailed understanding of specific sentences, words and longer phrasal constructions.

Reading texts can be exploited in a variety of ways to practise speaking and vocabulary and to provide opportunities for the meaningful use of language. Students can be asked to do a role-play or discussion activity based on the reading or to produce a short piece of writing such as writing an alternative ending, composing a letter and so on. If students have difficulties in L2 writing, writing activities can be replaced by oral tasks. Vocabulary learning activities based on words that occurred in the reading also help learners memorize words in context. Finally, it is important to mention that students with an SpLD benefit greatly from the explicit teaching of reading strategies such as using prediction, looking for key pieces of information and identifying the logic of the text and guessing the meaning of unfamiliar words and linguistic constructions. The use of the latter strategy, however, might be challenging because students with an SpLD tend to experience difficulties in establishing meaning using contextual and morphological clues.

To summarize the most important elements of teaching reading to students with an SpLD, we can revisit Table 7.1 for an overview of MSL teaching principles. The reading programme for students with an SpLD needs to be carefully structured and should build up reading skills gradually and cumulatively. Students benefit from explicit explanations of unfamiliar words and syntactic structures both in the pre-reading and the post-reading phases. Although reading practice is valuable, the importance of L2 reading in the given educational context needs to be considered, and if possible the development of oral skills including speaking and listening should be in the foreground. Multi-sensory elements in teaching reading can involve the use of drawing and acting tasks in checking comprehension. Furthermore, learners can be assisted in overcoming comprehension problems through the use of reading strategies. A sample reading lesson is given in Appendix 5.

Teaching listening

The teaching of listening shares a great number of similarities with teaching reading, but there are also a few differences in the teaching techniques that are helpful for addressing the difficulties students with an SpLD experience in listening to L2 texts. Generally,

students with an SpLD tend to find listening less challenging and anxiety-provoking than reading. Nevertheless, both the listening texts and the types of tasks used in teaching listening need to be adapted to these students' needs.

Most importantly, students with an SpLD often have difficulties with the auditory discrimination of similar sounds, which are even further aggravated in another language that might have sound distinctions that do not exist in the learners' L1. Hence texts in which students have to concentrate on distinguishing similar sounding words are particularly difficult for these learners. If the aim of the listening task is to achieve global comprehension of a listening text, it is helpful if the text contains only a low number of words that can be potentially confused with a similar sounding word. Additionally, students with an SpLD often find it problematic to concentrate on a stream of oral language for a long time and to keep a large amount of auditory information in working memory; consequently, just as with reading texts, listening input should also consist of short stretches of talk. Accompanying visual input (e.g. watching short film extracts, broadcasts and webcasts) can help students sustain their attention and might provide visual support in understanding the content of the text. It is also suggested that texts gradually increasing in speed, length and in clarity of articulation are used in the teaching process. Similar to the considerations in selecting appropriate reading materials, listening texts should also be interesting, culturally and contextually relevant and should not be far beyond the level of the students' language competence in terms of the vocabulary and grammatical structures occurring in the input.

Using similar tasks to those outlined in the introduction of reading texts is helpful in activating learners' background knowledge and creating expectations before listening. Just as in the case of reading, it greatly aids comprehension if the learners' attention is guided in the listening process, which can be achieved by giving students a purpose for listening. Additionally, the pre-teaching of vocabulary, but this time with great emphasis on the pronunciation of the words, assists learners in decoding words in the listening text and thereby promotes understanding.

Students with an SpLD generally tend to find it difficult to listen and read and listen and write at the same time. Therefore, it is advised that when listening to a text for the first time, learners should just listen and focus on understanding the main points, and they should not be asked to do a task parallel to listening. After the first listening, the teacher can check how much of the key information students have comprehended, and if comprehension was incomplete, further questions that can guide learners' attention during second listening can be asked. Once students seem to have a good general understanding of the text, they can be presented with listening tasks such as filling in missing pieces of information in a table or flow chart or giving brief answers to questions. It is important that students should have enough time to read the task input before listening and that the teacher checks that they understand the written task instructions. It is suggested that students with an SpLD should not be asked to record their answers to the listening tasks while listening because they find it difficult to divide their attention between listening and writing. Similarly, note taking as a task might prove to be particularly challenging for them. If the text is short, students can do the tasks after

listening; alternatively, the listening process can be interrupted at regular intervals to allow learners to make a note of their answers. If students have great difficulties in L2 reading or writing, tasks that involve reading and/or writing can be substituted with oral comprehension check questions. Multi-sensory teaching elements can also be introduced in the teaching of listening by devising tasks that involve movement, such as carrying out instructions presented in the listening text or preparing drawings that illustrate the content of the listening material. On a final listening, students can be asked to focus on those parts of the listening text that they had difficulties comprehending, which can be followed by a discussion of these difficulties and on clarifying potential misunderstandings of the text.

Listening texts serve as a good source for further language development as they provide ample vocabulary input and might help learners in acquiring formulaic expressions, and in associating grammatical structures with communicative functions. Post-listening communicative activities also foster the development of speaking and writing skills. Additionally, students with an SpLD benefit from training in listening strategies such as predicting what the text will be about and what will follow within the text, focussing on the main idea and making informed guesses.

The principles of multi-sensory instruction can also be applied in teaching listening. In reviewing the above description of teaching techniques and strategies, we can observe that carefully selected listening texts can ensure that the development of students' speech comprehension abilities progresses cumulatively and in a structured manner. Linguistic constructions necessary for the comprehension of the listening text are taught explicitly in the pre-listening phase, and in the post-listening stage, students can receive additional explanation on structures and words they encountered in the listening texts. It is important that students with an SpLD are provided with ample opportunities to hear L2 speech as these learners are usually not exposed to sufficient input through L2 reading. Multi-sensory listening tasks involving responding to the listening material with movements also make listening for students more enjoyable and help them acquire words and expressions.

Teaching speaking

Speaking is a component of language proficiency in which students with an SpLD might excel and experience fewer difficulties compared to the acquisition of other skills. In foreign language contexts where the curricular and assessment demands and the general language learning needs do not require that students achieve a high level of competence in skills involving reading and writing, oral language skills can play a central role in the language teaching process. Thus, a large number of instructional programmes planned specifically for students with an SpLD almost exclusively focus on oral communication (see e.g. Kormos *et al.*, 2010b). In these programmes, commonly used methods in the teaching of speaking are applied with adjustments that take into consideration the difficulties of students with an SpLD. The major challenges these students face in speaking in L2 involve the quick and efficient retrieval of words, remembering the

pronunciation of words, articulating the words correctly, consciously constructing sentences from word constituents and producing longer coherent oral monologues. Some students with an SpLD, especially those with Asperger's syndrome, might also find it difficult to apply appropriate social conventions of language use in the L2. Further obstacles to speaking in L2 can be that students with an SpLD might lack self-confidence and exhibit anxiety in communicating in the target language, especially in front of a large group (Piechurska-Kuciel, 2008).

In order to build up the confidence of students with an SpLD in their spoken language abilities, it is advised that oral communication activities are introduced from the first stages of language learning. Students need to be encouraged to produce one or two-word utterances such as responding to simple personal questions in communicative situations even at the beginning level. Most online dictionaries not only give the meaning of L2 words but also the pronunciation of the words, which helps students memorize the phonological form of the words and improves their pronunciation. Interactive activities that improve students' pronunciation and intonation skills at the word and sentence level are also available on the internet (e.g. <http://www.englishcentral.com>). Learners can then gradually progress from producing simple to complex sentences and from being able to respond in one and two sentence turns to constructing longer pieces of oral discourse. This ensures that the principle of cumulative progress of MSL instruction is also observed in teaching speaking. Due to the fact that students with an SpLD have difficulties in encoding L2 words and expressions in long-term memory, they need ample and varied practice opportunities in which they can meaningfully use phrases and short sentences for oral communication. Furthermore, multi-sensory speaking tasks in which speech is accompanied by movement are particularly useful means of helping learners memorize communicative phrases and expressions.

It is also conducive to the development of the speaking skills of learners with an SpLD if they receive explicit explanation on how to carry out communicative tasks. Hence, it is useful if students are not only presented with a model of the task, for example by listening to native speakers performing the task, but also receive a detailed explanation of how the task is structured, and how the various communicative functions in the interaction can be realized using the L2. As students with an SpLD find it difficult to divide their attention between communicative content and linguistic form, it is beneficial to review the vocabulary and syntactic structures necessary for the successful fulfilment of the task. Additionally, task frames, which contain phrases and constructions that students can manipulate to express their intended message can be provided. Students with an SpLD also need extended planning time that allows them to formulate the content of their utterance before speaking.

After the modelling and planning stage, it is advised that students are given the opportunity to rehearse the task in small groups without having to worry about making errors, and without the pressure of having to perform in front of a large audience. This allows them to repeat and improve their performance and might alleviate the anxiety students with an SpLD frequently experience in L2 communication. The teacher can observe and give individual feedback to the students while they are working in pairs or in

small groups. Finally, selected groups or pairs can carry out the task in front of the whole class, but this stage might be omitted with students who are particularly anxious in these contexts. Modern technology, such as the use of PowerPoint presentations, which provides textual support and helps learners to organize and remember their talk, and asking students to record themselves or each other with a video camera (nowadays routinely built into mobile phones) and preparing podcasts and webcasts, which allow for presenting rehearsed and planned performance, might also be motivating and enjoyable means of practising speaking. Appendix 6 contains an example task frame that can be used for teaching a specific speech function.

Teaching writing

Producing longer texts in writing might be particularly challenging for learners with an SpLD. Therefore, in a large number of language learning contexts these learners are often exempted from the writing requirements set by the curricula. Exemptions from text-level writing might be viable if learners are likely to use the L2 for mainly oral communication outside the classroom. There are, however, situations in which students with an SpLD are also expected to display sufficient levels of writing competence. In these cases, the teaching of writing needs to take into account both the difficulties that students face concerning the lower level aspects of writing such as handwriting and spelling, as well as the higher level, organizational aspects of composing.

Writing activities should be introduced gradually into the teaching process starting from very short sentence level tasks and tasks in which students only need to fill in selected pieces of missing information. If students demonstrate serious problems with handwriting and spelling individual words, they cannot be expected to be able to produce longer stretches of written discourse without sufficient help and scaffolding. Due to the fact that writing might be especially difficult for learners with an SpLD, it is imperative that writing tasks should be motivating and interesting and should provide a feeling of success and sense of accomplishment. The use of modern communication technology such as writing emails, chatting, and text messaging might also be recommended, and because it does not require handwriting, this might substitute or complement paper and pen writing activities.

Activities that precede the actual writing task and assist learners in planning the content and the linguistic aspects of their text are important in helping learners to overcome their writing difficulties. Without appropriate preparation for the writing activity, the composing attempts of students with an SpLD might be doomed to failure and students' motivation to express their thoughts in writing might decrease substantially. For this reason, the use of brainstorming activities and the preparation of an outline for the text are strongly recommended (interactive mind mapping and brainstorming tools are also available on the Internet e.g. <http://bubbl.us/>). In addition, providing learners with a model text, writing frame or template such as the letter frame in the grammar activity presented in Appendix 5 might be useful. Furthermore, learners with an SpLD might also benefit from colour-coding in these models and templates because it gives them guidance

on constructing sentences. Students might also find it easier to organize their ideas through the use and manipulation of shapes or colours that indicate different parts of the paragraph (e.g. topic sentence – red, supporting example – green) or the essay (e.g. introduction – rectangle, body – circle, conclusion – triangle) (Schneider & Evers, 2009). The review of vocabulary and syntactic structures necessary for the writing task also assists learners with an SpLD by activating the necessary linguistic items and constructions in their memory and helping them to retrieve these while writing. Setting the linguistic focus of the activity such as telling the learners to concentrate on capitalization, the use of connectives, punctuation and so on might also promote linguistic accuracy. It is recommended, however, that only one such focus for the writing task should be established in order to avoid excessive attentional demands on the learners.

Writing activities involving the use of modern technology such as writing blogs and sharing and co-editing documents online might also be effective means for enhancing the writing and reading skills of students with an SpLD. These new online writing activities are motivating because they provide a means for displaying students' work to the class and potentially to a wider public, and thus create a real audience for the students' writing. As they can be easily edited and commented on, students who have handwriting difficulties might find these tasks more manageable than traditional writing activities.

If possible, writing tasks should be short, or if the construction of longer texts is required, it is advised to introduce brief intervals in the writing process (e.g. students can be asked to prepare illustrations for their writing in these breaks). Students with an SpLD might require support from the teacher while writing, and other assistive devices such as laptops, electronic dictionaries and spellcheckers might also aid learners in composing their text. Although it is beneficial to teach learners how to self-edit and self-correct their work, for example with the use of checklists or guidelines, learners with an SpLD might find it difficult to find their own spelling and grammatical mistakes. They might, however, be able to detect organizational problems in their text. Similarly, students with an SpLD might not benefit from corrections in their work that only indicate spelling and grammar mistakes without providing them with the accurate form. Corrections in written work should not be overwhelming, as seeing a large number of errors underlined might be very discouraging for the students. Instead, it is advised to focus on one aspect in writing such as organization when giving feedback and ignore certain other aspects such as spelling. Alternatively, photocopies of the students' work can be made, and feedback can be provided in separate sessions using one copy of the text at a time with a specific focus.

This chapter presented general methods as well as particular techniques in teaching the four skills and grammar and vocabulary to students with an SpLD. We showed how the principles of multi-sensory instruction can be put into practice in different aspects of language teaching and how language learners with an SpLD might be helped in the successful acquisition of another language. The next chapter will focus on how the achievement and progress of these learners can be assessed in a fair and reliable manner.

Summary of key points

- The use of multi-sensory techniques such as colour-coding, drawings, accompanying movements and acting, aids the memorization of new linguistic material and makes practice tasks enjoyable and varied.
- Students with an SpLD benefit from explicit explanation in every aspect of L2 learning including grammar, pronunciation, spelling as well as the creation and understanding of written and spoken texts.
- Frequent and varied practice and periodic revision activities help learners with an SpLD anchor L2 items and constructions in long-term memory.
- Drills, sentence and task frames and models help the automatization of L2 grammatical constructions and are conducive to the development of speaking and writing skills.
- Slow progress in small cumulative steps provides learners with an SpLD with sufficient practice opportunities and gives them a sense of accomplishment. The careful structuring and pacing of production (speaking and writing) and perception (reading and listening) tasks is of great importance.
- Pre-teaching activities aid students with an SpLD to cope with listening and reading texts and with the difficulties they might experience in producing oral and written discourse.
- Modelling and practising the application of learning strategies helps learners to discover the techniques that they can efficiently apply to overcome their L2 learning difficulties.

Activities

1. Design a 45 minute lesson for students with an SpLD teaching:
 - a) a group of L2 words
 - b) a specific grammatical construction
 - c) a spelling rule
 - d) a selected communicative function (e.g. requests, asking for information etc.)
2. Select a reading/listening text that might be appropriate for learners with an SpLD and discuss what considerations you took into account in the selection process and how the text might need to be adjusted to the potential difficulties students with an SpLD might experience in handling the text.
3. Design a 45-minute lesson based on the selected reading/listening text for learners with an SpLD.
4. Select one website or a web-based application that contains language learning tasks or games that students with an SpLD would find particularly useful. Prepare a brief presentation on the website or application in which you explain what aspects of language students can practise and how the website or application is suitable for students with an SpLD.

Further reading

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8

Assessment

Introduction	146
Overview of key constructs in assessment	146
<i>Validity and fairness</i>	147
Accommodations and modifications	149
<i>Types of accommodations and selecting accommodations</i>	151
<i>Accommodations and modifications in high-stakes language proficiency tests</i>	154
Classroom-based assessment	156
<i>The purpose of evaluation</i>	156
<i>Planning the assessment</i>	157
<i>Types of assessment tasks</i>	159
<i>Collecting and analysing information</i>	162
Summary of key points	164
Activities	164
Further reading	165

Introduction

The accommodation of the needs of students with an SpLD has long been neglected in second language assessment. It is only recently that the issue of accessibility of language proficiency tests for students with disabilities has been raised in the European Union. Smythe (2005) and Shuter (2005), in their papers sponsored by the European Commission on Foreign Language Learning and Special Educational Needs (SEN), note that language examinations in Europe are often prerequisites for university admissions, graduation and job recruitment procedures, thus every effort should be made to make them accessible to people with SEN. The language skills of students are not only assessed in high-stakes standardized language proficiency tests, but also in the language classroom. Although classroom-based assessment is often informal and involves low-stakes, it might have important consequences for learners, such as progression to another grade or to the next stage of education. Achievement in tests can exert substantial influence on students' self-esteem, self-confidence and self-worth and might have an impact on motivation. Tests also impinge on the teaching process through influencing what will be taught and how (Alderson & Wall, 1993; Wall, 2000). Therefore, it is of high importance that assessment procedures should be valid, that is, they should give accurate information about the learners' competence, and fair, that is, they should provide adequate opportunities for learners to display what they know. Finding the balance between fair and valid assessment procedures, however, is not easy because many of the skills that language tests intend to measure are precisely those that are problematic for students with an SpLD, such as reading, writing and spelling, so the results may not fully reflect the learners' language competence.

We will start this chapter with a brief overview of the types of assessment, which will be followed by a discussion of the notions of validity and fairness. Next we give an analysis of available accommodations in high-stakes language proficiency exams. We conclude the chapter by elaborating classroom-based evaluation procedures that can be used to assess the language proficiency of students with an SpLD.

Overview of key constructs in language assessment

One of the key constructs used in assessment is the notion of tests. A test is a sample of students' behaviour on the basis of which inferences are made about the learners' underlying competence. Tests also involve some criteria against which the elicited performance is evaluated. Assessment is a term that is often used as a synonym for testing, but the two terms need to be differentiated (Brown, 2004). Assessment is an ongoing evaluation of students' performance and abilities which can take a wide variety of forms, including teachers' comments such as 'Good job', the evaluation of a portfolio of students' work and self-assessment. Tests are a form of assessment.

Assessment can be both formal and informal. Informal assessment is unplanned and is usually exercised in the form of teachers' comments and evaluative responses such as 'That's very good', 'Pay more attention to tenses' or giving stickers for classroom work. Formal assessment is the systematic and planned appraisal of the students' abilities and achievement. Typical examples of formal assessment are grades, test scores, and written feedback on students' essays. Assessment can also be classified based on the purpose it serves. Formative assessment evaluates how students are progressing in the acquisition of various skills and competencies. Formative assessment gives useful information to teachers concerning the effectiveness of teaching procedures and aids decision-making on what needs to be taught or revised. Most informal assessment is formative, but classroom quizzes and mid-term exams are also types of formative assessment. Summative assessment, such as exams and proficiency tests, gives an overall appraisal of what the students have acquired in terms of particular skills and competencies. Summative assessment provides information not only for the students and their teachers, but often for parents, school administrators and educational authorities as well.

Tests can also have different functions. Placement tests are used to ensure that students are placed in the learning group that is appropriate for their level of competence. These types of tests are usually based on a set of predetermined language competence standards and bear little relation to teaching. Diagnostic tests help identify learners' strengths and weaknesses in L2 and might not be directly related to a specific curriculum. Their main aim is to help teachers decide what needs to be taught to students, but diagnostic tests might also provide useful information to students and administrators. Progress tests are based on the syllabus or curriculum the students follow and are usually designed and administered by classroom teachers. They mostly have low stakes, and their purpose is to inform teaching. Achievement tests also assess whether learners acquired specific elements of language that they were taught in the language course they took part in, but they are less frequent than progress tests (they are usually taken at the end of the term or school year) and might have more serious consequences. Finally, proficiency tests aim to measure students' L2 competence irrespective of the teaching they received in learning the language. In these tests, designers specify what the candidates should be able to do to pass the test. Proficiency tests are designed to predict how well the students will be able to use their language skills in the future. Proficiency tests are usually high-stakes and are externally administered.

Validity and fairness

As mentioned in the introduction of this chapter, a key issue in assessment is the accuracy of the measurement, in other words, the validity of the test. Henning (1987) defines validity as follows:

Validity refers to the appropriateness of a given test or any of its component parts as a measure of what it is purported to measure. A test is said to be valid to the extent it measures what it is supposed to measure. It follows, that the term *valid* when used to describe a test should usually be accompanied by the preposition *for*. Any test then may be valid for some purposes but not for others. (p. 89)

Messick's (1989) definition of validity as 'an integrated evaluative judgement of the degree to which empirical evidence and theoretical rationales support the *adequacy* and *appropriateness of inferences* and *actions* based on test scores or other modes of assessment' (p. 13, his emphasis) also highlights that validity is not an inherent characteristic of the test itself, but depends on the context in which the test is used and on how the scores are interpreted. Messick argues that there are two major threats to validity: construct underrepresentation, when the test fails to measure what it intends to measure by ignoring relevant aspects of the construct (e.g. a dictation test used to measure writing skills), and construct irrelevant variance, when the test also measures factors which are not central to the construct (e.g. a writing test which also involves criteria assessing the neatness of handwriting). The latter threat to validity might result in bias towards particular groups of test-takers and might create unfair disadvantages to other groups (see the discussion of fairness below). Messick also highlights that validity includes the relevance and utility of the test in the given context as well as the social consequences of the test. In these recent conceptualizations of validity, test fairness is an integral part of validity (Kunnan, 2004). The interrelated nature of validity and fairness is even reflected in legal documents such as the Americans with Disabilities Act of 1990 cited below.

... a private entity offering an examination ... is responsible for selecting and administering the examination in a place and manner that ensures that the examination accurately reflects an individual's aptitude or achievement level, or other factors that the examination purports to measure, rather than reflecting [an] individual's impaired sensory, manual, or speaking skills, except where those skills are the factors that the examination purports to measure. (Americans with Disabilities Act of 1990, 56 Federal Register 1630.10)

The summary of the language learning difficulties of students with an SpLD presented in Chapter 4 indicates that for these learners fair treatment in assessment is of great importance. Fairness as defined by the American Educational Research Association (1999) has four principal characteristics: lack of bias, equitable treatment in the testing process, equality in the outcomes of testing, and fairness as an opportunity to learn. Lack of bias means that the test does not have 'construct irrelevant components that result in systematically lower or higher score for identifiable groups of examinees' (American Educational Research Association, 1999: 76). Bias can be generated by the content of the test, such as including culture-specific background knowledge in a reading test, which creates negative bias for those who are not familiar with the particular culture in question. Bias can also result from the response format. In this case, the task requires the application of an ability that is irrelevant for the aspect of language knowledge to be measured, and it impedes the successful completion of the task. For example, asking students to draw a picture based on a listening test might disadvantage those who have difficulties in drawing, such as learners with dyspraxia. Bias resulting from response-format is very important to consider in testing students with an SpLD, and hence tasks used in assessment should be carefully examined in terms of the construct irrelevant features that might pose difficulties for these learners. If such bias is found, alternative tasks and response formats need to be employed in assessment.

Fairness as equitable treatment in the assessment process involves the careful consideration of the context and purpose of the assessment. With regard to SpLDs, the most important aspect of fairness concerns 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. Therefore, test administration procedures often need to be modified to ensure appropriate testing conditions for students with an SpLD. For example, students with ADHD might need to be tested in a separate room from other candidates so that their attention would not be distracted from the test-tasks.

Fairness as equality in outcomes of testing requires that different sub-groups of test-takers, such as those from different first language or social backgrounds who have similar levels of ability, should show comparable distribution of scores. In other words, this means that the fact that one belongs to a particular group of test-takers should not affect the likelihood of passing a test. Finally, fairness as opportunity to learn means that test-takers should have equal opportunities in preparing for the test.

Accommodations and modifications

Although fairness and validity are strongly interrelated, and in most cases a valid test is fair and a fair test is valid, in the case of special arrangements it is important to consider how being fair to a particular group of test-takers might adversely affect the validity of the exam. In the case of SpLDs, the most serious concern is to what extent the granted accommodations and modifications in test-content and test-taking procedures affect the construct validity of the test. Hansen *et al.* (2005) created a preliminary framework for investigating accommodations in relation to task types and the constructs they are supposed to measure in the field of language testing. To demonstrate the model, they use the case of a dyslexic student receiving a read aloud accommodation on a reading comprehension task. Since the two main underlying features of a reading comprehension task are decoding (whether one is able to decode the written text; i.e. read) and comprehension (whether one is able to understand what is decoded), the read aloud gives an unfair advantage to the dyslexic student since the examinee does not have to decode the written text. Thus, this is not an accommodation, but a modification that affects the construct validity of the test. On the other hand, allowing the student to answer reading comprehension questions orally and not in writing does not affect the construct of reading which is being tested, and consequently this adjustment does not affect the validity of the exam. Hansen *et al.*'s (2005) model is a useful one that can be applied both in high-stakes proficiency testing and in classroom-based assessment, and which allows for the distinction between accommodations and modifications.

Accommodations do not change the nature of the construct being tested, but differentially affect a student's or group's performance in comparison to a peer group. Also, accommodations provide unique and differential access (to performance) so certain students or groups of students may complete the test and tasks without other confounding influences of test format, administration, or responding.

Modifications result in a change in the test (how it is given, how it is completed, or what construct is being assessed) and work across the board for all students with equal effect. Because of the lack of interaction between "group" and "change in test," the modification itself does not qualify as an accommodation. (Hollenbeck *et al.*, 1998: pp. 175–176)

The issue of how accommodations affect validity, however, is more complex than presented in Hansen *et al.*'s (2005) model, and it is often difficult to decide whether a particular accommodation has an impact on validity. Phillips (1994) listed a number of questions that would need to be answered in order to decide whether an accommodation should be granted to examinees. Three of her questions are of particular relevance:

- Does the accommodation change the construct being measured?
- Does the accommodation change the meaning of the scores?
- Would examinees without an SpLD also benefit from the accommodation?

In order to be able to answer these questions, it is important to carry out studies that compare the performance of students with and without an SpLD under testing conditions with and without accommodations. Accommodations that do not impinge on validity would result in overall score gains for students with an SpLD, but in no or limited gains for those without an SpLD. If students with no apparent SpLD also benefit from accommodations significantly it means that they are not performing to the best of their knowledge under standard administration procedures either, and consequently the validity of the test is questionable (see the flowchart in Figure 8.1).

Research evidence in the field of general educational testing suggests that a large number of accommodations, but especially allowing extended time in tests that have a time limit within which students have to finish, might also advantage students with no SpLD (for a review see Sireci *et al.*, 2005). One implication of these findings is that certain test administration procedures, such as making a test timed, disadvantage students with an SpLD, but allowing them extended time does not necessarily give them an advantage (Camara *et al.*, 1998). This does not mean, however, that students with an SpLD should not be granted extended time to complete the test, but rather that the relevance of the timed nature of the test to the construct it is supposed to measure should be reconsidered. Some experts in educational measurement go as far as to argue for *universal test design*, 'which mandates that tests be constructed and administered more flexibly so that accommodations become unnecessary' (Sireci *et al.*, 2005; Thompson *et al.*, 2002). Although, in theory, the fundamentals of universal test design point to a promising new direction, in fact they restate the basic conditions of test fairness; namely that tests should be designed and administered in a way that they do not create bias towards any group of test-takers. It is certainly true that certain advantages in technology, such as the wide availability of computer-based tests, might solve a number of accessibility issues in

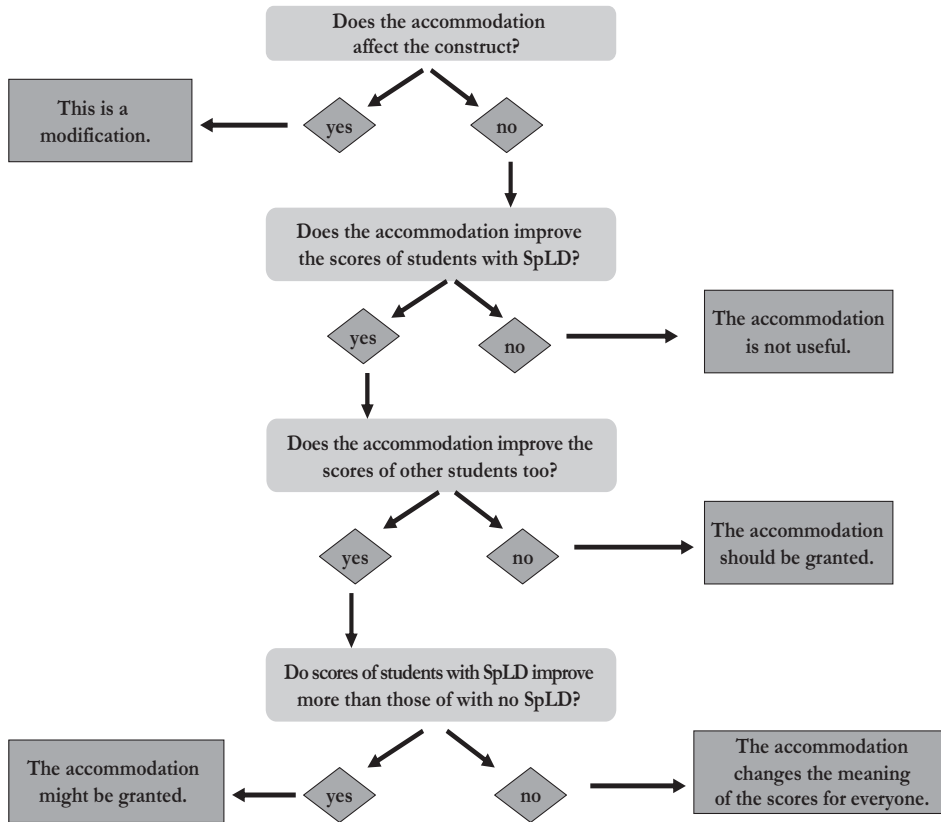


Figure 8.1 A flowchart of how accommodations might affect the construct and test scores

testing. Nevertheless, practicalities in test administration will always constrain the creation of tests that are entirely flexible. For example, even computer-based tests are usually group-administered, which might be distracting for a student with ADHD, who might consequently require the accommodation of being tested in a separate room.

The idea behind universal test design is that if tests are designed with students with disabilities in mind, they will be more appropriate for all students. A non-psychometric corollary is the common example of building televisions with closed caption capabilities for the hearing impaired. Once thought of as an accommodation for only those individuals, closed-captioned television is now commonplace in airports, restaurants, and health clubs to provide access to audio information for everyone whose hearing has been “impaired” by environmental noise. (Thompson *et al.*, 2002: 17)

Types of accommodations and selecting accommodations

The Standards for educational and psychological testing (American Educational Research Association, 1999) list six types of test modifications, four of which can be considered accommodations rather than modifications and might not affect the construct being

tested: modifying the presentation format, the response format, timing and the test-setting. The remaining two modifications: using only portions of a test and using substitute tests or alternate assessments have an effect on the construct being tested, but, as we will see in the discussion of classroom-based assessment, might frequently be implemented by teachers in classroom settings. Modification of the presentation format might involve an alteration in the medium of how test instructions or test-items are presented to students. For example, larger font-size or spacing, or coloured overlays might be employed in testing students with an SpLD. Modification in the response format allows test-takers to respond to test-items in another modality, such as answering comprehension questions orally rather than in writing, which is a frequent accommodation for students with dyspraxic tendencies. Another frequently applied accommodation is modifying the timing, which usually means allowing more time for students to complete the test. Finally, modifications in test setting might involve the allocation of a separate room for test-takers, making the location accessible for wheelchair users or altering the lighting conditions. For a list of different types of accommodations available for students with an SpLD, see Table 8.1 below.

Current educational research on the effect of accommodations in high-stakes standardized tests, which was mainly carried out in the USA, indicates that approximately two-thirds of students with an SpLD have been granted accommodations in these exams (Bolt & Thurlow, 2004). The most frequent accommodations have been extended time and alternative setting. In mathematics, assessment task input and instructions have also been frequently read aloud to students with an SpLD (Bolt & Thurlow, 2004). Unfortunately, the findings of studies in this field have been inconclusive and often disappointing. As mentioned above, most studies investigating the effect of extended time on performance suggest that students who would not be entitled to accommodations also benefit from this accommodation (Sireci *et al.*, 2005). Furthermore, findings also indicate that some

Table 8.1 *Accommodations available for students with an SpLD (based on Special Connections, 2005)*

Accommodations in presentation format	Accommodations in response format	Accommodations in timing	Accommodations in setting
Oral reading	Using a computer	Extended time	Administering the test individually
Large print	Using a scribe	Multiple or frequent breaks	Testing in a separate room
Magnification devices	Responding directly in the test booklet rather than on an answer sheet	Change in testing schedule	Testing in a small group
Screen reader	Using organizational devices such as spelling assistive devices, visual organizers	Testing over multiple days	Adjusting the lighting Providing noise buffers
Coloured overlays			

accommodations lower students' scores instead of raising them (Elliott *et al.*, 2001). This happens when the granted accommodations are not matched to the students' needs and when the students did not have the opportunity to practise using the accommodation before taking the test (e.g. practising how to work with a scribe or a reader, or using assistive devices such as screen-readers). There is also research evidence which shows that teachers are not always able to predict which students would need accommodations in tests and what accommodations would be beneficial for them (Helwig & Tindal, 2003).

Several considerations need to be taken into account when choosing accommodations for students. Due to the fact that teachers were often found to be inappropriate judges of what accommodation is needed, it is very important to consult the students themselves. Students' views on what strategies and devices they generally use to overcome their problems in learning, what accommodations they have tried before and how these accommodations have helped them and how they think the use of accommodations might be improved, need to be taken into account in the selection process. Teachers and testing agencies also need to consider whether the student needs the accommodations, how the accommodations will make the test both fair and valid and how accommodations can be provided in terms of the practical realities of the assessment context. Further issues for consideration include how accommodations can be improved and how the student can be helped in making the best possible use of accommodations (see the summary table below).

Questions to consider in choosing and using accommodations (based on Special Connections, 2005)

- What are the student's strengths and weaknesses resulting from their SpLD?
- What kind of learning and instructional strategies work best for the student?
- Does the student need accommodations?
- What accommodations increase the students' access to instruction and assessment?
- How do the accommodations influence the validity of the assessment?
- What accommodations has the student tried in the past and how have they worked for the student?
- What does the student prefer?
- Are there ways to improve the student's use of the accommodation?
- Are there other accommodations that the student should try?
- Are there ways for the student to practise using the accommodations?
- What are the challenges in providing the selected accommodations and how can they be overcome?

A final question in selecting accommodations is whether the students themselves want to make use of accommodations and whether they perceive them to be necessary. There might be learners with an SpLD who are sufficiently confident about their foreign language skills and might not deem accommodations useful. Some students such as the learner we interviewed in Hungary might want to demonstrate that they can accomplish their learning goals without accommodations and want to refute the publicly held misconception that students with dyslexia cannot acquire another language. By rejecting accommodations, some other learners might want to set an example for other students

with an SpLD and encourage them that they can also succeed in language learning (see quotes from students in Kormos *et al.*'s (2010) study below).

I was familiar with the accommodations, but I thought I would try to pass the exam without applying for them. After all, everyone keeps telling me that dyslexics cannot pass language exams because they are incapable of learning a foreign language. Then, I thought, I'll show it to them.

I did not want to apply for accommodations because I think you should not blame your failures on dyslexia. You have to study for the exam as hard as you can instead. (Interview data from Kormos *et al.*, 2010: 87)

Accommodations and modifications in high-stakes language proficiency tests

A variety of accommodations in high-stakes language proficiency tests are available for learners with an SpLD. Unfortunately the system of granting accommodations, the types of accommodations allowed and the information provided to the public on the accommodations show great variation across exam boards, which makes it difficult for learners with an SpLD to exercise advocacy concerning accommodations.

The first step which learners usually take in deciding whether to apply for accommodations and in selecting appropriate access arrangements is searching for information on the website of exam boards. Information on accessibility is not only used by the candidates, but also by their teachers, who help them prepare for the exams. Learners with an SpLD might experience difficulties orienting themselves on web pages and finding the relevant information; therefore it is of great importance that guidelines on how to apply for accommodations and data on the different types of accommodations should be displayed at a prominent place on the website. The information provided to test-takers should also be clearly worded and sufficiently detailed so that they would not have to engage in email correspondence with the examination centre to find the information they require.

The procedure of applying for accommodations usually involves submitting documentation concerning the nature of the SpLD and stating the requested accommodation. All the major international language examination boards require official documentation prepared by a specialist, which describes the nature of the learning difference and lists all the testing instruments used in the diagnosis, as well as the student's achievement on these diagnostic instruments. They also ask candidates to submit a detailed description of the types of accommodations they have used in the past and provide support for the need for the requested accommodation. The examination centres, however, differ as regards how recent the official documentation of the SpLD should be. Some UK-based exam boards ask candidates to submit documents which are less than two years' old, whereas there are other testing agencies in the USA that accept documents which are not older than five years for learning difficulties and not older than three years for ADHD. It would be welcome if exam boards accepted documentation older than two years, as this reflects the mainstream position in educational psychology that SpLDs are conditions that accompany

the individual through their lives. Moreover, in many countries the psychological assessment of SpLDs is expensive, and obtaining recent documentation for submission to exam boards might place an unnecessary financial burden on the students.

The available accommodations also vary across the exam boards (see Table 8.2 for an example of their accommodations in 2010). As regards the presentation format of the test, most major exam boards allow for the use of coloured overlays but they differ in terms of whether a reader can be used in reading out the task instructions for the learners. Further research into the effect of reading out task instructions for examinees would be needed to be able to assess how this accommodation affects the validity of the exam, and whether the accommodation provides learners with an SpLD with better opportunities to display their knowledge. As we will see below, in an interview study dyslexic language learners stated that they used some of the extended time they were allowed for reading and understanding task instructions (Kormos *et al.*, 2010). Hence it is possible that extended time can help learners with an SpLD overcome their difficulties in processing task input.

As regards accommodations in response format, more uniformity across the exam boards can be observed. Most exam boards allow learners to use a word processor or a scribe. In some exams, students with an SpLD might not need to transfer their solutions to a separate answer sheet, which not only extends the time they can work on the test itself, but also prevents them from potentially making mistakes in copying their answers.

Major exam boards provide similar accommodations in the timing of the test. They allow candidates to take supervised breaks and make use of extended time. The usual practice is to grant 25% extra time in solving the tasks, but, based on special considerations, candidates can request even longer periods of time as an extension. In an interview study conducted with dyslexic learners in Hungary, we asked students to explain what they used

Table 8.2 Accommodations available for candidates with an SpLD in three high-stakes language proficiency tests (data obtained in 2010)

	Cambridge ESOL	TOEFL IBT	Pearson Educational Tests
Reader		✓	✓
Transparent coloured overlays	✓	✓	✓
Word processor	✓	✓	✓
Scribe	✓	✓	✓
Writing the answers on the test paper	✓	N.A	
Extended time	✓	✓	✓
Supervised breaks	✓	✓	✓
Separate invigilation			✓
Prompter			✓

the extended time for in language proficiency exams (Kormos *et al.*, 2010). They explained that they needed the extra time to process task instructions, to read the task input and to review their answers. Some of the participants of this study, however, did not apply for this accommodation because they were confident they could perform to the best of their knowledge within the time limits of the test. This highlights the importance of making individualized judgements in granting accommodations to students with an SpLD, and of taking the students' own views regarding special arrangements into account. As pointed out above, research evidence concerning how time extension affects the validity of the exam is contradictory; therefore, the timing of the test for all the candidates might also need to be given careful consideration. Interestingly, changes in the testing schedule and testing on multiple days, which are also possible accommodations in the timing of the exams, are currently not permitted by any of the major international exam boards. This might be due to reasons of practicality and test security.

Accommodations in test settings are also provided by a few exam boards. Some testing agencies offer individual supervision to candidates with an SpLD and allow students to use a prompter, who can remind the student to stay focused on the task. These accommodations are especially useful for examinees with ADHD. In computer-based testing, individual supervision might be a less frequently required accommodation; nevertheless, for some candidates with ADHD even the smaller number of examinees in a computer laboratory might be distracting.

Classroom-based assessment

Assessment is most frequently carried out by teachers; hence it is highly important to discuss the evaluation procedures employed in the language classroom. As in any assessment, including high-stakes language testing, the five major stages of the process are: identifying the purpose of the assessment, planning how the assessment will take place, collecting the necessary information, interpreting the data gained and finally making a decision (based on Genesee & Upshur, 1996). These five stages usually form a cycle of assessment, in which the appropriateness of the decision taken based on the assessment process will usually be evaluated in another assessment cycle (see Figure 8.2).

The purpose of evaluation

Assessment can have several purposes such as evaluating the effectiveness of the teaching process and the progress and achievement of the students, establishing whether the students' knowledge and skills meet externally established standards, and diagnosing students' strengths and weaknesses at the beginning of and during the programme (McKay, 2006). The identification of the purpose of assessment also includes considering who will need the assessment information: the teacher him/herself, the students, the parents, the school administration, and educational authorities, just to mention the most



Figure 8.2 *The assessment cycle*

important stakeholders. When working with students with an SpLD, decisions on the purpose of evaluation might also involve considering the relevance and suitability of the standards against which the students' language competence will be measured and setting individual educational objectives for the students (see below).

Planning the assessment

In planning the assessment process the most important questions to answer are:

- what will be assessed
- when the assessment will take place
- what tasks and methods of assessment will be used
- what accommodations and modifications in assessment need to be implemented
- how the information gained will be analysed and evaluated.

As regards the question of what will be assessed, in classroom-based assessment teachers do not only test students' language knowledge and skills but also frequently evaluate additional factors in language learning, such as students' motivation and level of self-confidence in carrying out tasks (McKay, 2006). In the case of students with an SpLD, the question of what the target of assessment is needs to be considered carefully. Curricular objectives for learners with an SpLD might be established on an individual basis taking the students' strengths and weaknesses into consideration. Depending on their individual profile, students with an SpLD might need somewhat reduced learning

targets in certain areas of second language competence. Some of the changes in learning objectives which can be regarded as minor ones include not requiring dyslexic learners to learn accurate spelling of words and consequently disregarding spelling errors in classroom-assessment or allowing learners to use spellcheckers. Some more substantial modifications in learning objectives in the case of dyslexic and dyspraxic students might involve placing less emphasis on reading and writing in L2 and focusing more on the assessment of oral and listening skills. In an interview study conducted with Hungarian dyslexic language learners, Kormos *et al.* (2010) found that written assessment tasks, especially those that are marked for the correctness of spelling, might be an important source of language learning anxiety. Their study revealed that once modifications in assessment were implemented, students' anxiety decreased and they could achieve considerable success in language learning (see the quote below).

My Hebrew teacher did not get any training in teaching dyslexics, but he does not consider spelling and that's it. This was all I needed and now I can speak one more language... So if your spelling is not assessed, it will be easier for you, and you don't have butterflies in your stomach anymore that my goodness, I have to get this right. Once you are relieved of this stress, you will do better. It will be much better. (quote from a Hungarian dyslexic student in Kormos *et al.*, 2010: 12)

Assessment can take place at predetermined intervals but teachers often use continuous assessment and on the spot assessment, which are not necessarily planned in advance. Continuous assessment is especially important when working with learners with an SpLD in order to adjust the teaching process to their pace of learning and their specific needs. Continuous assessment is also frequent in second language settings where the students' target language competence is evaluated during content-based instruction. Dynamic assessment is frequently applied by specialists in working with students with an SpLD (Feuerstein, 1980), and can also be adapted to the language classroom (see also Chapter 7). In dynamic assessment, the students' achievement and progress are routinely evaluated during instruction and the outcomes of the assessment process are used as a basis for making decisions in the next phase of teaching (Schneider & Ganschow, 2000).

Genesee and Upshur (1996) give useful advice concerning when to carry out assessment, which is to be heeded in working with students with an SpLD. They argue that students' needs and abilities should be assessed at the beginning of the course or the academic year to determine whether the general objectives of the course can be met and to help in planning the teaching process. They also recommend that students' achievement on the objectives of smaller units of teaching such as units or lessons should also be evaluated because it gives useful information on the effectiveness and pace of teaching. This is of high importance in working with students with an SpLD because they need frequent revision and might progress at a slower speed than their peers. Moreover, certain instructional tasks might not prove to be as effective for them as for their peers with no SpLD. It is also essential to provide regular feedback to the students themselves. This helps them evaluate their own learning process, raise their motivation, lower their anxiety and increase their sense of success and self-worth. We pointed out in Chapter 4 that students with an SpLD might frequently experience a sense of failure and high levels of

anxiety, especially in foreign language classrooms. Regular and constructive feedback on their work can alleviate the emotional stress these learners often have to cope with in learning another language.

In the planning phase, teachers also need to make decisions on what accommodations students with an SpLD would require. These include the consideration of the task input, response format, the timing of the assessment and the setting in which the evaluation will take place. In an interview study conducted with teachers who had a wide range of expertise in working with students with an SpLD, the most frequently mentioned accommodations in classroom-based assessment were printing the task sheet on coloured paper with larger font size and spacing, allowing the students to give the task response orally, and testing the students individually in a quiet room (Kormos & Kontra, 2009). Another useful accommodation suggested by the teachers concerned the visual layout of the test paper: teachers designed the test so that students would easily find the beginning of the tasks and arranged the items within tasks in such a way that students would not leave out items accidentally.

In addition to the accommodations listed in Table 8.1, modifications can also be implemented in the assessment procedures to meet the needs of students with an SpLD. Some modifications frequently mentioned in interviews conducted with experienced teachers of students with an SpLD included using shorter tasks with a smaller number of items, and applying alternative tasks such as a matching task instead of a gap-fill task to assess knowledge of vocabulary (Kormos & Kontra, 2009). Due to their difficulties with sustained attention and with processing verbal information, learners with an SpLD find it challenging to read and listen to long texts. Hence as a possible modification, students with an SpLD might receive the same type of task as their peers but with shorter input or with input that is broken up into shorter sections. In an interview study in which dyslexic students were asked about their difficulties in performing assessment tasks, the learners also reported that they found it difficult to write extended answers in reading and listening tests (Kormos *et al.*, 2010). Therefore, comprehension tasks designed for dyslexic students might need to be modified so that they do not require long responses. Most learners with an SpLD find it demanding to write and listen at the same time. Consequently, in the assessment of their listening skills, students might be allowed to listen to the text more than once or be granted extended time to read the test items.

Types of assessment tasks

In planning the assessment tasks used in the language classroom, teachers have to take every possible measure to ascertain that the tasks and procedures they use are valid, reliable and fair (see above). Assessment should never be made on the basis of a single task: a range of tasks should be applied to arrive at a valid judgement of students' skills and abilities. Test tasks and assessment procedures have a considerable impact on students and the teaching process; consequently, additional selection criteria for tasks need to include the authenticity and relevance of the task for the learners. If possible, assessment tasks should reflect situations and activities in which students might use the language outside the realm of the classroom. Assessment tasks should also be engaging

and motivating for the learners. Tasks used for assessment should give students a feeling of success and achievement, which is especially important for students with an SpLD who frequently experience failure in school life. Assessment procedures also need to be practical, in other words, they have to be manageable given the resources and characteristics of the learning environment.

Questions to consider in selecting and designing assessment tasks for students with SpLD

- What skills, abilities and knowledge need to be measured?
- Does the task measure the targeted skill, ability or knowledge?
- Is the task enjoyable and motivating?
- Is the task authentic?
- Is the task relevant for the learners?
- Can the task be carried out given the constraints of the learning environment?
- If a score or mark is required, can the performance on the task be evaluated reliably?
- What kind of difficulties might learners with an SpLD experience with the task that result from their SpLD?
- Are there alternative task types that would be better suited for learners with an SpLD?
- How long does it take to complete the assessment task? Will learners with an SpLD be able to sustain their attention for the period required to perform the task? Can the task be shortened for students with an SpLD? Can they be given breaks?
- Where will the task be performed? Is there anything in the testing environment that can potentially distract learners with an SpLD? Does the testing environment need to be modified?
- Can students with an SpLD understand the instructions for completing the task? What kind of help do they need to make sure they understand what they have to do?
- Does the task input cause any difficulties for students with an SpLD? Do students need accommodations in processing the task input?
- Does the response to the task input cause any difficulties for students with an SpLD? Do students need accommodations in response format?
- Is the difficulty level of the task appropriate for students with an SpLD? Can the task be made easier for them? Is the task going to give them some sense of achievement and success?

The scope of this book does not allow us to elaborate all the possible methods of classroom assessment, but we will give a brief list of the techniques we believe can be used for assessing learners with an SpLD. Some of the traditional formats of assessment are classroom quizzes and essays, both of which need to be adjusted to the strengths and weaknesses of students with an SpLD using the principles of providing accommodations we outlined above. These tests might also need to be modified beyond the level of accommodations and might need to be replaced with other forms of assessment or with a shortened task.

Other classroom assessment techniques include the observation of students' performance in the natural classroom setting. This has several advantages as it enables the teacher to assess students' oral performance in communicative situations as they occur in the classroom, and it involves work the students would be doing anyway. In classroom observation, students might not be aware of being observed, and this might avoid inducing test anxiety, which is a frequently occurring phenomenon among students with

an SpLD in formal testing situations. Classroom observation also provides insights into the non-cognitive aspects of language learning such as students’ effort and persistence. In carrying out observations, careful decisions need to be made on the focus of the observation, which needs to be sufficiently constrained so that it can be performed easily during teaching. Teachers also need to determine in advance whom they will observe (i.e. individual students, small groups or the whole class), in what activities the learners will be observed and how the observations will be recorded (Genesee & Upshur, 1996). Appropriate record keeping is essential in making the assessment process reliable and informative. Classroom observation can be recorded in the form of field notes, which can be structured notes written based on predetermined criteria or a set of unstructured comments made during the process of information. Checklists and rating scales can also be used to record information gained from classroom-observation (see examples below).

Sample checklist for evaluating the spoken performance of elementary level language learners

___	Pronounces words correctly
___	Can use basic vocabulary in every day contexts
___	Can use simple grammatical structures
___	Can produce simple sentences
___	Can produce Yes/No questions
___	Can express basic information about him/herself
___	Can react appropriately to simple questions referring to daily activities

Sample rating scale items for evaluating the classroom behaviour of students with an SpLD

The student can work silently without disturbing others.						
Always	1	2	3	4	5	Never
The student waits for his/her turn to be called on.						
Always	1	2	3	4	5	Never
The student volunteers with answers.						
Always	1	2	3	4	5	Never
The student actively participates in groupwork.						
Always	1	2	3	4	5	Never
The student follows instructions.						
Always	1	2	3	4	5	Never

Another classroom assessment technique, which can be used in a versatile manner in the assessment of language learners with an SpLD is the portfolio. Portfolios have a number of advantages, which might be especially valuable in the assessment process of students with an SpLD. They provide a continuous and holistic view of the development of individual students and show what the students can do rather than what they have not mastered yet. Portfolio tasks can also be easily adjusted to the strengths and weaknesses of individual students. As a consequence, the use of portfolio assessment can give students with an SpLD a sense of achievement and success, and it might increase their self-confidence and motivation in completing the assessment tasks. Students might assume greater responsibility for their own learning and demonstrate a sense of ownership of their work if they can be involved in selecting the pieces for inclusion and

in deciding on the task itself. Learner autonomy can be further enhanced by involving the learners in the establishment of assessment criteria and in the process of assessment itself. Portfolios usually include some form of written work, although recordings of students' oral performance can also constitute a portfolio. As shown in Chapter 4, writing in another language poses several difficulties for students with an SpLD; therefore, portfolio assessment, which easily allows for the modification of the tasks and the assessment criteria and is a less anxiety-inducing form of assessment, can provide learners with an SpLD the opportunity to demonstrate the best of their knowledge and skills.

Students might also be asked to share the responsibility of assessment with the teacher and to give an evaluation of their own abilities. Peer assessment might be another form of evaluation that can be applied in the foreign language classroom. Standardized self-assessment scales already exist for evaluating one's own language proficiency (e.g. Common European Framework of Reference, Council of Europe, 2001), but simple self-assessment instruments can easily be developed by language teachers. Self-assessment involves learners making judgements about how their work meets criteria and standards, which were developed either externally or by the teacher, or were collaboratively devised together with the students. Allowing students to self-assess provides them with opportunities for monitoring their work and taking more responsibility for learning (Holec, 1981). Self-assessment helps students to evaluate their achievement, weaknesses, strengths and the effectiveness of their learning processes (Oscarsson, 1989). Self-assessment can be used as a useful complementary method of assessment in the evaluation of the work of students with an SpLD because it promotes critical reflection on the efficiency of their learning, which may in turn increase motivation and ultimately lead to more autonomous learning. Self-assessment might also be instrumental in making learners familiar with the assessment criteria applied by teachers or educational authorities in high-stakes tests. We will also show in Chapter 9 how students' ability to self-assess assists in adjusting to new educational contexts.

Collecting and analysing information

The next phase of assessment involves administering the types of assessment tasks in the language classroom that have been described above. Detailed and clear instructions on how to do the tasks are of great importance in any assessment procedure. Due to the fact that learners with an SpLD often have difficulties with keeping several pieces of verbal information in working memory, instructions given to these learners need to be kept simple, and if they are complex, they need to be presented in separate stages or chunks. If instructions are provided in writing, the teacher needs to ensure that the students can understand the instructions and, if necessary, the instructions can be read out. If possible, a demonstration of how to do the task should also be given either by the teacher or by another student.

Classroom-based assessment might also allow for scaffolding in assessment. Students with an SpLD might need some support and help in solving tasks. Unless the test is high-stakes and intended to be solved by the student alone, learners with an SpLD should

not be left to struggle on their own. Sometimes even a small amount of help, positive reinforcement and supportive comments can assist students to make further attempts at solving the tasks and to overcome their difficulties. The type and amount of support given in assessment can be noted when the learners' performance is evaluated, and when the outcomes of the assessment process are reported to stakeholders.

A detailed description of all the possible ways of analysing task performance is beyond the scope of this chapter; therefore here we will only focus on the general guidelines for evaluating the work of learners with an SpLD. Feedback to learners on their performance can take different forms: oral or spoken evaluative comments, marks, scores and descriptions of levels of achievement. Due to the fact that learners with an SpLD often experience difficulties with language learning, they should be given positive feedback, which encourages them to continue learning and which highlights what they can do rather than what they cannot do. For learners with certain types of SpLDs such as ADHD, immediate feedback might be preferred over delayed feedback. Students with an SpLD should be rewarded for achievement when it shows effort and progress even if it might fall short of the required standards. If feedback needs to show gaps in learners' knowledge these should be presented as areas for further improvement rather than as lack of abilities. Teachers might also need to consider how much feedback they give on errors to students with an SpLD. In correcting written and spoken performance, they might decide to ignore certain types of errors and select specific areas for the learners to focus on. It might be very discouraging for learners to receive a piece of corrected work, which is full of highlighted errors and to be interrupted by frequent corrections in speech. Such error-correction procedures might also be ineffective in inducing appropriate response to the feedback.

In scoring or marking students' work, consideration should be given to a number of issues. First of all, the scoring procedure needs to be reliable; in other words, teachers should be consistent in awarding scores. Second, it needs to be decided whether the same criteria will be applied for evaluating the work of learners with an SpLD as for the students with no apparent SpLD. As mentioned above, a frequent modification in scoring written work might involve disregarding spelling errors. The performance of students with an SpLD might also be evaluated using more lenient criteria or criteria designed for lower level learners. It needs to be noted, however, that in all these cases, the scores of the students with an SpLD will have a different meaning from the scores of other learners. This should be recorded and might need to be reported when the scores are made available to parents or educational authorities.

In this chapter we presented the basic theoretical principles underlying test-fairness and the practical ways in which equal opportunities and access can be ensured in high-stakes testing. We also demonstrated how accommodations can be granted and how tests can be designed and modified to suit the individual profiles of learners with an SpLD in classroom assessment. This chapter concludes the theme of teaching and assessment, and in the last chapter of our book we discuss how learners with an SpLD can be assisted in progression from one stage of education to another and ultimately with the transition to the world of work.

Summary of key points

- Validity and test-fairness are essential, interrelated characteristics of assessment.
- Fairness of a test is ensured by lack of bias, equitable treatment in the testing process, equality in the outcomes of testing and in opportunities to learn.
- Granting accommodations does not change the construct to be tested, whereas modifications result in changes in the target of assessment.
- Accommodations can be provided in the presentation and response format, timing and settings of the test.
- A large number of factors, including the nature of the students' SpLD and educational experience, need to be taken into account in recommending accommodations to students with an SpLD.
- In classroom-based assessment teachers might modify the purpose of assessment and can adjust the testing tasks and scoring procedures to the strengths and weaknesses of the students. Alternative means of assessment such as portfolios can also be selected.
- Classroom teachers should consider accommodations in the test-setting and administration procedures and might provide support to learners with an SpLD during the assessment process.
- The timing, detail and tone of feedback should take the nature of the students' SpLD into account.

Activities

1. Select a language proficiency exam and find information on the accommodations available to students with an SpLD. Discuss how useful and appropriate these accommodations are.
2. Design a vocabulary quiz for a group of students with dyslexia. Give a rationale for selecting the particular task types and discuss the modifications and accommodations you might need to implement in administering the test.
3. What kind of accommodations and modifications in classroom-based assessment can be beneficial for students with ADHD?
4. Select a high-stakes language test your school regularly administers to the students. Discuss what kind of changes
 - a) in the test,
 - b) the administration procedures
 - c) and scoring would be necessary to make this test accessible for students with different types of SpLDs.

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9

Transition and Progression

Introduction	168
Factors that cause stress in transition	169
<i>Environmental and physical transition</i>	<i>171</i>
<i>Academic and cognitive challenges of transition</i>	<i>171</i>
<i>Social demands of transition</i>	<i>172</i>
<i>Psychological transitions</i>	<i>172</i>
Strategies that students and their families can implement	173
Strategies that the existing institution can implement	177
<i>Developing personal qualities and academic skills</i>	<i>177</i>
<i>Good communication</i>	<i>177</i>
<i>Independence</i>	<i>178</i>
<i>Career advice</i>	<i>179</i>
What receiving institutions can do to facilitate transition	180
<i>Phased in transition</i>	<i>180</i>
<i>Reassessment of support needs</i>	<i>180</i>
<i>Information</i>	<i>181</i>
Moving on to employment	183
Conclusion	184
Summary of key points	185
Activities	186
Further reading	186

Introduction

This chapter is particularly concerned with the somewhat artificial stages of progression that are dictated by the education systems and societies in which we live. At each stage of education there are new challenges for students: different environments to adjust to, new ways of working to conform to and ever higher expectations of them. Formal foreign language tuition usually begins at a major transition point, such as the transfer to high school, and additional languages may be added to the curriculum at various transition points through the education system. Learners with an SpLD are no more likely than their peers to have difficulty with learning new languages as long as they are introduced in a way that is appropriate and accessible for them. Language teachers therefore need to be aware that the students they are meeting for the first time may well be working through some specific transition processes, and be prepared with a range of teaching strategies to accommodate various learning preferences. As students progress through the system there may be changes in the way that they are expected to engage with the target language, in the domains in which they are expected to communicate in the new language, as well as the types of change that apply to all subjects of study: the materials used and the teaching methods employed. Language development also becomes crucial in determining which options are available for learners as they progress. In EFL situations, students working within their own cultural context may have other sources of information available to them that have prepared them to some extent for the changes that will occur. In ESL contexts, language learners are likely to be at an even greater disadvantage, as they try to navigate an education system that is unfamiliar and imposes unexpected changes upon them. The role of the language teacher in facilitating transition in that context is therefore even more important.

The first significant transition is entry to kindergarten or nursery school, when a child who has spent most of the day at home becomes a pupil in a formal (or semi-formal) school setting. Other major transitions are the transfer from primary to secondary school and then to college or university. However, along the way there are many smaller transition points which are less frequently discussed, but which nevertheless can have a large impact on an individual. These include the progression to a new academic year group or grade class, as well as the end of a term or semester and the start of the next within the year. These transitions happen at predetermined times of the academic year, and affect an entire cohort of learners, regardless of the emotional or academic readiness of each individual to progress to the next level.

Transition points are particularly demanding for students with an SpLD, and in this chapter some of the reasons for this are discussed. Students who have previously coped well with school, to the extent that no SpLD has been identified, may find that the stress of transition, perhaps combined with the experience of learning a second language, reveals their cognitive differences for the first time as their learning strategies need to be modified to suit the new environment and its demands. This chapter makes some suggestions as to how learners can be supported and helped to progress smoothly through each stage of school and college and ultimately on to successful employment.

Factors that cause stress in transition

Human lives are made up of a series of transitions and progressions from one stage or phase of life to another. Transition can broadly be described as the process of change over a period of time that entails a shift in self-identity and often status within the community. Some steps may seem small, but all are significant in forming the people we are becoming as we live our lives. The most obvious developments are perhaps the *physical* and *environmental* changes that can be documented as people grow from being babies to mature adults. These developments tend to happen gradually, and may be differently timed for every individual, but they are characterized by change, both in our external appearance, and the environments that we move in at each stage. In terms of educational transition, there are also the elements of *cognitive* and *academic* development to consider. However, more significant are the *psychological* and *social* adjustments that we have to constantly make to ensure our behaviour is appropriate to the new roles we assume. As Lucey and Reay express it: 'transitions in individuals' lives have always demanded emotional reorganisation' (2000: 192).

Lam and Pollard (2006) provide a comprehensive survey of various frameworks that have been put forward to describe the process of transition in human lives. From these, three phases can be identified: 1) *preparation* for the new role we will be taking on; 2) *separation* from the old identity that we have had up to now, and 3) *incorporation* into the new environment and role that we are to play. These stages are often accompanied by certain ceremonies and rituals that mark the transition points as we progress through our lives.

Since transition is a necessary and recurring aspect of our lives, it seems strange that it does not cease to have a disruptive effect on us as we get older. Naturally, some people cope with change better than others, and it is not just people with an SpLD who may feel disorientated following a transition. However, there are several reasons why times of

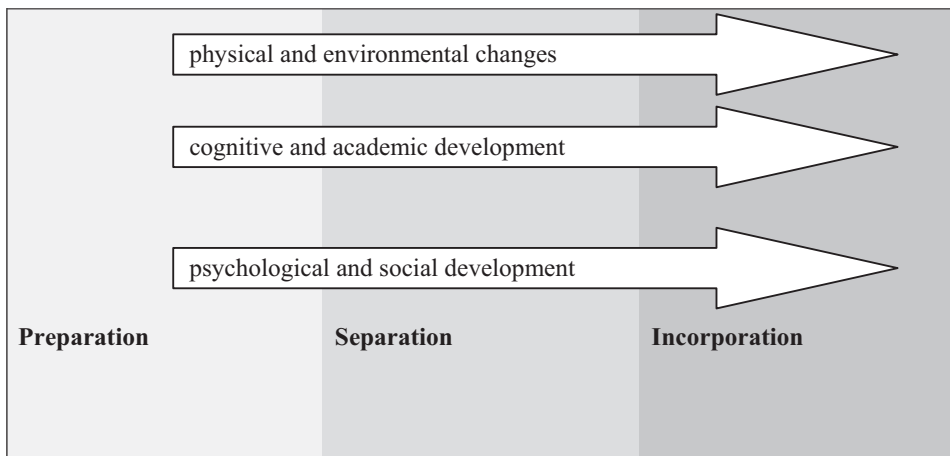


Figure 9.1 Integrated models of transition

transition can be particularly stressful for those who experience difficulties due to an SpLD. For example, the coping mechanisms and support strategies that they have developed early in their educational careers to help them succeed may not seem appropriate any longer, or may cease to be effective, or they may not perceive themselves as fitting into the next stage of education.

It is always important to keep in mind the diversity of the population of learners who have an SpLD, and hence the range of reactions to transition. Some students may be excited about the approaching change and even perceive a transition point as a chance for a fresh start (Lucey & Reay, 2000; Weedon & Riddell, 2007). On the other hand, many reports (see, for example Mellard & Woods, 2007; Taylor *et al.*, 2010) point to the fact that students who have dyslexia or another SpLD are less likely to continue in education beyond the compulsory age of attendance, and if they do pursue college or university education, they are less likely to excel and more likely to drop out before completion than their peers who have no apparent SpLD. On leaving education, a new workplace presents challenges for all young adults, but especially for those with an SpLD, who may feel that their colleagues and employers are (even) less sympathetic than their classmates and teachers had been.

In the last decade there has been a lot of attention paid to the major academic transition points, particularly in the UK, the USA and Australia, and strategies have been put in place to smooth the path of young people through the educational system. In the UK, this has been so successful at the primary to secondary transition point that a study commissioned by the Department for Children, Schools and Families (DCSF) found that 84% of children did not feel anxious about moving to their next school. Although 16% did express some concerns, after one term (roughly twelve weeks) the number who were still anxious about the new school had reduced to 3% (Evangelou *et al.*, 2008).

The definition of a successful transition that was employed in the UK Department for Children, Schools and Families study had five elements:

1. Expanding friendships and boosting self-esteem and confidence
2. Settling very well into school life
3. Showing a growing interest in school and work
4. Getting used to new routines and organisation of secondary school
5. Experiencing curriculum continuity

(Evangelou *et al.*, 2008)

The criteria for judging the success of a transition can be couched in terms of how quickly the stages of transition are completed, or how comfortable the individual feels with the new physical environment, how well they cope with the academic or cognitive challenges they meet, and particularly how well they adapt to the social and psychological changes demanded of them. Although it could be argued that there is some overlap between these components, they provide a good starting point from which to discuss aspects of transition that may cause undue stress and upheaval, especially for students who have an SpLD.

Environmental and physical transitions

Beginning formal education requires a child to leave the familiar home environment and perhaps for the first time spend extended periods of time in an unfamiliar place, without a parent. It also imposes a new daily routine on children, one over which they have no control, and they may have to adapt to a new pattern of eating, working and resting. Moving from primary to secondary school in many countries involves following a much more complicated timetable, usually with many different separate subjects, taught by different teachers in different classrooms. The transition to college or university often entails adopting a different kind of timetable, perhaps less structured, with time built in for independent study. In all these situations, adjusting to the new routine can be problematic for learners who experience weakness in short-term and working memory. For those whose perceptions of time are different from the majority, it may be disorientating to find that an activity they are engaged in has suddenly to come to an end, and that they are expected to focus on an entirely different subject. Since time awareness can be a problem for some learners with an SpLD, they may not allocate sufficient time for travelling between classes, or for preparing for classes and exams. Until they have had time to internalize their new routine, they are liable to forget where they have to be, what equipment they will need and what preparation they will need to do.

Poor spatial awareness can also be an aggravating factor in transitions, since navigating around a new building or campus – usually a much bigger one than the previous familiar site – often causes anxiety for learners with dyslexic and dyspraxic tendencies. With increasing maturity, learners are often expected to undertake longer and more complex journeys to school or college independently, or with their peers rather than their parents. For many learners with an SpLD, travelling by public transport can be challenging in different ways depending on the particular difficulties they experience. It could be the difficulty of interacting with other unfamiliar people, of remembering which bus or train to take, or of paying attention to where to get off and remembering how to complete the journey on foot.

Academic and cognitive challenges of transition

As learners progress through each stage of education, they are likely to face increasing levels of challenge from the content of the curriculum they are following. Tasks are likely to become more complex, the cognitive load higher and the general volume of work greater. Working with new teachers, and often more teachers than before, sometimes means that not all the staff are aware of learners' particular strengths and weaknesses and so are not able to tailor the presentation of new ideas to those learners with an SpLD.

It is often the case that more independence is required of learners as they progress through the educational system, and that teaching styles can be quite different from those they are familiar with. Projects and group work are sometimes introduced in broad terms to give the learners the freedom to pursue their own interests within a given framework. While this may suit many creative learners with an SpLD, some may find that they misinterpret the teacher's intentions and expectations. In addition, tasks that entail

multiple processes and several layers of instructions are likely to cause problems for those who have weaknesses in the area of working memory.

Since many learners with an SpLD also have slower processing speeds, it is often the case that completing tasks takes longer, and when the volume of work increases, it can mean that other activities are abandoned, or that not all the work can be done thoroughly. Managing the workload can be extremely stressful, exacerbating problems in other areas, such as memory and attention.

Social demands of transition

As discussed in Chapters 2 and 3, learners who are identified as having an SpLD may experience a range of difficulties in their educational and personal lives. If they have traits of Asperger's syndrome or ADHD, they may find that their ability to form and maintain relationships with their peers is hampered. In the case of Asperger's syndrome, social interaction with others is challenging, and this can be particularly difficult in large groups, where noise levels are high and people are unfamiliar. The impulsiveness associated with ADHD, as well as the lack of emotional inhibition, can mean that others become wary of working or socializing with students who exhibit these characteristics.

When moving to a new class or educational institution it is likely that the immediate peer group of most learners will also change to some extent, causing additional anxiety for students with an SpLD, which will only intensify the social challenges they already face. Young children who have grown up with these individuals may be better able to accept them as they are than older children or young adults who meet them later on. Students with these SpLDs may find that the people they used to rely on socially have moved into new friendship groups more quickly than they were able to, and so find themselves quite isolated. This can have a detrimental effect on their self-esteem and confirm their negative self-identity as people who do not fit in.

Although mechanisms are usually in place to share information between institutions (see Chapter 5), there comes a point in every learner's career when the responsibility for disclosing their SpLDs falls on the individual student. Some students see transition points as a chance for a fresh start, an opportunity to reinvent themselves, and are therefore reluctant to identify themselves as someone who requires support or curriculum adjustments to be made for them. Without this vital information, tutors are likely to judge the learner on the basis of the quality of the work they produce, and unfortunately they can often perceive them as being of low ability or as having a poor attitude. These impressions, formed through lack of communication, can seriously impair the quality of the relationship that the learner is able to build with the staff, even if the SpLD is subsequently disclosed.

Psychological transitions

Perhaps the most important aspect of any successful transition is the ability of the individuals concerned to prepare, by mentally projecting themselves into the new role and

imagining themselves in the new environment, taking part in the activities associated with that role, and behaving in the appropriate manner. For learners with traits of Asperger's syndrome this is especially hard, since their social imagination may be quite limited. One major source of stress for all learners in transition is dealing with the unknown. The knowledge that they will be expected to operate in a different way, with unknown people in an alien environment is a considerable source of stress for learners who cannot visualize or imagine how that scenario might work.

Adopting a new role inevitably entails letting go of some parts of an old persona (Lucey & Reay, 2000). For example, the move from school to college or university means no longer being considered a school pupil, but being regarded as a young adult learner. This may be accompanied by a sense of loss (due to the separation from a part of his/her self-identity that s/he has grown comfortable with) and may be difficult for most learners to articulate, although they still feel it on an emotional level. For learners whose emotional control is not well developed because of an SpLD, this may be difficult to cope with and make the transition problematic.

Every institution has its own culture or ethos, and it is one of the challenges of transition to identify the behavioural and ideological norms so as to be able to incorporate oneself into them and become a fully accepted member of the organization. For learners who perceive the world in very different terms because of an SpLD, this represents another layer of complexity in the transition process, and one that may be a barrier to integration for some time.

For all learners there is likely to be some stress associated with the major transition points in education. Forming new relationships with previously unknown peers and different teachers, adjusting to a new physical environment, and taking on greater levels of responsibility and cognitive challenge are all factors that are cited as reasons why transition can be stressful (Maras & Aveling, 2006). For the reasons outlined in this section, however, these problems are often exacerbated for learners with an SpLD. It is therefore vital that everybody involved in the transition does all that they can to help the learners to prepare for the changes that are coming, to help them separate psychologically from their old identities and become physically and socially incorporated into the new environment. In the following sections, recommendations are made for the roles that students, parents and carers, the existing institutions and the receiving institutions can play in facilitating successful transitions for these vulnerable learners.

Strategies that students and their families can implement

Awareness is growing amongst educational professionals of the additional difficulties that can affect learners who have an SpLD at times of change, and many schools are putting

strategies in place to help to smooth transitions. However, students can also act to help themselves prepare for the changes that they are going to experience, and their parents, carers and families can also play a crucial role in developing skills and qualities that will help them in this.

In their study of young adults with an SpLD, Goldberg *et al.* (2003) identified six personal attributes that they claimed were more marked or more frequently present among those who had made successful transitions through the education system to adult life. These were: *self-awareness; pro-activity; flexible perseverance; pragmatic goal setting; appropriate use of support systems; and emotional coping strategies*. Although other factors that play a role in success could also be suggested, it seems that these six qualities certainly would be of some use in helping any person through transition points, and in assuring success in life generally. For individuals who face additional challenges due to an SpLD, fostering these attributes from a young age may therefore be a useful strategy to adopt.

Students who are *self-aware* understand what their strengths are and what they are likely to find more difficult. They are better able to see their disability as just one component of their identities, rather than defining themselves – or allowing themselves to be defined by others – through the label they have been given. Armed with this information they are more likely to make choices about their education at the stage of preparing for transition (regarding subjects to study, which school to attend, and possible career paths that would suit them) that ultimately lead to success. This depends upon having had access to appropriate information at the time their SpLD was identified, and competent guidance subsequently in adapting their study strategies to suit their learning needs.

Students can be helped to become more self-aware by the process of supportive carers finding out information and interpreting it at the level at which the learner is working. Explicitly praising learners when they have demonstrated skills or strategies that can usefully be transferred to other activities helps them to identify their strengths and abilities. Although young learners with an SpLD may feel that they are not well represented in most media, there is a growing body of children's literature that features characters that have an SpLD. Reading (or being read) stories about people – real or fictional – who experience the same difficulties as they do, and discussing the compensatory strategies that these characters make use of, may be a fruitful avenue to pursue in addressing issues of self-awareness and self-esteem. (A list of these commercially produced materials is available from the 'LD Online' website: <http://www.ldonline.org/kids/books/friends>). It may even be possible for parents to arrange for their children to meet adults who overcame similar difficulties, to act as role models or to offer advice or encouragement.

A high degree of self-awareness is linked to a strong sense of self-identity, and this is a key factor in determining the routes that learners with an SpLD take through the education system. If an individual is able to mentally project him or herself into a different situation, taking on a new role, in a new environment, the physical transition becomes much easier. Again, explicit discussion of how this might feel and what will be different, or the same, could help young people to make the necessary psychological adjustments for transitions. Parents or guardians could initiate these kinds of discussions

with young people who have an SpLD and liaison with teachers can help to reinforce the work done at home.

Being pro-active is, arguably, a positive life skill that everyone would benefit from developing. For learners whose self-esteem may be very low due to negative learning experiences, some explicit coaching may be required to build the self-confidence that allows a person to take the initiative without fear of their ideas being rejected. It is important, if full incorporation into the new learning context is to be achieved, that young people with an SpLD are listened to and that their suggestions are acknowledged and accepted, even if they cannot be immediately implemented. Students should be encouraged to approach members of staff to talk about their study styles and discuss how the curriculum could be made more accessible for them. At first, students may want a parent or family member to accompany them, but they should be encouraged to speak for themselves, as soon as they are able, rather than relying on others to act as advocates for them. As they progress through the education system, learners will be required to take on more responsibility for their own self-advocacy. At some point, the need for self-disclosure of their disability will be necessary, and the thought of this naturally makes students anxious, due to the fear of rejection or discrimination (Madriaga, 2007; Weedon & Riddell, 2007). It is not surprising that there is a widespread belief that the numbers of disabled students in higher education is likely to be underreported (Fuller *et al.*, 2004). Having a good model of how to disclose and inform people about their learning differences can help students to feel more confident when they come to do it for themselves.

Being tenacious, sticking at a task, is a valuable attribute that enables people to achieve their goals, but it is also important to recognize when a more *flexible* form of perseverance is appropriate. This means that a learner may experience such great difficulties with one course of action that different strategies need to be employed to pursue the same goal, or even that the goal needs to be modified. This is linked to self-awareness, in that it is important for learners to acknowledge where their limitations lie. In terms of transition, plans that are made during the preparation stage to ensure a smooth transfer may need to be modified later on, if they are discovered to be either too ambitious or hindering full incorporation in to the new institution. Ideally, learners would be able to monitor their own progress and discuss with support and academic staff any barriers that were preventing progress. Realistically, especially with younger learners, a parent or carer may take that role, while encouraging the child to develop the degree of pro-activity necessary to take it on in the future.

Pragmatic goal setting is also linked to self-awareness and flexible perseverance. It is helpful if short-term goals leading to the fulfilment of long-term ambitions are mapped out, but both the immediate actions to be taken and the ultimate end point need to be realistic in terms of achievability and time scale. Most young people would need some guidance in this at the point of preparing for transitions. A high degree of self-awareness is necessary to ensure that the learner is working towards something that is within their abilities, and some flexibility may be required along the route, to ensure that any insurmountable barriers can be sidestepped. The people who know the learner best,

perhaps family members, would be ideally placed to discuss this with the learner and to help him/her develop appropriate techniques for planning educational and career paths.

Goldberg *et al.* (2003) also identified that the *appropriate use of support systems* is important for the successful transition to adulthood. Support systems that are available to learners may include informal networks of family and friends, as well as more formal institutional support provided by specialist tutors or class tutors. It may also encompass the use of electronic support in the form of specialist software and electronic devices. It is important that learners find out what is available – or should be made available – and make good use of the full range of support, as appropriate for their needs. It should also be noted, however, that at times of transition these support networks are likely to change. Specialist personnel rarely transfer with students to new institutions, and supportive peers may find that they are moving in different social groups, or are unable to provide the same degree of assistance as they previously did. On the other hand, there may be new or better facilities available through funding at certain stages of education, which may help to make the learner more independent. At the preparation stage prior to transition, it is vital that the range of support they are entitled to in the new institution is investigated, either by the learner or by the learner and a parent or carer, and that contact is made with the specialist personnel who will take on the support role. A degree of pro-activity may be required in approaching prospective schools and colleges to arrange these initial discussions, and this may be an ideal opportunity for a parent or carer to encourage the young person to take the lead, while still providing a supportive presence. The learner may need time to accept that separation from the familiar support team is a part of growing up and moving forward. It may be easier to adjust to the idea of working with different people by seeing where they will be working, and through this being enabled to visualize themselves in the new situation.

Finally, the development of *emotional coping strategies* is important for young people with an SpLD, since their lives are likely to be punctuated by frustration and stress to a greater degree than their peers. Goldberg *et al.* (2003) reported that the young people in their study were more successful in dealing with stress if they were able to recognize the triggers that indicated the onset of anxiety-related symptoms and could take evasive action. This included putting the problematic task to one side till later, physically leaving the situation for a short break, meeting friends for a chat or – more formally – arranging counselling with a health professional. Times of transition are always likely to be stress trigger-points, and it is helpful for learners to recognize this and be prepared with strategies to help themselves overcome the negative effects of stress. Family members can assist in this by watching for symptoms and helping the young person to become more aware of his or her physical and emotional reactions to stress, as well as ways of alleviating it.

Of the six attributes discussed here, it is clear that the most important is self-awareness, which has an impact on the ability to develop all of the others. By helping young people with an SpLD to become more self-aware, parents, carers and family members can support them through transition from the preparation stage to full incorporation into the new institution.

Although students can implement some strategies themselves to ensure that transition runs smoothly, and with the support of their families and support network they can go some way towards preparing for it, the educational institutions at which they are studying and will go on to study must take some responsibility for enabling them to transfer with the minimum possible stress, so that they are able to concentrate on their studies as early as possible. Good communication between the institutions and the students is important for this, as well as working with the students and families to help them develop a degree of autonomy. One of the most important ways that schools and colleges can assist learners with an SpLD, though, is by providing good quality advice about the educational choices that will ultimately lead to successful career progression.

Strategies that the existing institution can implement

Developing personal qualities and academic skills

Schools can do a lot to reinforce the support work that is done at home in terms of developing the positive personal qualities that enable learners with SpLDs to succeed. The language classroom is the ideal context for exploring many of the issues discussed in the previous section, since in learning an additional language there is an element of renegotiating identity and self-image, according to new social orders that derive from the power that language competence bestows (Norton, 2000). For example, in the language learning context, lists of personal attributes and the language for expressing emotions could form part of a vocabulary activity, followed by discussion relating to their positive and negative aspects. Role-plays could be initiated in the target language to explore the issue of pro-activity, and what happens when characters in familiar situations do not take the initiative, or seek the help they need from others. As noted in Chapter 8, teachers should offer praise not just for accurate language use, but also for demonstration of sustained concentration and perseverance.

Good communication

In order to ensure a smooth transition it is vital that communication between the student and his/her family, the existing institution and the receiving institution begins in the preparation phase well before the actual transition point, and continues throughout the period of separation and has the possibility to continue into the incorporation stage, if need be. Early contact should be made by the support team (or the class tutor) in the existing institution with their counterparts in the receiving institution, to ensure that the necessary facilities and arrangements would be available for the transferring learners. This would enable staff to give comprehensive advice regarding the suitability of various

transition options, and for receiving institutions to make any arrangements not already in place. In some cases in the UK, Evangelou *et al.* (2008) report, the support staff, and indeed the subject teachers from the local secondary school, visit the primary schools that regularly send learners up to them in order to provide the opportunity for discussion with the staff, and for the learners to become familiar with them.

It is also helpful, where possible, if learners with an SpLD are able to have contact with their peers in the new school, either through informal networks or formally arranged events. Maras and Aveling (2006) note that a range of events and communication channels are increasingly being developed between institutions that have well-established transition links. These include activities such as ‘pen-pals’ writing letters or emails to each other, so that the new students have a contact already in the school to whom they can address questions. Language learners could use the opportunity to write in the target language, thus simultaneously developing their language skills within an authentic task. Social and cultural events and open days that prospective learners can attend with their families help them to become more familiar with the physical environment and the people at the new institution.

Materials that bridge the transition period may be available in some areas, so that learners use the same texts in the last year of their primary school and in the first year of their secondary education, thus ensuring a high degree of curriculum continuity. Evangelou *et al.* (2008) conclude that in the UK there are in fact excellent systems in place to make the transition from primary to secondary education easier for all learners, and particularly for disabled learners, for whom the preparation period may start as much as two years before the transition point. There is, however, still some work to be done around the other transition points, to help learners into and out of the compulsory school system.

Independence

Schools and colleges can also help by supporting their students in developing autonomy, working in conjunction with the families in the way described above to foster independence from the formal support systems provided by the institution. This, however, has to be handled sensitively and on the basis of the individual’s rate of personal and academic development. Some students reach a point when they begin to reject the support they are offered and want to work alone, to be more like the majority of their peers (Mellard & Woods, 2007). This often becomes clear at a transition point, when they feel that they are maturing, and perhaps perceive an opportunity to reinvent themselves to some extent, to present to the world the new persona brought into being by the transition. The thought of working with unknown or unfamiliar support staff may also make the reduction of support appealing.

Unfortunately, as Taylor *et al.* (2010) point out, there is always a need to be realistic in determining the degree of independence that a learner is ready for. Staff members have to balance the desire to allow learners to take important decisions about their own education with the educational imperative of providing a safety net should it be needed.

If students do not take up the support that is available, it is important that they are helped to understand the implications of their decisions, and wherever possible, to know that they could return to their previous patterns of support if they feel that they are not managing to incorporate into the new institution as easily as they had anticipated or hoped. This is where communication between the old and the new institutions can be important in assessing the likely consequences of reducing support, and deciding how best to manage the transition.

Career advice

When it comes to making decisions about their futures, there is some evidence that students who have an SpLD tend to underestimate their abilities and do not have the same level of self-belief as their peers, causing them to 'aim low'. Polychroni *et al.* (2006), found that learners with dyslexia tend to have lower academic self-esteem, and this may be one factor that prevents them from imagining themselves progressing into post-compulsory education. They would, therefore, need more encouragement and almost certainly more explicit coaching in developing skills such as writing convincing application forms and performing well in interviews.

Unfortunately, it seems that this support is not always forthcoming from the members of staff who are best placed to encourage them. Madriaga (2007) believes that there is still a degree of covert 'disablism' to be found in educational establishments, with the result that some tutors do not have high enough expectations of students with an SpLD to push them to achieve their full potential. Students and their parents pick up on these lower expectations and so the long-term planning for post-compulsory education is often not in place. This can result in a lack of psychological preparation and insufficient financial provision for further studying.

In the UK, the National Disability Team and Skill (2004, cited in Madriaga 2007) suggest that the lack of awareness of what is entailed and the development of the necessary academic and life skills for transition is the biggest problem that students with an SpLD face when it comes to progressing through the education system. It seems that despite the work that has been done in the UK at the transition point from primary to secondary education (at age eleven), there is still a lot that needs to improve if disabled students are to progress beyond the compulsory sector. In many other countries of the world where institutional mechanisms to ease transition from one educational institution to another are not in place, students with an SpLD might experience even more serious difficulties in adjusting to the new educational context than their peers in the UK.

What receiving institutions can do to facilitate transition

Phased in transition

In terms of the physical and environmental issues identified in the first section of this chapter, many secondary schools already take steps to alleviate the difficulties, either real or anticipated, that new students face on transition. Being able to visit the school, either on formal taster days or informally for social events before the new term starts, turns ‘the largely imagined world of the secondary school into the “known” experience of the child’ (Lucey & Reay, 2000: 202). Each visit improves the degree of familiarity with the environment and allows for better orientation as the new students are able to recognize more landmarks for navigation. Universities and colleges are also following suit with most offering open days when tours and information are available.

For learners with an SpLD, visits need to be longer and more frequent than for other students. If the time spent in the new environment is too brief, it may only add to the anxiety already experienced (Maras & Aveling, 2007). Learners with Asperger’s syndrome may find that more substantial experiential preparation compensates for their lack of ability to imagine the environment, and themselves in it (Elliot & Wilson, 2008). According to Evangelou *et al.* (2008) some schools in the UK have adopted a policy of having only the new intake in on the first day of the school year, allowing them an opportunity to feel that they ‘own’ the environment. At other times, students who particularly struggle with crowded situations may be encouraged to arrive early and leave later, and where possible to move around the school while other learners are still in class. Fellow students or members of the support staff may be recruited to act as guides between classes, at least until the learner feels confident enough to navigate the new environment alone. Some students with an SpLD experience extreme anxiety that can affect their concentration and behaviour. Transitions are likely to be fraught with potential anxiety-triggers, so for these learners, it is useful if they can quickly identify a space where they can go to calm down and gather their thoughts, before returning to the group. They may also welcome a space to organize their personal belongings, books and materials, especially if they have to carry more equipment than had previously been the case.

Reassessment of support requirements

As the academic challenges increase, it may be that the support offered to students who have an SpLD needs to be reassessed. For this to be done thoroughly, excellent communication between the existing institution and the receiving institution is required, as well as input from the student (and his or her parents or guardians, where appropriate). Information from the receiving institution’s academic staff is likely to be extremely useful in determining what arrangements will be needed for different classes,

and the advice of independent assessors who specialize in assistive technology should also be sought, if there is a budget for equipment. The crucial factor is timing; implementing some changes in classroom management that can assist learners with an SpLD takes no time and costs nothing, but if equipment is to be ordered and set up, and the student is to have time to learn how to use it, or if systemic or structural changes are to be made to the timetable or daily routine, more time will be needed to ensure that everyone concerned has understood what the changes entail and why they are necessary. For this reason, the evaluation really needs to be done well before the start of a new academic year. Students who do not quickly incorporate into the new institution may find that they spend the rest of the year running to catch up, experiencing added stress and possibly failure.

Regular reviews of the support package are needed to ensure that physical, academic and social incorporation is achieved. For some learners, one-to-one professional or peer support may be necessary or helpful for an extended period of time, both in classes and in private study time. In some institutions, a named member of staff may be responsible for a particular learner, or there may be a team who share the role (Maras & Aveling, 2006). These buddy or mentoring initiatives seem to work best when they are seen as part of the wider social bonding process. Ideally, all students need the opportunity to develop a new group identity as soon as possible, including and accepting all members of their group. Meeting new classmates, teachers and support staff as early as possible in the preparation stage of transition gives students with an SpLD the chance to begin building relationships that will support them in the separation stage that many find particularly difficult. One major barrier to incorporation that Evangelou *et al.* (2008) identified is the bullying of vulnerable students by their peers. Learners who have any form of disability, including a hidden disability like an SpLD, are especially at risk of this, and staff members need to be vigilant in detecting signs of harassment. Building strong social networks reduces this risk, so any group building activities that the receiving institution can initiate are likely to be beneficial, as was suggested in Chapter 6.

Information

One measure that receiving institutions can implement quickly and cheaply is sharing information amongst the members of staff who will be working with any new learners with an SpLD. Under British disability legislation, once one member of staff knows about a student's disability, the whole institution is deemed to know, so it is important that good communication systems exist to cascade the details of requested curricula adjustments to every member of staff who comes into contact with that learner. This should include a summary of what strengths s/he might bring to the group, as well as what the student finds difficult (see Chapter 5 for an example pro forma). As soon as they are able to, students should be allowed to have some input into the information that is distributed about them, and it should be borne in mind that under the British 'Freedom of Information Act' (and the equivalent in many other countries), students have the right to see any written documents that relate to them. The golden rule, then, should be that nothing is written about a learner that could not comfortably be shared with them.

Fuller *et al.*'s (2004) study of disabled students' experiences (including students with an SpLD) in one university highlights the degree of diversity in terms of how well these systems work. Even within departments there will always be some tutors who implement the requested accommodations better than others; in the absence of mandatory professional development or training, this seems to come down to the personal experience, knowledge base and attitude of each tutor.

As regards information for new students about the institution that they are joining, there is a tendency for learners with an SpLD to become overwhelmed with advice, notices, guidelines and regulations in the first few weeks of a new academic year. The result is that almost none of it is absorbed, and so these students often find that they are in breach of the rules, or do not have the information they need to function fully in the new institution. Ideally, the most important information would be given to these learners well ahead of the start of the year, giving them time to assimilate it, and then more can be offered as it is required, on a 'drip-feed' basis.

Most of this chapter has assumed that students who have an SpLD already know about it, and are willing to work with it. However, there are two groups of students to whom this does not apply: those who do not wish to disclose their disability on transition to a new institution, and an increasing number of people whose learning differences have not been formally identified at early stages of education because of their ability to compensate for the difficulties they experience. As these students progress through the system, they may become increasingly aware that their cognitive functioning is different from their peers, and alert tutors will sometimes notice this and advise them to seek formal assessment. For this group, and for those who have chosen not to disclose their identified SpLD, the systems outlined above will not be helpful in the transition phase, but it is important that other avenues are opened to them. Information about support services should be widely publicized in a variety of formats, including electronic communication media and all outreach and induction materials and events. A positive portrayal is essential, not using a narrow representation of the term 'disability' but explaining all the difficulties and differences that students might experience and which could be catered for.

None of these initiatives should be considered more important than another, since the most significant factor in easing transition appears to be the implementation of a combination of interventions, so that all learners find suitable ways of becoming familiar with the new institution. Parents and guardians should also be specifically targeted through information booklets and structured visits, since their input into the transition period is crucial, as discussed above. In an ideal world, every learner would have the opportunity to discuss their transition needs well ahead of the event, and an individual induction plan would be drawn up and implemented according to their wishes and requirements. Most institutions are still a long way off this, but there are some encouraging signs that the challenges of transition are being taken seriously, at least at some points in the education system, in some countries. One of the aims of education, though, is to empower young people to live independently, which for most will ultimately involve finding employment. The last section of this chapter examines the transition out of education into the adult world of work.

Moving on to employment

Progress made in the education system in terms of inclusion and acceptance of people with an SpLD does not yet seem to be carried through into the world of work, despite many countries enacting legislation to protect disabled jobseekers and employees. Reid (1998) points out that even applying for a job is fraught with difficulties for dyslexic applicants; filling out the application forms may be a barrier that can be overcome with help from friends or mentors, but in a pressurized interview situation it may be hard for a person with an SpLD to process the questions quickly, to identify the key points and formulate coherent answers without forgetting what the main ideas were. Gerber *et al.* (2004) found that people with an SpLD were often underemployed in relation to their abilities, and tended to find work through informal means, such as working with family or friends, or getting permanent work on the strength of their performance in casual labour situations. The challenges for candidates with an SpLD operating in a second language, perhaps in a country where they do not have extensive family or social networks, are greatly magnified.

The same challenges that arose at transition points throughout the education system with regard to changes in the physical environment, social integration and psychological adjustments are likely to confront new employees as well. However, apart from the possibility of some support with the preparation stage from the existing educational institution, there is little chance of there being any specialist support team in place or accommodations available to smooth the transition process, especially if the new employer is unaware of the disability, as is often the case. That is why it is essential that the language learner is well equipped with the socio-linguistic skills to elicit help and share the relevant information with their work-colleagues, should they decide to do so.

The main issues surrounding disclosure have been covered in some detail in Chapter 5, but in relating this to a workplace setting, the first decision to be made is whether to disclose at all. Several studies into disability in the workplace found that most people did not disclose their disability, and did not intend to; this reticence to share information seemed to be due to a number of reasons. The main factor that prevented employees from disclosing an SpLD was the fear that they would be rejected by their workmates (Roberts & Macan, 2006) and even dismissed by their employers if they were to disclose their SpLD (Madriaga, 2007). In an increasingly competitive employment market, it seems that this fear may become stronger, as employers have larger pools of candidates to draw from. Another important factor, however, was a lack of knowledge about their own disabilities, how they might impact on their performance and what adjustments or equipment might be available to enable them to do their jobs well (Gerber *et al.*, 2004). Linked to this was a low degree of self-advocacy; people who are not fully aware of how the law protects them and of their rights in the workplace are unlikely to draw attention to the problems that they experience. People working in a country that is not their own may well not be aware of how the legislation may protect them. Some people may have felt that there was no need to disclose as long as they could 'pass' and continue doing their job.

In all, it seems that the benefits of disclosure in the workplace are not as clearly evident as in education, but nevertheless some people do want to share information about their SpLD with their employers and workmates. This may be with the intention of gaining accommodations that they feel will improve their performance, such as specialist equipment, more flexibility in deadlines, or clearer direction from a line manager. There may also be a feeling that it is better to be open from the beginning, because if an SpLD is concealed, and then later becomes apparent because of its impact upon performance, it may seem that deception was intended. Roberts and Macan (2006) also make the point that not disclosing a disability may have the effect of reinforcing its negative aspects in the view of the disabled person, while an individual who discloses a disability is able to choose the time and manner of disclosure, and can thus present it in as positive a light as possible; by taking control of the situation he or she enhances his or her self-esteem.

How and when to disclose are equally important issues to consider; there are various arguments as to whether a candidate for a job should share the information at the interview, or only once the position has been secured and he or she has settled into the role. As part of the development of self-awareness and pro-activity mentioned above, it is to be hoped that young adults who know that they have an SpLD and have had support throughout their school careers to enable them to succeed in education will have developed enough self-confidence to be able to present their SpLD as a positive feature. By introducing their talents and gifts first, they demonstrate that they would be an asset to any company, before outlining any adjustments that might need to be made in terms of communication systems or equipment. Language teachers can help by making sure that their learners have a range of linguistic strategies at their disposal for explaining their needs, before they enter the workplace environment. Employers can also assist in the process by providing opportunities for confidential disclosure at different stages of the recruitment and induction process, and by honouring their legal obligations to provide accommodations to disabled staff members. In this way, they will get the best out of the new employee, facilitate the incorporation stage of transition and ultimately reap the benefits of a diverse workforce.

Conclusion

This book has considered a wide range of topics relating to teaching languages to students who have an SpLD, some of which are rarely covered elsewhere. Although these topics are generally omitted from training programmes because of time constraints, we felt it important to include them here for two reasons. First of all, in some contexts (particularly ESOL / ESL situations), the language teacher may well be the only or main point of contact with the new language community, and as such may well take on the role of advocate in a range of circumstances, such as in arranging assessment, sharing information and facilitating progression after the language course has finished. Secondly, learning a new language often presents challenges not met before and thus can highlight any underlying learning differences that had previously been hidden; language teachers

may therefore find themselves in the position of being the first to notice that an individual has an SpLD, and they need to know not only how it can affect the student's performance in their class, but also what steps can be taken to enable the learner to succeed more generally.

All of the topics covered in the book have been addressed by drawing on the authors' own experience, as well as referring to the latest research and theories of best practice. This field of education is beset with disagreement and perceived difficulty, but it is hoped that this book has taken a consistently positive approach to the issues discussed and has shown that, although the challenges facing language learners with an SpLD are considerable, there is still reason to be optimistic. With the right support and guidance from well-informed and sympathetic teachers, students with an SpLD *can* be successful language learners.

Summary of key points

- Transition points in life are challenging for everybody, but individuals with an SpLD are likely to experience greater difficulties at times of transition than their peers who have no apparent SpLD.
- Transition can be considered to be made up of three stages. For a transition to be successful the individual must first go through a stage of preparation for the new situation, then a process of separation from the old, and finally complete incorporation into the new institution.
- These stages of transition involve several different elements, the most important of which are physical and environmental changes, cognitive and academic progression and psychological and social aspects of transition.
- Physical and environmental factors that can cause stress at times of transition include having to navigate an unfamiliar and often larger school building or campus, having to undertake longer or more complicated daily journeys and having to work within new routines or timetables.
- Academic demands that arise at transition points are larger workloads, more complex cognitive challenges and a greater expectation of independent learning.
- The social and psychological aspects of transition include getting to know (and form relationships with) a wider range of new people, coming to terms with the new social identity associated with the new role and understanding the culture and ethos of the new organization.
- Students can minimize the negative aspects of transition by developing personal qualities and skills that will be beneficial not only in education but also through their adult lives. These include having a high degree of self-awareness, the ability to make pragmatic decisions regarding their careers and knowing when to seek help.
- Educational institutions can assist in the transition process by maintaining good communication systems both within organizations and between existing and receiving organizations. They can provide opportunities for students to become familiar with the physical environment and personnel in the receiving institution and implement appropriate adjustments in curriculum delivery and management.
- Employers can also assist in the process of progression into employment by providing opportunities for disclosure of an SpLD, acknowledging their duties to comply with disability legislation and valuing the skills and personal qualities that individuals with an SpLD can bring to a workplace.

Activities

- 1a. How many transitions have you been through already in your life?
How many more do you expect to go through?
- 1b. When you compare your answers to a colleague's, are you counting the same kinds of events?
- 2a. Choose one of your transitions that went well and make a list of the factors that enabled you to manage the transition smoothly.
- 2b. Choose one that did not go well, that you found difficult to manage – what could have helped you through that transition more easily?
3. Talk to any of your language learners who have an SpLD. What were their worries before they began this course? Did any of these turn out to be real problems? Were there any barriers to smooth transition that they had not expected?
4. What practical strategies could you suggest to a language learner with an SpLD who is moving on to a different school or college from your class?

Further reading

Lam, M. S. & Pollard, A. (2006). A conceptual framework for understanding children as agents in the transition from home to kindergarten. *Early Years*, 26, 123–141.

Madriaga, M. (2007). Enduring disablism: students with dyslexia and their pathways into UK higher education and beyond. *Disability and Society*, 22, 399–412.

Appendix 1

Example Format for a Screening Interview

Confidential information

Student Name: Date of interview:

Student number: Tutor(s)

Nationality: First language:

Address:

.....

Date of birth: Telephone:

What courses/subjects are you studying?

How do you feel about your course/s?

What are your plans for the future?

What do you remember about your primary school?

(e.g. How many did you go to? Where? Did you ever miss any school? Did you enjoy it?

What were you good at? Did you make friends? Did you have any support / extra lessons?)

Did you learn to speak / read / write at the same time as your classmates?

Did you (do you) have any problems with any of these (get examples if possible):

eyes / ears

tying shoelaces

handwriting

sport

left / right

telling the time

getting to the right place on time

remembering instructions / messages

learning lists

taking tests

making notes in class

How did you get on in secondary school? (e.g. *What kind of school is/ was it? Was that your choice? Did you have any support / extra lessons?*)

Did you go on to FE? HE? (If so, what did you study? Why did you choose that? Did you have any support / extra lessons?)

Have you ever taken any exams before? (Which? When? What were the results? How did you feel about them?)

Did you have any special exam arrangements? No / Yes: what

Have you ever had an assessment like this before? No / Yes: When was it? _____

(Has anyone asked you these questions before? / Have you ever had a meeting with a psychologist?)

Is there a report available for us to see / copy? Yes/No

Here at this school / college, have you had / are you having support?
(Who with, how often, for what? Someone to read / write for you?)

How do you feel about using ICT? Do you normally use any extra equipment to help you?
(e.g. Dictaphones, word processors)

What kind of difficulties do you experience in learning languages?

Listening: Background noise? Lose the thread of longer utterances?

Reading: Have to re-read? Slow? Words move around?

Writing: Spelling? Organizing ideas? Getting started? Remembering words? Hand ache?

Speaking: Pronunciation of long words? Mixing up syllables?

Vocabulary: Remembering meanings / sounds / spellings / forms?

Grammar: Remembering rules / using rules?

Do you think you have a good memory? (Do you remember people's names/ friends' birthdays/ where and when to meet people/ where you put your keys? Do you use a diary or reminder system?)

Do you think you are well organized? (Do you keep your books and notes tidy? Do you always know where to find things? Do you always get everything done that you have to do?)

Any other considerations? (e.g. Family members? trauma? Physical impairments?)

Student presents as (note personal aspects such as level of self-confidence and self-awareness / ability to remember specific incidents / ability to express ideas):

Appendix 2

Example of a classroom activity to raise awareness of an SpLD

Procedure:

- 1) Show the class a short text in their own language, or the language most commonly used by the group (two to three sentences or about twenty to thirty words should be enough). Example text 1 below is in English, but any local language can be used. Ask them to copy it down exactly as it is written, as quickly as they can. Time them to see what the average time taken by the group is. Elicit feedback: how did they approach the task? How did it make them feel?

Example Text 1

This is a very easy exercise. Just copy these sentences down as quickly as you can, writing with the hand you normally use. How long does it take you?

- 2) Next, show them a text that is harder to read. Example text 2 tries to mimic the visual disturbances that some dyslexic people experience when they look at written text. Ask the participants to copy it down using their weaker hand, and again, time them. Elicit feedback: how did they feel doing this task? Did they focus on the message? Students who have an SpLD might often experience difficulty with the fine motor control required to complete this task, and so spend a lot more processing time on the mechanical aspects of the task, rather than absorbing the information.

Example Text 2

Now copy this text as quickly as you can, writing with your weaker hand. Why is it so much harder?

- 3) Finally, show an equivalent text in an unfamiliar language (example text 3 is Swedish, but examples of other languages can be obtained easily from the internet). Again, ask them to copy the text and time them – notice how much longer it takes them, on average (the range of finishing times may be greater than in the first round). Elicit feedback: did they employ any different strategies for copying this time? How much could they remember at a time? Explain that for many learners who have an SpLD, their working memory span is much shorter than average, and this is how it feels for them when asked to copy in their own first language, let alone a foreign language.

Example Text 3

Skriv nu på ett främmande språk, som svenska, och tänk hur svårt det är att måste titta på varje ord. Visst tar det lite längre!

Appendix 3

Two sample vocabulary lessons for children at beginner level

Lesson 1 Sound-meaning associations

Vocabulary to be taught: *bed, table, chair, door, window* (just five items at a time, avoid teaching *desk* together with *table* because students might confuse these two, especially because a number of languages use the same word for these two items)

Preparation: five big pictures of these words that you can put on the wall, five smaller pictures that you can hold and show to the students, five smaller pictures for the charade game

Description	Aim	Sensory channels
1. Start with saying the first word and showing the picture at the same time (e.g. bed). Ask students to repeat the word after you. Do choral repetition a few times, then check if individual students can pronounce the word correctly. Put the bigger picture of the word on the wall.	Present the phonological form of words	Auditive and visual
2. Repeat the same procedure with the second word (e.g. table). Place the picture of the second word on the wall in a different place in the classroom. Practise the two words by first asking students to point to the right picture on the wall, then by showing them the different pictures and asking them to say what they are.	Present and cumulatively practise the phonological form of words	Auditive and visual
3. Follow the same presentation and practice method by adding one item at a time, and practice until students seem to have memorized the five words.	Present and cumulatively practise the phonological form of words	Auditive and visual
4. Picture dictation: Say the words one by one and ask students to draw the words. Ask students to work in pairs and take turns in dictating the pictures to each other.	Practise sound meaning associations	Auditive, visual, kinaesthetic

Description	Aim	Sensory channels
5. Word race: Arrange the classroom so that students can easily run to the pictures on the wall. Put students in groups of five. Two groups compete at a time. Tell students to line up. The first students in the line should run to the picture the name of which you say. The group whose runner gets to the picture first receives a point. The winner is the group with the highest number of points. (This game can be left out if not appropriate for the group. If you have a small classroom, you can place the pictures on the blackboard, and students can circle the right picture). Ask one or two volunteers to be the master of the game and say the words to the other groups.	Practise sound meaning associations	Auditive, visual, kinaesthetic
6. Charade: Select five students from the group, give each one a small picture of the words you taught. Tell the students one by one to mime the words, and the class will have to guess what word they are miming. Repeat this process until everybody had a chance to mime at least one word.	Practise sound meaning associations	Auditive, visual, kinaesthetic
7. At the end of the lesson, revise the words once more, by showing the pictures and asking students to say their names. You can also ask the students to revise the words in pairs using the drawings they made in the picture dictation game. One student in the pair should point to one of the pictures and the other should say its name, and they take turns in pointing at the pictures and saying the words.	Revision	Auditive, visual, kinaesthetic

Lesson 2. Learning the written form of the words

Vocabulary to be taught: the spelling of *bed, table, chair, door, window*

Preparation: five big sheets with the written form of these words that you can put on the wall, five smaller sheets with the written form of the words that you can hold and show to the students, five smaller sheets with the picture of the objects, five smaller sheets with the written form and the picture, five cards with the written form of the word for the charade game, letter cards for each student, five small pictures of the objects in envelopes, one for each pair of students

Description	Aim	Sensory channels
1. Start by revising the words you taught in the previous lesson by first showing the pictures and asking students to say the names of them.	Revision	Auditive and visual
2. Show the picture of the first vocabulary item together with the spelling of the word. Use colour coding for consonants and vowels and highlight potentially difficult sounds. e.g. Door Say the word and ask students to repeat it after you. Segment the word into sounds, and ask students to repeat the sounds of the word after you. E.g. [d] [o:] ([r]). If necessary explain sound letter correspondences such as the pronunciation of the letters “oo”. Put the written form of the word on the wall.	Present the written form words, Provide explicit explanation on sound-letter correspondences	Auditive and visual
3. Ask the students to arrange their letter cards to form the word and then ask them to trace the word with their fingers either in the air or on their desks.	Practise the written form of words	Kinaesthetic, visual
4. Ask the students to prepare a drawing in which the difficulty in spelling the word is highlighted (see Figure 7.2). Repeat the same procedure with two additional words.	Practise the written form of words	Visual, kinaesthetic
5. Once you have taught the written form of three words, show a picture of one of the objects and ask students to point to the written form of the word on the wall. Then show the pictures again and tell them to arrange the letter cards to form the word for the picture.	Practise the written form of words	Visual, kinaesthetic
6. Repeat Steps 2-4 with the remaining two words and then revise all the words as in Step 5.	Cumulatively present and practise the written form of words	Auditive, visual, kinaesthetic
7. Word race: Play the same game as in Lesson 1, but instead of saying the word, now show a picture of the object, and students have to run to the written form of the word placed on the wall.	Practise written form and meaning associations	Visual, kinaesthetic
8. Charade: This is the same game as in the previous lesson, but instead of getting the picture of the object, students receive a card with the written form of the word.	Practise written form and meaning association	Visual, kinaesthetic

Description	Aim	Sensory channels
9. Pair dictation: Distribute one envelope containing five small pictures to each pair of students. One of the students takes the pictures out of the envelope one by one, shows the picture to the other student, who has to form the word using the letter cards. Students change roles so that both of them have the opportunity to write down the words using the letter cards.	Practise written form and meaning association	Visual, auditory, kinaesthetic
10. Revision and making a record of words: Ask students to arrange their letter cards to form all the five words. Check that they have arranged the words correctly, by showing them the written form of the word and asking them first to detect any mistakes, and then by going round and making sure that all the students have got the correct arrangement. Ask students first to trace the words either in the air or on their desk, and then to copy the words in their notebooks and prepare a drawing next to the word. Encourage them to use colour-coding and adding spelling clues in the drawings (for an example see Figure 7.2). Go round and check if every student has spelt the words correctly.	Revision	Auditive, visual, kinaesthetic

Appendix 4

Sample grammar lesson at beginner level

Grammatical structure: Forming yes-no questions with the verb 'be'

Preparation: Six pictures of different people (old, young, sad, happy, tall, short etc.), six colour coded sentences which describe these people cut up into phrases, sentence constituents for the matching game in envelopes, sentence constituents for individual practise in envelopes, photocopied sheets of the pictures to be distributed to the students for the 'guess who' game, letter frames for each of the students

Lesson

Description	Aim	Sensory channels
1. Show learners the pictures of people one by one and elicit declarative sentences (e.g. He is happy. They are old etc.). Put the colour-coded sentences describing the people on the board.	Revise declarative sentence, provide task input	Visual, auditive
2. Ask a question about one of the people in the pictures (e.g. Is he sad?), emphasizing the intonation so that students would recognize that this is a question. Elicit a yes or no response from the students. Repeat this with all the pictures. Ask students to tell you how to rearrange the colour-coded sentences on the board to form questions.	Demonstrate question forms and elicit rule for question formation	Visual, auditive
3. Matching game: Divide students into groups of three. Distribute the envelopes each of which contains a different sentence cut up into three constituents (e.g. [he] [is] [old]). Ask students to line up in a way that they can make up a declarative sentence. Each group says their own sentence. Next, tell them to form a question by rearranging themselves and ask them again to tell their sentence to the whole class.	Practise forming declarative sentences and asking yes-no questions	Visual, auditive, kinaesthetic

Description	Aim	Sensory channels
4. Individual practise: Give each of the students an envelope containing three or four sentences which have been cut up into the constituent parts (e.g. each envelope can contain the following: HE, SHE, THEY, IS, IS, ARE, OLD, YOUNG, SAD) and ask them to form questions by arranging the cards in the appropriate order.	Practise question formation	Visual, auditory, kinaesthetic
5. Guess who game: Distribute the photocopied sheets that contain at least six pictures of people. Divide students into pairs. One student should select one picture without telling his/her partner their choice. The other student has to find out who his/her partner thought about by asking yes/no questions. Students change roles and the game is repeated.	Practise question formation and answering simple questions	Visual, auditory
6. Letter writing: Distribute the letter frames (see below) and tell students to write a letter to one of their friends in which they ask them about a new car/toy/game and so on, depending on the age group or interest of the students. Explain the words students might not know in the letter frame and show them how they can fill in the missing parts of the letter with an example (on the blackboard, an overhead projector, computer screen). Leave the example visible for the students while they are writing. Ask them to write the letter. Once they are ready, assign a partner to the students and tell them to exchange the letters and read them. Hand out the answer-frame and demonstrate how the answer letter can be written. Ask students to write an answer to the letter they received.	Practise question formation, answering questions and writing simple letters	Visual, auditory,

Letter frame 1.

Dear,

Is it true you have a new _____ ? Please tell me about it.

- Is it _____ ?
- Is _____ ?
- _____ ?
- _____ ?

Write to me soon.

Best wishes,

Letter frame 2.

Dear _____ ,
Thank you for your letter. Yes, I have a new _____ .
My new _____ is _____ . It is _____ .
I hope I can show it to you soon.
Best wishes,
_____.

Appendix 5

Sample Reading Lesson

Aim: to understand a narrative

Preparation: Photocopies of the word matching task and the reading text

Lesson

1. *Pre-reading activity.* Ask learners to think about three things about themselves that are hard to believe. Alternatively, you can ask them to think about three pieces of gossip about popstars or three statements in relation to sciences. Two of these statements should be true and one false. Students take turns and say their statements and the others guess which one is not true. Tell the learners that you will read a tale, in which someone will have to say things that are hard to believe in order to be able to marry a princess.
2. *Pre-teaching of vocabulary.* Matching exercise. Learners work on the task on their own first, and then check the solution. Discuss the pronunciation and spelling of the words. Ask learners to make a record of these words for themselves using colour-coding and visual clues to help them remember the words.

Match the words and expressions with their definitions.

- | | |
|------------------------------|--|
| A) indeed | 1) a way of talking to a king or queen |
| B) blind | 2) to provide food for somebody |
| C) gain the hand of somebody | 3) not able to see |
| D) engage somebody | 4) marry somebody |
| E) to keep somebody | 5) really |
| F) your Majesty | 6) ask somebody to work for you |

3. *1st reading.* Ask learners to try to find the answers to these questions (if students have difficulties in writing, do not ask them to write the answers down):

- a) Who are the people in the story?
- b) How can the young man marry the princess?
- c) What is it that the king cannot believe, and why not?

After reading, discuss these questions with the whole class.

4. *2nd Reading.* Ask learners to underline the sentences in the text that contain an impossible statement and tell them to discuss in pairs why the statement cannot be true.
5. *After reading.* Role-play task (with a more advanced class, who are familiar with this type of activity). Put students in groups of three. Assign each student a role (narrator, king, John). Tell students to read their own part silently a few times. Then ask them to try to act out the story. First allow them to look at the text, and on the second occasion encourage them to rely on their memory, but do not require that they use the exact words of the story.

Changing the story: Put students in small groups or pairs and ask them to replace the story of the pig with a story of their own choice. Set a reward for the most unbelievable story (e.g. stickers). Students discuss their ideas and then present their story to the class. The class can vote which one is the most unbelievable story and which group deserves the reward. If the students have adequate writing skills, you can ask them to write down their story as homework, otherwise do not use writing for this activity.

IT IS NOT TRUE

Once upon a time there was a Hungarian princess who was very beautiful. One day she announced that she would only marry the man who could tell her father, the king, a story which he could not believe. Many princes and knights had tried to gain the hand of the princess with their stories, but they had all failed. One day a poor, young man, called John, heard of this and went up to the king's palace.



The king knew very well what the young man wanted and invited him to tell his story. The young man said:

'My father has a pig. A wonderful pig, your Majesty; he has kept my father, my mother, seven sisters, and myself, for the last twenty years.'

'Indeed!' said the king.

'He gives us as much milk every morning as any cow.'

'Indeed!' said the king.



'Yes, your Majesty, and lays a lot of eggs for our breakfast.'

'Indeed!' said the king.

'And every day my mother cuts a nice bit of bacon out of his side, and every night it grows together again.'



'But lately he won't allow my mother to have any more bacon from his side. He is also growing rather blind, and can't see where he is going.'

'You should have someone to lead him then,' said the king.

'Yes, your Majesty, that is why my father has just engaged your father to look after him.'

'That's not true,' shouted the king, then suddenly he remembered his daughter's promise. So he had to allow the princess to marry John.

Appendix 6

Sample Speaking Lesson Frame for Requests

Aim: to teach and practise making and responding to requests

Preparation: Recording of native speakers making and responding to requests, task sheets

Lesson

1. *Listening activity.* Students listen to a short recording of native speakers making and responding to requests. On the first listening, their task is to find out what the request is and whether the request can be fulfilled. Elicit the answers and check if the students understood the main idea of the dialogue. With the students, fill in the first two columns of the table below on the whiteboard. On the second listening, students pay attention to the expressions used for making and responding to the requests. Fill in the second two columns of the table together. Explain how the various expressions are used.

What is requested?	Does the person get what is requested?	What expressions are used for making the request?	What expressions are used for responding to the request?
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2. *Demonstration.* Tell the students that you were in a hurry before you left for this class, and you need to borrow a few things from them. Choose a student who would feel sufficiently confident to act out a dialogue in front of the class. Ask the student if s/he could lend you a pen, a rubber and an object you think s/he may not have (e.g. a yellow pencil). Act out the dialogue.
3. *Practice task.* Put students in pairs and explain that they will act out a role-play in which they have to make and respond to requests using the expressions they have just learned. Hand out Task Sheet 1. If students are at a lower level, or you assume that they would find it difficult to understand the task instructions or plan what they will say, you might pair up two student As and two student Bs. They can then discuss what the task is and what they will say in pairs before they perform the task. Get students to perform the task. Reverse roles and do Task 2. As students are doing the tasks, walk around, help if students need it and observe what linguistic forms students use correctly and what some of the common problems are. Finally, ask for volunteers or choose a pair to perform the tasks in front of the class.

Task 1.

Student A.

You would like to make dinner for your family, but you have just realized that some of the ingredients for the dish you want to make are missing. You ask your neighbour if he/she could help you out. You need the following things:

2 eggs

3 tomatoes

1 carrot

Student B

Your neighbour has just come to you to ask for a few things s/he needs for making dinner. You are happy to help, but you only have these things in your fridge.

3 eggs

a bottle of orange juice

a bottle of milk

2 tomatoes

Task 2.

Student A

You were ill last week and you missed a lot of classes. You ask your classmate if s/he could help you with the following:

- tell you what the maths homework was
- explain the things they learnt in the science lesson
- give you a list of the new words in French

Student B

Your classmate was ill last week and missed a lot of classes. S/he is asking you to help him/her, but

- you are not very good at science
- you forgot to write down the words in the French class.

4. *Feedback and revision.* Give students feedback on how well they managed to acquire linguistic forms of making and responding to requests. Highlight expressions they used well and discuss some typical mistakes.

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Index

Abbreviations used are SpLD (Specific Learning Difference), ADHD (Attention Deficit Hyperactivity Disorder), L2 (second language), ESL (English as a Second Language), SLI (Specific Language Impairment)

- accommodations and modifications *see also*
 - support
 - applying for 154–6, 180–1
 - in assessments 149–56
 - in the classroom 103–23
 - in high-stakes language proficiency tests 154–6
- Adams, C. 42
- adaptive control of thought (ACT) theory 26–7
- Addy, L.M. 44
- ADHD (Attention Deficit Hyperactivity Disorder)
 - overview 48–52
 - and assessment 149, 151
 - cognitive abilities needed for L2 acquisition 64
 - and dyscalculia 51
 - and dyspraxia 45
 - ‘fiddle pegs’ 108
 - furniture arrangements 107
 - hyperactivity 50, 51
 - immediate feedback 163
 - medication 52
 - and research into L2 learning 66
 - and self-esteem 117
 - sensitivity to sensory stimulation 106
 - and social relationships 54, 172
 - and the use of prompts 156
- adjustments *see* accommodations and modifications; support
- Adlard, A. 31
- adult learners 33, 48, 51, 62, 66, 68–9, 121
- affective factors in language learning 64–5, 127, 176
- Aitchison, J. 132
- Alderson, J.C. 73, 74, 146
- Allan, J. 2
- alternative settings for assessments 152, 156
- analytical learners (‘inch worm’ learners) 112, 119
- Anastopoulos, A.D. 52
- Anderson, J.R. 26–7
- anxiety
 - language learning 64–5, 140, 158
 - and the multi-sensory structured learning approach 127
 - pros and cons of disclosure 100
 - strategies for dealing with 176
 - test anxiety 160–1
 - and transitions 180
- aptitude, language 61–4, 130
- Asperger, H. 52
- Asperger’s syndrome
 - overview 52–5
 - ‘aspie’ label 14
 - furniture arrangements 107
 - psychological transitions 172–3
 - roles in group tasks 114
 - social conventions 78, 140
 - social relationships 172
 - speech production 78
 - transition to a new institution 180
 - understanding classroom instructions 115
- assessment and testing (of second language)
 - accommodations and modifications 149–56
 - ‘assessment’ vs ‘testing’ 146
 - bias, in assessment 148–9
 - choice of assessment tasks 112–13, 159–61
 - classroom-based assessment 156–63
 - continuous assessment 158
 - dynamic assessment 128–9, 158
 - key constructs 146–9
 - response formats 148, 152, 155
 - self-assessments 162
 - targets of assessment for SpLD learners 157–8
 - ‘tests’, defined 146–7
- assessment and testing (of SpLD)
 - assessment of SpLDs in an L2 context 93–5
 - assessment tools 90–2
 - formal assessment procedures 89–93
 - identification of problems 85–93
- attention
 - attentional resources and L2 oral production 77
 - importance in L2 learning generally 64
 - inattention and ADHD 49–51
 - problems with sustained attention in dyslexia 32

- short attention span in dyspraxia 45
- and writing processes 75
- attributes, learners'
 - attributes needed for success 174–6
- Attwood, T. 53, 54, 55
- audio recorders 109
- Auditory Magnocellular Hypothesis 37
- auditory processing problems
 - teacher communication 114–15
 - teaching listening 138
 - varying degrees in SpLD learners 66, 78
- Augur, J. 33
- autism 52–3 *see also* Asperger's syndrome
- automaticity
 - development of 26–30
 - in mathematics 48
 - and metacognitive thinking skills 121–2
 - problems with automatization as core of dyslexia 35
 - providing opportunities for 'over learning' 111–12, 127
 - speech comprehension/ production 77–8
 - using language in communicative situations 72
- autonomy, learner
 - and dynamic assessment 128–9
 - enhanced by technology-mediated language learning 108
 - institutions helping learners develop 178–9
 - and portfolios 161–2
- Aveling, E. 173, 178, 180, 181

- Bachman, L. 60, 61
- background colours of materials 110
- Baddeley, A.D. 25, 26
- Baird, G. 53
- Bajkó, A. 10
- Bandura, A. 64
- Barkley, R.A. 48, 49–50, 51, 52
- Baron-Cohen, S. 53, 54, 55
- Barton, L. 8, 11, 14
- basic learning mechanisms 24–8
- Becker, H. 13
- behavioural definitions of dyslexia 23
- behavioural problems *see* ADHD (Attention Deficit Hyperactivity Disorder); classroom management
- Beresford, D. 14, 15
- Berlin, R. 6, 20

- Berninger, V.W. 74
- bias, in assessment 148–9
- Biederman, J. 51
- Bishop, D.V.M. 42
- Bogdashina, O. 105
- Bolt, S.E. 14, 152
- Boon, M. 44, 45
- Booth, T. 9, 11, 12
- Bowers, P.G. 24, 31, 34, 78
- Bradley, J. 13
- breaks within lessons 118
- Brown, H.D. 146
- Bryant, P.E. 30
- bullying 181
- Burden, R.L. 65
- Burdett, J.G.W. 65
- Burgoine, E. 53
- Burt, C. 5
- Bynner, J. 46

- Calvo, M.G. 64
- Camara, W. 150
- Canale, M. 61
- career advice 179
- Carroll, J. 61–2
- Catts, H.W. 42
- Cerebellar Deficit hypothesis 35–6
- Chamot, A. 127
- Chanock, K. 9
- Chinn, S.J. 112
- classrooms
 - adjustments and support 105–10
 - classroom management 117–19
 - classroom observation as assessment 160–1
 - classroom-based assessment 156–63
 - communication (teachers') 114–17
 - differentiation 113–14
 - equipment 107–9
 - furniture 107
 - light, temperature and volume 106–7
 - materials 109–10
 - routines 118–19, 171
 - and transitions 171
- Cline, T. 11
- Clough, P. 11
- cognitive abilities
 - basic learning mechanisms 24–8
 - cognitive functioning and dyslexia 22

- needed for language learning generally 61–4
- Cognitive Assessments for Multilingual Learners*
(ELT well, 2011) 94
- colour
 - background colours of materials 110
 - colour terms (relationship between language and thought) 3–4
 - coloured overlays/ tinted papers 106, 152
 - in planning writing activities 142
 - use in grammar teaching 134
 - use of colour as a learning strategy 120
- Combley, M. 126
- communication
 - between student, family and institution 177–8
 - teachers to students 114–17
- compensatory strategies *see* strategies (learners')
- competence, language, diagram of 60
- computers *see* ICT
- conscious controlled processing 26
- continuous assessment 158
- controlled writing practice 135
- Convention on the Rights of Persons with Disabilities 3, 9, 13
- coordination disorder *see* developmental coordination disorder; dyspraxia
- Corbett, J. 3, 8, 11, 14
- 'covering' strategies 99–100
- Cowan, N. 25
- Craik, F. 25
- criterion-referenced models of testing 91–2
- Crombie, M. 65, 69, 108, 111, 121, 126, 127, 133, 134, 135
- Csizér, K. 65, 67
- Cuisenaire rods 108, 134
- curriculum adjustments for SpLD learners 111–14
- deductive learning, vs inductive 129
- Dee, L. 13
- deficit model of ability 8–9
- Dehaene, S. 47
- Denckla, M.B. 34
- Deponio, P. 85
- desks, sloping, value of 107
- determinism, linguistic 3–4
- developmental coordination disorder 44 *see also* dyspraxia
- 'diagnosis' *see also* assessment and testing (of SpLD)
 - of ADHD 49
 - of dyscalculia 47
 - of dyslexia 7, 23
- differentiation in classroom 113–14
- digit span tests 92–3
- digital audio recorders 109
- dimensionality
 - and ADHD 49
 - and dyslexia 24
- disability
 - definitions of term 3
 - models of disability 5–13
 - WHO definition 13
- 'disablism' 179
- disclosure of SpLD
 - to family 97–8
 - to other professionals 97–8, 181–2
 - to peers 99, 117
 - to student 95–7
 - students disclosing to institutions 99–100, 172, 175
 - students who do not wish to disclose SpLD 182
 - during transitions 172
 - in workplaces 183–4
- discourses
 - challenging dominant discourses 15
 - labelling 13–14
 - models of disability 5–13
- 'disorders', use of the term 8
- Dixon, G. 44
- Dörnyei, Z. 64
- Double-Deficit Hypothesis 34–5
- Dowman, M. 3
- Downey, D. 63, 130
- drawings
 - using to memorise spellings 131
 - using to memorise vocabulary 133
- drills, useful for learners with SpLD 129, 134–5
- Dunn, R.J. 112
- dynamic assessment 128–9, 158
- dyscalculia
 - overview 46–8
 - and cognitive abilities needed for L2 acquisition 64
 - co-occurrence with ADHD 51
 - co-occurrence with dyslexia 32, 46, 47, 48, 66

- dyslexia
 - overview 20–38
 - Auditory Magnocellular Hypothesis 37
 - behavioural definitions of dyslexia 23
 - behavioural manifestations 30–3
 - and biology 22
 - Cerebellar Deficit hypothesis 35–6
 - cognitive and neurological explanations 33–7
 - cognitive correlates 30–3
 - cognitive functioning 22
 - continuum 24
 - co-occurrence of dyslexia and other SpLDs 35
 - co-occurrence with ADHD 51
 - co-occurrence with dyscalculia 32, 46, 47, 48, 66
 - co-occurrence with dyspraxia 44
 - definitions of 21–4
 - different manifestations according to L1 31
 - Double-Deficit Hypothesis 34–5
 - history of research 20–1
 - and learning anxiety 65
 - and motivation to learn 65
 - non-homogeneity of problems regarding L2 learning 66
 - non-literacy problems 32–3
 - Orton-Gillingham (OG) approach 126
 - Phonological Deficit Hypothesis 34
 - problems with automatization as core of 35
 - progression of discourses about 5–13
 - and specific language impairment 42
 - speech perception/ production 31
 - speed deficits 34–5
 - spelling 31
 - value of early intervention 22–3
 - Visual Magnocellular Hypothesis 37
- Dyson, A. 11, 12
- dyspraxia
 - overview 44–5
 - and cognitive abilities needed for L2 acquisition 64
 - co-occurrence with dyslexia 44
 - and handwriting 76
- educational psychologists, as gatekeepers to support 90
- Ehlers, S. 53
- Ehrman, M.E. 62
- electronic devices, use of for support 108, 109, 120, 176
- Elliott, S.N. 153
- Elliott, T. 180
- Ellis, A.W. 6
- Ellis, N.C. 62
- emotional coping strategies 174, 176
- employment 183–4
- Engle, R.W. 25
- environment, classroom *see* classrooms
- Equality Act 3
- equipment 107–9
- error correction *see also* feedback
 - not over-correcting 117, 142, 163
 - overlooking spelling errors 158
 - reformulations 117
 - rephrasing, used with care 115
- ESOL/ESL situations 89, 93–4, 116, 168, 184
 - length of exposure needed in L2 before assessment for SpLDs 94
- Evangelou, M. 170, 178, 180, 181
- Everatt, J. 32, 64, 68, 94
- Evers, T. 126, 129, 131, 132, 134, 142
- Everson, H.T. 64
- ‘exceptional’ used in place of ‘special’ in US 8
- explicit learning 61
- extended time for assessments 150, 152, 155–6
- Eysenck, M.W. 64
- failure to succeed, as criteria for intervention 86
- Fairclough, N. 2
- fairness (of assessment) 147–50
- false positive identifications of SpLDs 94
- Faraone, S.V. 49
- Farrell, P. 14
- Fawcett, A.J. 22–3, 28–9, 30, 33, 35–6, 37, 72
- feedback
 - and differentiation 114
 - error correction 117, 142, 158, 163
 - giving feedback to SpLD learners 115–16
 - importance of positive feedback 116, 163
- Feuerstein, R. 158
- ‘fiddle pegs’ 108
- fine motor skills 33, 44–5
- Fletcher, J.M. 23, 32, 63, 64, 68, 72
- flexible perseverance 174, 175
- Florian, L. 13
- fluorescent lighting 106
- Fong, K.M. 66–7
- font size/ type 109–10, 152

- formal assessment procedures 90–3
 formative assessment 147
 Frederickson, N. 11
 Frith, C.D. 31
 Frith, U. 21–2, 24, 29–30, 31, 63
 Fuchs, D. 23
 Fuchs, L.S. 23
 Fuller, M. 175, 182
 furniture, classroom 107
- games 132, 133, 135
 Ganschow, L. 63, 65, 70, 128, 130, 158
 gap-fill tasks 137, 159
 Gardner, R.C. 64
 Gathercole, S.E. 25, 68
 Gayán, J. 37
 Geary, D.C. 47, 48
 Genesee, F. 156, 158, 161
 genetic origins
 - of ADHD 51
 - of Asperger's syndrome 53
 - of dyscalculia 47
 - of dyslexia 37
 - of specific language impairments (SLI) 43
- Gerber, P.J. 183
 Gertner, B. 43
 Geva, E. 75, 77, 93, 94
 Ghaziuddin, M. 54
 Gillberg, C. 53
 Gillingham, A. 126
 Gilroy, D. 99, 108
 Ginsburg, H.P. 46, 47
 Goffman, E. 99
 Goldberg, R. 174, 176
 Goswami, U. 30, 67, 131
 Grabe, W. 72, 73, 74, 75
 grammar
 - acquisition of morphology and SLI 42
 - acquisition problems and SpLDs 71–2
 - explicit teaching needed 134
 - grammar games on computers 135
 - grammatical knowledge and reading performance 74
 - grammatical sensitivity 61–2
 - sample lessons 194–6
 - teaching grammar 134–5
- Graves, P. 98
 Gray, P. 11
 Grigorenko, E.L. 62
- gross motor skills 33, 45
 group work
 - and classroom management 118
 - and differentiation 114
- Gutman, S.A. 106
- Hage, P. 4
 Hale, G.A. 51
 Hallahan, D.P. 6
 Halliday, M. 126
 Hamre, B. 11
 handheld devices 108, 109, 120, 176
 handwriting, difficulties with 44–5, 107, 142
 Hanley, R.H. 67
 Hansen, E.G. 149, 150
 Haslum, M.N. 23
 Hasnat, M.J. 98
 Hazan, V. 31
 Helland, T. 66, 67, 78
 Helwig, R. 153
 Henning, G. 147
 Hinshelwood, J. 6, 21
 Hitch, G.J. 25
 Ho, C.S.-H. 66–7
 Holec, H. 162
 holistic learners 112
 Hollenbeck, K. 150
 homework diaries 108, 120
 homogenous inhibition 70
 Hornsby, B. 126
 Horwitz, E.K. 64
 Hulstijn, J.H. 61, 69
 Hutchinson, J.M. 94
 Huws, J.C. 95, 96
 hyperactivity and ADHD 50, 51
- ICT
 - computer-based testing 150–1
 - electronic devices used for support 108, 109, 120, 176
 - grammar games 135
 - interactive whiteboards 134
 - mind mapping software 109
 - and motivation 108
 - paper-based technologies, enduring value of 108, 109, 134
 - PowerPoint presentations 141
 - recording speaking exercises 141
 - software for support 176

- spelling games 132
- as teaching aids 107–9
- technology-mediated language learning 107–9
- using emails/chat/text messaging/ blogs as writing practice 141, 142
- using online dictionaries of pronunciation 140
- value of using texts from internet for reading 136
- vocabulary games 133
- vocabulary lists 134
- voice recognition software 108–9
- and writing 108, 141, 142
- identification of SpLDs 84–93
- implicit learning 61, 71
- impulsivity 50, 51
- ‘inch worm’ (analytical) learners 112, 119
- incidental learning 69
- inclusion 10–13
- inductive language learning 62, 129
- information sharing 181–2 *see also* disclosure of SpLD
- inner self-correction dialogue 121
- instance theory 27–8, 30
- instructions, ways of giving 115, 171–2
- integration, vs inclusion 11
- intentional learning 68–9
- interactive whiteboards 134
- International Dyslexia Association (IDA) 23
- interpreters, in screening interviews 89–90
- IQ measurement 5, 23, 47, 91

- Jacobson, L. 13
- Jeffries, S. 32, 64, 68
- Joanisse, M.F. 42
- Joffe, L. 47
- Johnston, J. 43
- Jones, R.S.P. 95, 96

- Kaasa, R. 66, 67, 78
- Kamhi, A.G. 42
- Kane, M.K. 25
- Kaplan, B. 6, 75, 85
- kinaesthetic learners 108, 112, 126–7, 133
- Kintsch, W. 28
- Kirby, A. 6, 85
- Klein, C. 95
- Kohonen, V. 62

- Kontra, E. 10, 65, 67, 69, 78, 159
- Kormos, J. 62, 65, 67, 69, 72, 73, 74, 76, 77, 78, 79, 139, 154, 155, 156, 158, 159
- Kovas, Y. 36
- Kunnan, A.J. 148
- Kussmaul, A. 6

- L1
 - developing L1 skills in parallel to L2 130
 - influence on learning to read 31
 - and manifestations of dyslexia 31
 - skills and knowledge as foundations for L2 learning 70, 73, 130
 - transfer of writing skills 75
 - using L1 for SpLD assessments in an L2 context 95
 - using L1 to teach the L2 rule system explicitly 129
- labelling
 - overview 13–14
 - benefits in terms of curriculum adjustments etc 90
 - functional labels vs diagnostic 85–6
 - and self-awareness 174
- Lam, M.S. 169
- language aptitude 61–4, 130
- language interaction with thought 3–4
- language learning processes generally 60–5
- learned helplessness 9
- ‘Learning Difficulties’ 15
- ‘Learning Disability’ (US term) 15
- learning skills 119–23
- learning strategies *see* strategies (learners’)
- learning styles, taking account of 112, 120 *see also* multi-sensory materials/ activities
- legal discourses, of dyslexia and other SpLDs 8–9
- Leonard, L.B. 42, 43, 44
- Levelt, W.J.M. 77
- Lewis, M. 51
- light levels in classroom 106
- Limbos, M.M. 94
- Lindsay, G. 11
- Lingsom, S. 99–100, 101
- Linguistic Coding Differences Hypothesis (LCDH) 63–4
- links and connections
 - helping learners make 112
 - learners with SpLD might make ‘odd’ 115

- listening
 - multi-sensory materials/ activities for 139
 - oral production/ comprehension generally
 - less affected by SpLDs 77–9
 - teaching listening 137–9
- literacy, assessments of 91–2
- Livingstone, M.S. 36–7
- Logan, G.D. 27–8, 30
- long-term memory
 - overview 24–5
 - and metacognitive thinking skills 121
 - and multi-sensory approaches 127
 - use of speaking tasks to memorize information 140
- Lovegrove, W. 37
- Lovett, M.W. 35
- Lucey, H. 169, 170, 173, 180

- Macan, T.H. 100, 101, 183, 184
- MacIntyre, P.D. 9, 64, 90, 98
- MacKay, D.G. 12, 13
- Madriaga, M. 175, 179, 183
- magnocellular pathway 36–7
- Maras, P. 173, 178, 180, 181
- Martin, D. 68
- Martin, J. 37
- mathematics, learning difficulties in *see* dyscalculia
- Matthews, N. 84, 100
- McKay, N. 156, 157
- McNulty, M. 65
- medical discourses, of dyslexia and other SpLDs 7–8
- Mellard, D.F. 170, 178
- memory *see also* long-term memory; phonological short-term memory; working memory
 - overview 24–5
 - memorization techniques 122–3
 - mnemonics 122, 131, 133
- mentoring initiatives 181
- Mercer, C.D. 6
- Messick, S. 148
- metacognitive thinking skills 120–3
- metalinguistic awareness 74
- Mikó, A. 67, 69, 72, 73, 74, 76, 79
- Miles, E. 86, 87, 90, 126
- Miles, T. 99, 108
- Miles, T.R. 23, 31, 33, 86, 87, 90
- Miller Guron, L. 94

- mind maps
 - as evidence of understanding 113
 - in pre-writing activities 141
 - software for 109
 - useful for holistic learners 112
- mixed expressive language and receptive disorder
 - see* specific language impairments (SLI)
- mnemonics 122, 131, 133
- modelling learning strategies 127
- modifications, vs accommodations 149–56
 - see also* accommodations and modifications
- Montgomery, D. 44
- Morgan, P. 21
- Mortimore, T. 112
- motivation
 - overview 64–5
 - boosted by success 122
 - and computers 108
 - importance of positive feedback 116, 163
 - instructional factors affecting 65
 - selecting texts students are motivated to read 136
- motor skills
 - and dyslexia 33
 - and dyspraxia 45
 - fine motor skills 33, 44–5
 - gross motor skills 33, 45
 - handwriting, difficulties with 44–5
- Mulcahy, F. 13
- multi-modal teaching approaches 112, 115
- multiple choice questions, not suitable for learners with SpLD 135, 137
- multi-sensory materials/ activities
 - for all classroom tasks 112–13
 - multi-sensory structured learning (MSL) approach 126–32
- Murphy, K.R. 51
- Murray, H. 2

- naming speed, in dyslexia 34–5
- Nation, I.S.P. 68
- Ndlovu, K. 75, 77
- neurological issues
 - and ADHD 51
 - and dyscalculia 47
- Nicolson, R.I. 22–3, 28–9, 30, 33, 35–6, 37, 72
- Nijakowska, J. 126, 130, 131, 132, 133
- noise in classrooms, effect on learning 106–7
- non-literacy problems 36

- non-verbal indicators of SpLD 87
- non-word repetition tasks 26, 34, 69, 92
- normative testing 90–1
- Norton, B. 177
- Norwich, B. 5
- O'Brien, I. 62, 77
- observation
 - as part of assessment 160–1
 - as part of identification process 86–8
- Oliver, M. 7
- Olson, R.K. 37
- Olyer, C. 11
- O'Malley, J.M. 127
- oral production/ comprehension *see* listening; speaking
- orthography *see* spelling
- Orton, S. 6, 21, 126
- Orton-Gillingham (OG) approach 126
- Oscarsson, M. 162
- 'over learning', providing opportunities for
 - 111–12, 127
- Oxford, R.L. 62
- pace, of lessons 119
- pair work 118
- Palmer, A. 60, 61
- Papagno, C. 62
- paper-based technologies, enduring value of 108, 109, 134
- Parsons, S. 46
- 'passing' strategies (as non-disabled) 99–100
- Pauc, R. 45
- Paulesu, E. 31
- peers
 - arranging contact with new peers as part of transition 178, 181
 - awareness raising activity 189
 - developing relationships with 172
 - disclosing information to 99, 117
 - peer assessments 162
- Pembrey, M. 43
- Pennington, B.F. 35
- Perfetti, C. 28
- Pfiffner, L.J. 52
- phased-in transitions 180
- Phillips, S.E. 150
- phoneme-to-grapheme mapping 31
- phonemic awareness 34, 75, 77
- phonetic coding ability 61
- phonological processing
 - counterbalancing weaknesses using multi-sensory approaches 127
 - Double-Deficit Hypothesis 34–5
 - in dyslexia, phonological deficit hypothesis 20, 21, 28–9, 33–4, 63
 - in dyslexia generally 31–2, 36
 - phonological awareness tests useful even when conducted in L2 94
 - phonological loop 25–6
 - processing problems restrict incidental learning 69
 - processing problems restrict speech comprehension 78
 - and reading problems 73
- phonological short-term memory
 - and impact on vocabulary acquisition 69
 - in L2 learning generally 62, 63
 - and reading problems 73
 - and speech comprehension 78
 - and speech production 77–8
 - and vocabulary learning 68
 - and writing processes 75
- Piechurska-Kuciel, E. 65, 140
- planning, extended planning time for tasks 140
- Plomin, R. 36
- Pollack, J. 96, 99
- Pollard, A. 169
- Polychroni, F. 179
- portfolios 161–2
- Portwood, M. 44, 45
- post-compulsory education, transition to 179
- PowerPoint presentations 141
- pragmatic goal setting 175–6
- Pressley, M. 74
- pre-teaching activities 136, 138, 141–2
- primary-to-secondary transition 178, 179, 180
- pro-activity 174, 175–6, 184
- procedural knowledge
 - and automaticity 26
 - and grammar 72
 - and speech production 78
 - vs declarative knowledge 61
- proceduralization, in knowledge compilation 27
- processing delays, assessing 93
- processing speed, non-language specific assessment 95

- proficiency testing
 – generally 147
 – accommodations and modifications in high-stakes proficiency tests 154–6
 prompters 156
 pronunciation *see also* speaking
 – and dyspraxia 44–5
 – and the multi-sensory structured learning approach 130–2
 – using online dictionaries of pronunciation 140
 psychological assessments 90–1
 psychological transitions 172–3

 Ramus, F. 36
 Ranschburg, P. 70
 Ranta, L. 61
 reading
 – assessing reading skills for ‘diagnosis’ 92
 – learning to read in L2 and SpLDs 72–4
 – learning to read, theories of 29–30
 – lexical route (reading) 28–9
 – reading processes 28–9
 – reading strategies 74, 137
 – sample lessons 197–9
 – stories about people with similar SpLDs 174
 – teaching reading 135–7
 reading aloud in class 116–17, 136–7
 reading aloud task/ test instructions 155, 162
 ‘reading disability’, as term for dyslexia 7, 15
 Reay, D. 169, 170, 173, 180
 reformulations 117
 Reid, G. 120–1, 183
 relativism, linguistic 4
 response format (of assessments) 148, 152, 155
 ‘retreats’ within the classroom 107
 Riddell, S. 170, 175
 Riddick, B. 65
 Ripley, K. 44
 Roberts, L.L. 100, 101, 183, 184
 Robinson-Tait, C. 133
 Rocco, T.S. 97, 99, 100
 Rogers, R. 5
 Rosenthal, R. 13
 Ross, D.M. 49
 Ross, S.A. 49
 rote learning ability 62

 routines, classroom
 – overview 118–19
 – and transitions 171
 Rudel, R.G. 34

 Sáfár, A. 62
 sans serif fonts 110
 Sarkadi, Á. 70, 75–6
 Sawyer, M. 61
 scaffolding 163
 Schneider, E. 69, 108, 111, 121, 126, 127, 128, 129, 131, 132, 133, 134, 135, 142, 158
 Schneider, W. 26
 Schoonen, R. 73, 75
 Scotland, non-use of term ‘Special Educational Needs’ 13
 screening procedures 88–90, 187–8
 scribes, use of 155
 Segal, S.S. 5
 self-assessments 162
 self-awareness 174, 184
 self-esteem
 – and career choice 179
 – and openness about disabilities 100
 – and pro-activity 175
 – self-confidence 64–5, 140
 – teachers encouraging 116–17, 140
 self-identity
 – and disclosure of an SpLD 95–6
 – self-perception and labels 85
 – and transitions 174–5
 sequencing problems 79 *see also* serial processing; word-order rules
 sequential learners 112
 serial processing 71, 76
 Service, E. 62, 68
 Shalev, R.S. 47
 Shiffrin, R.M. 26
 short-term memory
 – overview 25–6
 – causing problems at times of transition 171
 – using homework diaries to help 108, 120
 Shuter, R. 146
 Silva, T. 75
 single word recognition tests, useful even when conducted in L2 94
 Singleton, C. 108
 Sireci, S.G. 150

- situated cognition, need to take into account 47
- Situation, Problem, Solution, Outcome 112
- Skehan, P. 62
- Slobin, D.I. 3
- sloping desks, value of 107
- Smith, A.M. 84, 113
- Smythe, I. 146
- Snowling, M. 31, 32, 36, 42, 63, 64, 68
- social construction, discourse of 9–10
- social difficulties
 - and Asperger’s syndrome 78
 - caused by ADHD 54, 172
 - caused by dyspraxia 45
 - caused by language impairment 43
 - demands of transitions 172
 - social dynamics in classrooms 117–19
- software, use of for support 176
- sound-letter correspondences, teaching 130–2
- Sparks, R. 65, 66, 70, 126, 130
- spatial awareness, and transitions 171
- speaking
 - oral production/ comprehension generally less affected by SpLDs 77–9
 - sample lessons 200–1
 - teaching speaking 139–41
 - use of speaking tasks to memorize information 140
- ‘special’, use of the term 8
- special education, need for 7, 10
- Special Educational Needs Co-ordinators (SENCo) 84
- ‘Special Educational Needs’ (SEN) 8, 15
- Speciale, G. 62, 68
- specialist teaching
 - in ‘integrated’ settings 11
 - not needed in truly inclusive settings 12
 - replacing ‘support’ 15
- specific language impairments (SLIs) 42–4
- specific learning difficulties (SpLDs)
 - benefits of the term 12
 - defined 9
- speech production processes 77
- speed deficits, in dyslexia 34–5
- spelling
 - and dyslexia generally 31
 - and the multi-sensory structured learning approach 130–2
 - non-transparent/transparent orthographies 66–7, 75
 - overlooking incorrect spelling 158
 - and reading problems 73
 - spellcheckers 108, 142
 - spelling difficulties and L2 writing 75–6
- Spencer, L.H. 67
- spiral structures to language courses 119
- Spolsky, B. 63, 70
- Stanovich, K.E. 33, 63, 73
- statement of special educational needs 10
- Stillman, B.W. 126
- strategies (institutions’) *see also* classrooms
 - facilitating transitions 177–9
 - modelling learning strategies 127
- strategies (learners’)
 - affective strategies 127
 - ‘covering’ strategies 99–100
 - for dealing with transitions 173–7
 - developing learning skills 119–23
 - importance of teacher demonstration 127
 - language classroom an ideal place to explore 177
 - listening strategies 139
 - ‘passing’ strategies (as non-disabled) 99–100
 - reading strategies 74, 137
 - use of strategies may mask problems in assessments 92–3
 - for vocabulary 133–4
- strephosymbolia 6
- study skills 119–20
- subject matter, (re-)organization of 111–12
- summative assessment 147
- Sunderland, H. 89
- support *see also* accommodations and modifications
 - appropriate use of 176
 - learners not taking up 178–9
 - not needed in truly inclusive settings 12
 - reassessment on transition 180–1
 - in a socially constructed discourse of disability 10
- Swain, M. 61
- Swanson, L.B. 31, 78
- syllabic awareness 30, 33–4
- syndrome, dyslexia viewed as 7
- Szatmari, P. 49
- Szczepanski, M. 106
- Tallal, P. 42
- tasks
 - breaking into chunks beneficial 119

- choice of 112–13
- explicit explanation of how to carry out communicative tasks needed 140
- increasing in complexity as rise up school system 171–2
- task frames 140
- Taylor, M. 170, 178
- teachers
 - and choice of discourses 15
 - and developing metacognitive thinking skills 122
 - disclosing results of SpLD assessments to 97–8
 - teacher practice and positive effects on learners with SpLDs 103–23
- teaching/ education environment deficient not the learner 8, 9–10, 12
- technology-mediated language learning 107–9 *see also* ICT
- temperature in classrooms 106
- terminology, importance of 3–18
- ‘tests’, defined 146–7
- text windows, use of 109
- ‘TextHelp’ (spellchecker) 108
- textual layout, importance of 136, 159 *see also* colour
- thinking aloud 121
- Thompson, S. 90, 150, 151
- thought, interaction with language 3–4
- Thurlow, M.I. 152
- time awareness 171
- time extensions 150, 152, 155–6
- time management 33, 120
- Tindal, G. 153
- tinted papers/ coloured overlays 106, 110
- Tobias, S. 64
- Tomblin, J.B. 43
- Tomlinson, S. 11
- transitions
 - strategies for institutions 177–84
 - strategies for learners 173–7
 - stress factors in 169–73
- Tuholski, S.W. 25
- Tulving, E. 25
- Turner, E. 129
- Ullman, M.T. 24–5
- unidentified SpLDs 182
- unintentional learning *see* incidental learning
- universal test design 150–1
- Upshur, J.A. 156, 158, 161
- validity (of assessment) 147–50
- Vallar, G. 62
- van Gelderen, A. 74
- Vellutino, F.R. 21, 24, 31, 33, 34, 63
- verbal processing speed, assessing 93
- verbal reasoning ability, assessing 93
- Verhoeven, L. 73
- visual distortions 106
- Visual Magnocellular Hypothesis 37
- visual perception, assessing 92
- visual processing speed
 - assessing 93
 - and choice of materials 109–10
- visualization 122
- visuo-spatial sketchpad 25
- vocabulary
 - explicit teaching needed 132
 - large vocabulary taken to equate to high ‘IQ’ 93
 - problems with vocabulary learning 68–71
 - and reading comprehension 73
 - sample lessons 190–3
 - small vocabulary and SpLD 32, 63, 68, 70–1, 73, 78
 - teaching 132–4
- voice recognition software 108–9
- Wagner, R. 6
- ‘wait-to-fail’ diagnostic method 22–3
- Wall, D. 146
- Waller, E. 96, 99
- Weedon, E. 170, 175
- Wilenius, F. 13
- Willey, L. 14
- Wing, L. 52, 53
- Winzer, M.A. 8
- Wodak, R. 2
- Wolf, M. 24, 31, 34, 78
- Woods, K.L. 170, 178
- word-blindness 6, 20
- word-order rules 71
- word-recognition
 - in dyslexia 30–3
 - in reading processes 28–9
- working memory
 - overview 25–6

- assessment tools 92–3
 - causing problems at times of transition 171
 - in dyslexia 32
 - in mathematics 48
 - reduced by anxiety 64
- workload, managing 172
- World Health Organization, definition of disability 13
- writing
- assessment 91–2
 - assessment in L2 contexts 95
 - and computers 108
 - teaching writing 141–2
 - writing in L2 74–7
- Zarnetkin, A.J. 51
- Ziegler, J. 67, 131