

Supporting Students with Dyslexia

Practical guidelines for institutions
of further and higher education

Written by Trudy Loftus

© AHEAD Educational Press, 2009
AHEAD, East Hall
UCD, Carysfort Avenue
Blackrock,
Co. Dublin
t (01) 716 4396
e ahead@ahead.ie
www.ahead.ie

ISBN no. 1-899951-20-2 978-1-899951-20-8

Contents

Introduction	1
What is Dyslexia?	3
Dyslexia Information Sheet	6
The Dyslexic Student and Learning	7
Difficulties experienced by Students with Dyslexia	7
Dyslexia and Learning A Foreign Language	12
How Students with Dyslexia Learn Best	14
Summary.....	15
Recognising Dyslexia	17
Stage 1: Guidelines for Pre-Assessment and Screening	20
Screening Process	20
Computerised screening	21
Psycho-educational Assessment	22
Case Study	23
Individual Needs Assessment	25
Accommodating students with Dyslexia	30
Lecturing.....	31
Setting Reading Work	32
Setting Written Work.....	33
Guidelines for marking exam scripts and giving feedback	33
Preparing students for exams	34
Exam Words	35
Facilitating Students in Exams	38
Summary of Key Points.....	40



Assistive Technology	42
Definition of Assistive Technology	42
Simple Aids	42
Low Tech Assistive Technologies	43
Assistive Technologies to aid Study Skills	44
High-Tech Assistive Technologies	44
Self-esteem	48
Student's Voices	50
Further Information: Publications and Research	52
Organisation and Contacts	55

Introduction

AHEAD is an independent non-profit organisation working to promote inclusive education in Ireland for students with disabilities? Set up in 1988, the aim of AHEAD is to change attitudes and mind-sets about students with disability and to encourage professionals involved in education at all levels to see the ability of students with disabilities and to expect them to participate in education, develop their talents and abilities and go on to develop careers of their choice. The principles of AHEAD are firmly rooted in a rights philosophy, recognising the rights of people with disabilities to an education, to access third level education and meaningful employment.

AHEAD has considerable know how and expertise about the support needs of students with disabilities, and how to go about supporting them in a learning environment to ensure that they can learn equally as all other students. To support professional staff to adjust their practices to be more inclusive of students with disabilities, AHEAD publish a number of handbooks aimed at teachers and guidance counsellors working with students with disabilities. The demand for these handbooks has been high and feedback would indicate that they are a useful resource for their users and an important source of information concerning disability issues.

Dyslexia affects up to 8% of the population, more significantly it affects over 50% of third level students with disabilities, a rate that is growing annually. Research indicates that these students are clustered in certain faculties, namely arts, art and design, Engineering and Science and this has considerable significance for the teaching and assessment

methodologies used in these and other subject areas. Despite the growing presence of students with dyslexia in third level education, staff may not understand what it is and the impact it has on how the student will manage the demands of learning on his/her course.

This manual aims to provide an understanding of dyslexia by providing an overview of dyslexia, its characteristics and the impact it has on students in an educational learning environment. It makes very practical suggestions on how teaching staff can facilitate the learning needs of the students with dyslexia in both further and higher education. It is hoped that this user-friendly booklet will be of interest to all staff that have responsibility for teaching and have regular contact with students such as heads of departments, lecturers, tutors, counsellors and learning support staff.

Ann Heelan
Executive Director
AHEAD

What is Dyslexia?

The word Dyslexia comes from the Greek `dus` meaning difficulty and `lexis` meaning single word or speech. At its simplest `dyslexia` means a difficulty with language. When people think of dyslexia their first image may be of a person experiencing difficulty with reading or reversing `b` and `d` when writing. However, this is true in only some cases, dyslexia is much more than a difficulty with reading and writing. The Irish Task force on Dyslexia (2001), have defined dyslexia as:

Dyslexia is manifested in a continuum of specific learning difficulties related to the acquisition of basic skills in reading, spelling and/or writing, such difficulties being unexpected in relation to a person's other abilities and educational experiences.

Dyslexia can be described at the neurological, cognitive and behavioural level.

It is typically characterised by inefficient information processing, including difficulties in phonological processing, working memory, rapid naming and automaticity of basic skills. Difficulties in organisation, sequencing and motor skills may also be present.

This definition recognises that dyslexia can be described at the neurological, cognitive and behavioural levels. Differences at the neurological level give rise to difficulties processing information at the cognitive level which results in problems in reading, writing/spelling at the behavioural level.

Behavioural level

It results in the written language difficulties with identifying, using, spelling and pronouncing words and occasionally with using maths notation.

Cognitive level

It describes characteristics associated with dyslexia. These characteristics refer to poor auditory and visual short-term memory, difficulties in sound-symbol matching, word naming/finding difficulties, a discrepancy between reading and listening comprehension, directional confusion and mixed laterality.

Neurological Level

As a neurological condition, dyslexia concerns how an individual makes use of the hemispheres of the brain. Those with dyslexia have commonly been found to exhibit weak use of the left hemisphere of the brain, the part that controls speech and language processing, as well as analytical thinking and sequencing. The corollary is that they make greater use of the right hemisphere which governs visual-spatial functions. Therefore many people with dyslexia exhibit practical and visualisation skills, lateral thinking and problem solving abilities and musical and artistic flair.

One result of left brain weakness is a difficulty in phonological processing, which is the verbal processing of sounds. Research suggests that this a primary cause of dyslexia. An awareness of sounds (or phonemes) within words allows a person to notice, think and manipulate sounds, a skill essential when learning to read.

The exact nature, range and extent of difficulties experienced by students with dyslexia will vary from one case to another and dyslexia is therefore best described as a syndrome.

People unfamiliar with dyslexia may assume it is due to low intelligence but this is a myth. Dyslexia is commonly found in people whose overall intellectual or creative ability is far greater than their literacy skills.

Dyslexia transcends boundaries of age, gender, race and socio-economic group. International studies have shown it is more prevalent among males than females, the ratio approximately 3:1, although recently this data has been challenged. People with dyslexia exhibit symptoms throughout their life span. Dyslexia is thought to be genetic in origin however `acquired dyslexia` can result from changes in the brain due to illness or accident.

Dyslexia Information Sheet

Summary

- Individuals with dyslexia may experience difficulties with word recognition, aspects of reading comprehension, aspects of writing and/or spelling, short-term memory difficulties and/or organisational difficulties and occasionally maths notation.
- Dyslexia can be described at the neurological, cognitive and behavioural level.
- The exact nature, range and extent of the difficulties experienced by someone with dyslexia will vary from one person to another.
- Since the difficulties experienced range along a continuum from mild to severe, there is a need for a continuum of interventions/supports.
- The incidence of dyslexia in the general population is thought to be between 2 and 4 per cent.
- Dyslexia is thought to be hereditary and is a life long condition.
- Dyslexia is more common in males than females, in the ratio 3:1.
- Dyslexia is found across all levels of intelligence.
- Dyslexia may occur in all socio-economic circumstances.
- Dyslexia may co-exist with other learning difficulties such as Attention Deficit Disorder.

The Dyslexic Student and Learning

Difficulties experienced by Students with Dyslexia

Although individual cases vary many people with dyslexia experience difficulty in one or more of the following areas:

Memory

Some students will have a poor memory for what they see or hear in the short term and cannot hold onto information presented visually/orally long enough to process it and commit it to long term memory. This leads to difficulty with:

- Lectures: students are expected to understand, listen and write
- Comprehending lengthy text: student may have forgotten what was at start of chapter when on second or third page
- Remembering spelling patterns and sounds
- Recalling times tables, formulae and number facts

Reading

Most difficulties with reading due to dyslexia are caused by poor word recognition and this combined with poor memory can result in comprehension difficulties. Difficulties with reading include:

- Reading aloud
- Skimming for overview
- Reading with speed and accuracy
- Losing place in text
- Blurring of words or text jumping
- Confusion caused by background or decorative font

Writing

Most dyslexic students will avoid words they cannot spell when writing this affects the quality of the written work and can result in poor or simplified expression of ideas. Omission of punctuation and function words will further distort the quality of written work in exam situations and in lectures.

Main writing difficulties are:

- Writing at speed
- Poor expression due to vocabulary limited by spelling
- Poor syntax
- Poor quality lecture notes

Spelling

In some cases where the spelling is very poor it will mask the meaning. Common spelling difficulties are:

- Letter reversals
- Omission or addition of letters/syllables
- Transposition of letters within words
- Phonetically based spelling/inconsistent spelling
- Not applying spelling rules

Handwriting

Very poor fine motor control is often associated with dyslexia and this can result in poor handwriting, immature letter formation, uneven letter size and inappropriate use of capital letters.

Maths

Problems with numeracy due to dyslexia include;

- Reversal, omission or miscopying of digits
- Confusion with mathematical symbols
- Incoherent layout of problem solving steps
- Slow calculation rate
- Difficulties in visual-spatial perception and organisation

Organisation

Students who have organisational difficulties can struggle with:

- Timetables and deadlines
- Structure of essays and assignments
- Sequencing information when hearing, writing or reading
- Confusing temporal relationships, such as clock, times or dates
- Poor recall of directions or sequence of instructions

Speech

Some students with dyslexia experience minor speech difficulties which can cause distress when reading aloud, making presentations or answering questions posed by a tutor in class. These difficulties include:

- Mispronouncing multi-syllabic words
- Substituting a word for a similar sounding words
- Spoonerisms, swopping the first consonant of two words e.g. Gill Bates instead of Bill Gates

Although students with dyslexia have a lot of difficulty pursuing their studies, they also have a lot of strengths they can bring to the learning process. Some of these are:

- Overall level of intellectual ability
- Creative ability
- Lateral or diverse thinking skills
- Problem-solving skills/Critical thinking skills
- Good visual and visual spatial thinking skills
- Ability to process information holistically
- Good oral skills
- Interpersonal and/or intrapersonal skills
(Based on Sayles, 2002)

Although dyslexia is not linked to intelligence, most students with dyslexia are at least average or above average intelligence. Some students with dyslexia are thought to be very creative not in language sense but in a technical and artistic sense. Studies have shown that there is a much higher incidence of dyslexia amongst students attending colleges of Art and Design and Technology. Associated with being dyslexic is the difficulty in interpreting information presented in linear sequential format and students with dyslexia frequently see patterns and linkages that emerge from looking at information in a holistic manner and from a different perspective.

Personal Skills

Students with dyslexia who have long experience of overcoming difficulties and have achieved sufficiently to access third level also demonstrate a range of personal characteristics including:

- Good motivation
- Excellent application
- Meta-cognitive awareness
- Persistence
- Resourcefulness

Dyslexia and Learning A Foreign Language

Students with dyslexia experience the same difficulties with reading and writing a foreign language as they do in their native language. However some college courses have a second or foreign language component, the following are some guidelines on how to support the dyslexic student in learning a modern foreign language.

- Instructions and symbols should be used consistently
- Provide course introduction and overview and introductions to chapters and units
- Provide chapter/unit summary
- Include a glossary
- Close correspondence between audiocassettes and books
- Avoid irrelevant vocabulary and material
- `Set the scene` in advance of a listening task, to allow student to prepare him/herself
- Ensure phoneme-grapheme system is explicit

- Provide examples of segmentation of words
- Systematic vocabulary extension
- Avoid assumptions about knowledge of grammatical terms
- When explaining points of grammar always give examples
- Include cultural information to aid motivation
- An oral/aural focus is welcomed by most dyslexic learners

Student's Experience

Emily struggled with French which was a core component of her culinary Arts course. She excelled at the practical aspects of the course but because of her difficulties with French, she considered leaving the course. She spoke with the disability officer in the college and explained that she was dyslexic. She was given intensive language support to cope with French. She completed her work placement at a top restaurant in France where she was offered employment because of her excellent culinary skills. She developed sufficient oral/aural skills to communicate in French although she continued to struggle with written language.

How Students with Dyslexia Learn Best

Students with dyslexia need a very structured learning environment which uses a variety of techniques to impart information. In brief, students with dyslexia learn best when the teaching is:

- Multi-sensory i.e. using all available pathways in the brain, including visual and auditory
- Systematic/sequential – To structure the learning so that the student can build skills gradually and in a logical way
- Cumulative: The teaching helps the student connect to what is already known
- Allows for consolidation and repetition to compensate for weak short term memory and to help develop automaticity
- The teaching is cognitive and encourages the student to think about the information and to use their problem solving and critical thinking skills
- Relevant: Using specific examples and relating them directly to the material being studied

Students Can Improve Their Skills By:

- Learning core vocabulary to an automatic level
- Putting information into graphs, diagrams or pictorial form
- Chunking and grouping, categorising information
- Overlearning, even when information is known the student should continue to learn it to compensate for short-term memory difficulty
- Linking new information to base of knowledge already established

Summary

Learning Weaknesses

- **Memory:** Affects comprehension, note-taking, recall of facts/formula
- **Reading:** Slow and inefficient
- **Writing:** Limited vocabulary, poor syntax, grammar and structure
- **Spelling:** Inconsistent, omission of letters/syllables, could mask meaning
- **Maths:** Miscopying digits, symbols, slow calculation rate
- **Handwriting:** Illegible under stress, poor letter formation
- **Organisation:** Schedules, deadlines and structure of assignments
- **Speech:** Mispronunciation of words

Learning Strengths

- Overall level of intellectual or creative ability
- Lateral or diverse thinking skills
- Problem-solving skills
- Visual and spatial thinking skills
- Ability to process information holistically
- Good oral skills/Interpersonal and/or intrapersonal skills

Teaching Students with Dyslexia a Modern Foreign Language

- Ensure course is systematic overall
- Systematic extension of vocabulary, segmentation of new words
- Explain all grammatical concepts with examples
- Oral/aural focus preferable for students with dyslexia
- Provide glossaries and regular revision sections

Students with Dyslexia Learn Best by using:

- Multi-sensory strategies, using all pathways in the brain
- Structuring, systematically organising and sequencing information
- Linking information to what is already known
- Consolidating learning by regular reviewing of information
- Overlearning to compensate for poor short-term memory

Recognising Dyslexia

Although there is much more awareness about dyslexia now than in the past there is still evidence that a lot of students go undiagnosed until after they enter third level. College lecturers frequently ask how they can recognise a student with dyslexia. The main indicators are:

- Significant discrepancy between oral and written performance
- Unusual and inconsistent spelling
- Untidy handwriting
- Slow reading with inaccuracies
- Inaccuracy in reading due to visual discomfort
- Mispronounces or misuses words
- Difficulty writing and planning essays
- Does not complete assignments or hand in work
- Poor memorisation skills
- Problems recalling names of some words
- Difficulty organising and sequencing tasks
- Problems taking notes from overheads/lectures
- Trouble outlining or summarising
- Poor time management skills

It is important to note that it is only when these difficulties occur in a cluster and impact negatively on learning that dyslexia should be considered as a possible cause.

“Compensated” Dyslexic

It is also worth noting that many students with dyslexia will have worked hard over the years to overcome their difficulties and can be termed `compensated dyslexics`. They may have learned strategies for reading, note-taking and writing which means that they can cope well with their academic studies.

Screening and Identifying Dyslexia

Third level institutions may test students for dyslexia or refer them for testing for a number of reasons:

- To verify and assess the needs of the student in terms of supports required to access their course, where a student presents as dyslexic but has no recent psychological assessment.
- To detect those who have come to the attention of the staff by self-referral due to difficulties they are experiencing with their course.
- To inform policy-making e.g. standardising marking procedures for exams, provision of exam accommodations, provision of services such as learning support and access to assistive technologies.

Tri-Partite Approach to Identification

The identification process can be divided into three stages, pre-assessment and screening, psychological assessment and individual needs identification.

- Pre-assessment and screening: Most institutions advise students of the implications of testing and screen students before referring them for a full educational assessment.

- The pre-assessment interview and screening is usually carried out by a counsellor or experienced learning support tutor.
- Psycho-educational Assessment should be carried out by a fully qualified psychologist with a recognised qualification in assessment. This is necessary for a diagnosis of dyslexia to be accepted by a college.
- The individual needs assessment can be carried out by learning support tutor with specialist knowledge and training in working with students with dyslexia. This will identify supports required by the student in order to fully access their course.

Stage 1: Guidelines for Pre-Assessment and Screening

Pre-Assessment

- Discuss the process and issues involved in assessment
- Offer pre-screening counselling if necessary where low self-esteem is evident
- Inform student of potential consequences and limitations of testing i.e. that if the screening process indicates a high probability of dyslexia then a full psycho-educational assessment would be recommended

Screening Process

An Interview

- To gather a case history of the student's overall learning experience including specific difficulties.

Screening Tests

Paper/orally presented screening tests:

- Dast (Fawcett and Nicholson, 1998)
- Adult Dyslexia Checklist (Vingrad, 1994)
- Computer-based Tests
- Lucid Adult Screening Test (LADS), (Lucid)
- Research,(2002)
- Quickscan (part of studyscan suite from Zdzienski, 1997)

Computerised screening

The most popular of computerised dyslexia screening test currently in use in third level in Ireland is the LADS. If this method is used it is important that the computerised test is supported by the pre-assessment interview, case history and paper tests of reading/ spelling attainment. LADS consists of four sections as listed below, each takes less than five minutes to complete, so the test can be taken in 20 minutes.

- I.Q.
- Word Recognition
- Word Construction
- Memory

Psycho-educational Assessment

A full psychological/educational assessment should contain the following information:

General level of intellectual ability

With particular reference to significant discrepancies between verbal and non-verbal abilities.

Cognitive processing, including

- Working memory
- Phonological processing
- Speed of processing
- Performance in tests such as motor control and/or attentional functioning may also be included

Attainment tests

- Attainments in reading: Including single word reading, non-word reading, text reading and reading comprehension
- Attainments in Arithmetic: If the course has a maths component
- Attainments in Language: If a course has a foreign language component

Conclusion

- It should be stated whether or not a student has dyslexia and if this is disabling in the context of study at third level.
- Recommendations for support: In terms of technical support and study skills tuition

Most Frequently used Tests

- Wechsler Adult Intelligence Scale – Third edition (WAIS 111)
- Woodcock reading Mastery Test Revised – (WRMT – R)
- Wide range Achievement Test 4 (WRAT – 4)
- Dyslexia Adult Screening Test (DAST)
- The Adult reading Test

Case Study

Background

Mary was a mature student who had a successful career as a senior child care worker. New regulations meant that everyone involved in childcare had to have a formal qualification, so Mary along with other child care workers returned to education on part-time basis to do a degree in social care. Mary found college a daunting experience and her lecturer spoke to her after she failed her first assignment. The lecturer explained that her written work lacked structure and was difficult to understand because of poor spelling, grammar and syntax. The tutor referred Mary to the disability service.

Referral and Screening

Mary met with a learning support tutor and explained that she had struggled to learn and write at school and had received individual reading help. She had never been assessed for dyslexia and assumed she was just not very bright. She dropped out of school early and used her excellent interpersonal skills in a job she loved working with troubled kids and quickly gained promotion and recognition

in this area. Although she was anxious to identify the nature of her written language difficulties, she was also very upset by the memories of school failure. She was referred for counselling support and dyslexia screening suggested her difficulties were due to dyslexia. She attended an educational psychologist for a full assessment.

Outcome

The educational psychologist report confirmed that Mary was indeed dyslexic and this allowed Mary to:

- Finally understand the nature of her written language difficulties.
- To access accommodations for spelling, grammar and syntax so that her lecturers could be informed of her written language difficulty.
- To access support from a learning support tutor who taught her strategies to overcome her difficulties and to suit her learning strengths.
- Discovering she was dyslexic was liberating for Mary who could finally face up to her difficulties and regain her confidence in her own intelligence and ability to learn.

Individual Needs Assessment

This assessment is usually carried out by a disability officer or learning support tutor with expertise in the area of the dyslexia. The purpose of the assessment is to identify the supports necessary to allow the student to access their chosen course of study. In order to do this a discussion with the student should examine:

- The nature of their dyslexia and the degree of difficulty as experienced by the student and a discussion to ensure the student understands the diagnostic assessment (psycho-educational report).
- Impact of dyslexia on ability to access the course in terms of
 - » Lectures: Can they take notes of good enough quality to study?
 - » Course materials: Can they read text/reference material?
 - » Assessment: Can they write project/essay/exam questions?
- Supports required in terms of lectures, course material and exam/assessments
- Learning support strategies necessary for student to learn
- Specialist dyslexia tuition to learn compensatory strategies

Supports

Once the tutor has identified the students' needs they can recommend a range of needs-based supports. These recommendations will vary according to the individual students needs, some of the supports recommended are:

Lectures

- Copies of notes
- Note-taker or note-taking tuition

Course Material

- Tuition in research and reading strategies
- Tuition in memory strategies, organisational skills
- Training on use of Assistive Technology

Exam support

- Extra time
- Concession for spelling/grammar/syntax
- Use of computer to answer
- Tuition in essay writing, self-editing, exam preparation and exam technique skills

Case Study: Individual Needs Assessment

Nature and degree of difficulty

Anne's report indicates that although she has a perfectly adequate intelligence her reading was at 13.3yr was four years delayed and her spelling was three years delayed. This suggests Anne is severely dyslexic and given the high language content of the social care course she will need a lot of support. Anne herself states that she struggled with reading/ writing throughout school. At Leaving Cert she had the following accommodations:

- Reader
- Use of tape-recorder/computer
- Waiver for spelling and grammar

Impact of Disability on ability to access third level course

- Poor reading skills: will make it difficult for Anne to research and read course material and poor spelling will make assignments for college work very difficult.
- The course she is studying has a high essay content, it is assessed by essay work and Anne will have to use compensatory strategies including availing of learning support and the use of assistive technologies to overcome her difficulties.
- Given the level of difficulty experienced by Anne she will need support to be provided on an individual basis.
- Her writing skills are too weak to be able to take lecture notes.

Recommendations

- Anne would benefit from access to photocopying as her spelling is too inaccurate to take notes from text book material.
- Learning Support: Anne will need a lot of individual teaching to help her research, plan and structure written course work.
- The level of difficulty experienced by Anne and the limited facilities available on the college site necessitates that Anne apply a laptop with Texthelp and Dragon Naturally Speaking software and the use of a Franklin speaking dictionary for writing.
- Copy of Lecture Notes should be provided for Anne as she is unable to listen and write simultaneously.
- Additional tuition may be required in Psychology, the difficult vocabulary and language content will cause Anne difficulty.
- Anne should have a reader, use of tape or computer to answer at exams.

Assessment: Key points

Pre-Assessment Interview

- Explain assessment process
- Offer counselling if appropriate
- Discuss educational history

Screening

- Should try to identify dyslexic characteristics
- Should include sub-tests in reading and spelling
- Should include sub-tests in writing and memory

Psycho-educational Assessment

- General intelligence tests
- Cognitive functioning
- Attainment tests in reading/spelling
- Arithmetic/language skills
- Conclusion should clearly identify dyslexia
- Supports should be recommended

Individual Needs Assessment

- Discuss impact of dyslexia in learning environment
- Recommend supports in lectures, course material and exams
- Initiate and develop a programme of learning support

Accommodating students with Dyslexia

Lecturers and tutors are in an ideal position to support students with dyslexia. They have regular contact with students and know them best, and as experts in their field they also know the academic requirements for the course they teach. Lecturers do not have to become experts in dyslexia in order to support students with dyslexia but it helps to take on board a few simple strategies that will aid learning. It also helps to be sympathetic and understanding of the difficulties faced by students with dyslexia.

In general, academic staff could:

- Encourage students to notify you as early as possible about any learning needs they may have
- Invite students with dyslexia to meet with you to discuss any concerns they have about the course
- Provide students with a detailed course syllabus for the academic year

Academic staff can take learning strengths and weaknesses of dyslexic students into account when:

- Lecturing
- Setting reading/research work
- Setting Written Assignments
- Marking and giving feedback on Assignments
- Preparing Students for Exams
- Facilitating Students in Exams
- Summary: Key points

Lecturing

Lecturers can use a number of strategies to ensure students with dyslexia can access the material covered including:

- Use the beginning of the lecture to put new material into context by reviewing material previously covered.
- Give an outline of the structure of the lecture.
- Signpost each new idea “Now I’m going to look at...”
- Have copies of notes or overheads available in hard copy or in electronic format for each student.
- Pause regularly to ask for questions and to sum up key points.
- Use a multi-sensory approach where possible i.e. using videos, flow-charts, diagrams or tapes.
- Communicate patterns or themes in material to encourage association of ideas.
- Allow the use of laptops or tape-recorders in lectures.
- Give back-up reading from text or articles so that a student can try to grasp understanding from another angle if necessary.

Using e-learning or electronic notes

Providing notes online or in electronic form has many advantages for the student with dyslexia, these are just some:

- Material online can be accessed by students when, where and for as long as they need.
- Material online can make use of colour and interactive diagrams.

- Material online can link to explanatory or extension material.
- Notes online can be reduced or enlarged at will.
- Notes online can be customised in terms of background colour and font style.
- Text online can be read by appropriate software.

Setting Reading Work

Reading is an essential element of any of most courses, but lecturers can tailor reading requirements to suit students with dyslexia by:

- Many dyslexic students may be competent at reading to themselves but may struggle when required to read in front of others.
- Only ask students with dyslexia to read aloud if they want to and give them advance notice of this before the lecture.
- Give students extra time for reading tasks in lectures and give examples of what information students should look for.
- Introduce key words or jargon in advance of assigning a reading passage as those students with dyslexia may have difficulty with understanding if the mechanic of decoding new terminology gets in the way of meaning.
- Annotate reading lists with what is essential and what is desired reading so that students with dyslexia can prioritise.

Setting Written Work

Most universities and colleges rely upon written assignments to assess students` progress. Lecturers can help students with dyslexia achieve in written assignments by:

- Critical information about course requirements and deadlines in accessible and multiple formats i.e. written, oral, email or disc.
- Set interim targets for stages of assignment to allow students with dyslexia to organise their time more effectively.
- Clarifying assignment titles in order to eliminate misinterpretation.
- Allow alternative format assignments e.g. photographs, drawings or use of other visual aids in place of descriptive text.
- Establish a reduced word count for essays.
- Focus student on key essay requirements such as introduction, main arguments, supporting points and evidence, conclusion.
- Assist them with ancillary conventions such as bibliography, references and quotations.

Guidelines for marking exam scripts and giving feedback

- Correct for content following a defined and written marking scheme.
- Read fast, looking for ideas, understanding and knowledge.

- If presentation is part of the marking scheme then the percentage for presentation should be indicated separately.
- Identify main difficulty i.e. spelling, grammar, syntax and highlight examples.
- Make constructive comments.
- Explain your comments straight-forwardly.
- Write legibly.
- If you have marked only for content and ideas, say so.
- Use two pens, neither red; use one for content/ideas and the other for structure.
- Be sensitive, many students with SLD have had bad experiences in both primary and second level education because of a lack of awareness among teaching staff of the specific issues impacting on them in education.

Preparing students for exams

Preparing for examinations requires a lot of organisation and planning, two things that students with dyslexia find particularly hard. Methods of revising for exams such as reading, re-reading and writing out notes are not effective strategies for the dyslexic student. It is important that the student learn some basic study and exam preparation skills which allows for their learning style.

Tutors can help students by:

- Establishing with students a timetable for short-term, mid-term and long-term planning.
- Allow realistic time frames for revision.

- Review past exam papers with course handouts to correlate questions and topics covered.
- Rehearse reading and interpreting questions, for example, by using the scorer system. (Scheduling time, searching for Clue words, Omitting difficult questions, Reading carefully, Estimating time for answers and Reviewing work).
- Help students plan possible exam answers.
- Encourage students to use highlighter pens to identify key words in questions.
- Encourage students to look for personal errors they routinely make.
- The mechanics of writing can interfere with recall of ideas, therefore it is important for students to learn mind-mapping techniques.
- Advise students to use bullet points if they run out of time.
- Advise students to learn stress management techniques to help them cope with the stress of the exam situation.
- Practice exam questions under timed conditions.

Exam Words

Students with dyslexia often do not appreciate the subtlety of the different meanings associated with the words that ask the question and thus may not write all they actually know. It is important to clearly explain to students with dyslexia that different answers are required when the word asking the question changes.

Example

The topic for each of the four questions below is the same but the answers vary depending on the word asking the question. It is important the tutors give clear guidelines to the students in terms of format of answers required.

Question 1: *Explain* the term “hydro-electricity”.

This question requires a short answer where the concept is explained in a few sentences.

Question 2: *Discuss* the use of hydro-electricity.

This question requires an essay type answer with four parts where you

- a) explain what is meant by hydro-electricity
- b) give the advantages of using hydro-electricity
- c) give the disadvantages
- d) say what the long –term implications are for using this type of electricity

Question 3: *Describe* hydro-electricity.

This answer involves all the parts as per the discuss question but with the addition of diagrams and drawings.

Question 4: *Illustrate* the use of hydro-electricity.

This answer requires working through an example of hydro-electricity generation.

Instruction Words Used In Exams and Assignments

A helpful guide to use is:

Compare	Look for similarities and differences between
Contrast	As above or each item can be set against one from the other group
Criticise	Give your views and discuss the evidence
Define	Give the exact meaning of a word, phrase or idea
Describe	Give a detailed account
Discuss	Explain, then give the pro's and con's and implications
Distinguish/ Differentiate	List the ideas and then say how they differ
Evaluate	Discuss the arguments that other people have put for and against. You might add your own views
Illustrate/Interpret	Make clear, use examples
Outline	Give the main features and ideas of a subject. No details.

(The above is taken from a handout 'Examination Technique' by A.E. Baker and V O`Donoghue, Barnet College of Further Education).

Facilitating Students in Exams

Examinations are daunting for every student but the additional students with dyslexia face the additional stress because the mechanics of reading and writing interfere with the process of interpreting questions, recalling information and structuring answers. Third level institutions can help minimise the impact of dyslexia by making exam papers and the examination itself more accessible. Here are some suggestions:

Making the exam paper more accessible

- Print exam questions in enlarged font.
- Use shaded paper such as blue or pink to eliminate glare from black text on white background.
- Avoid computer sheets for multiple choice questions.
- Avoid complicated language in exam questions.
- Clearly separate questions on exam paper.

Making the exam accommodations

- Offer extra time - on average 10 minutes per hour to allow for slower pace of reading and writing.
- Allow students to record their answers on tape.
- Allow students the use of a word-processor if they are proficient in its use.
- If a student uses a word processor with voice recognition software for academic assignments allow them to use it in exams.
- Permit students to use a scribe to write down their answers.

- Allow students to have a reader where necessary.
- Do not deduct marks for mistakes in grammar, punctuation and spelling, so that a student can concentrate on content and ideas.

This list of accommodations is not exhaustive and will not apply to all students with dyslexia. A lot of students feel that a waiver for spelling and grammar and some extra time is sufficient for them to demonstrate their knowledge and this allows them to sit the exam with their colleagues. If students require the use of word processing with voice recognition software, reader, scribe or the use of a tape recorder then they must sit the exam in a separate room from other students and they must be trained in the use of such facilities.

Summary of Key Points

Lectures

- Outline main areas that you are going to cover in the lecture
- Signpost each new idea
- Provide copies of lecture notes preferably in electronic form
- Allow taping of lecture
- Use videos, diagrams, drawings, examples where possible

Setting Reading/ Written Work

- Identify essential reading and desirable reading on reading lists.
- Only ask students to read aloud in lecture if they want
- Introduce new terminology before setting reading tasks
- Clarify essay titles and format required i.e. introduction etc.
- Allow students to use alternatives to text only i.e. photographs, drawings etc.
- Set interim targets for stages of assignment.
- Give deadlines in accessible format i.e. email, oral, written or disc.

Guidelines for marking script

- Mark for ideas and content
- Do not penalise for spelling, grammar or punctuation
- Do not mark every wrong spelling but examples of common errors
- Offer constructive criticism
- Make comments in a sensitive manner and in legible writing

Preparing for exams

- Assist students by doing examples of exam questions and answers
- Give clear guidance on revision schedule
- Make the exam paper accessible by choosing exam words carefully

Exam Accommodations

- Print exam paper on blue/pink background
- Allow 10 minutes per hour extra time
- Allow students to use word processor, tape, voice recognition software, reader or scribe where necessary

Assistive Technology

Many students with dyslexia find the use of Assistive Technology can help them compensate for their reading and writing difficulties. However, Assistive Technology is often thought to refer to a laptop with sophisticated software but it is so much more than this. Assistive Technology refers to any technical aid, device, tool or adaptation that allows a student to work independently and supports them in their learning.

Definition of Assistive Technology

Any item, piece of equipment or product system whether acquired commercially off the shelf, modified or customised, that is used to increase, maintain or improve functional capabilities of individuals with disabilities.

(Tech Act, 1988; ATA 1998)

Simple Aids

Everyday functional aids to learning with no electronic parts include:

- **Post-it notes:** To mark pages and to record simple reminders
- **Coloured pens:** To distinguish important heading, sub-headings
- **Highlighter pens:** To mark key information on a page, acts as an aid to memory
- **Coloured paper:** To reduce glare from black text on white paper

- **Pen grips:** Assists pen control and therefore hand-writing
- **Coloured key-board letters:** Allows students to easily distinguish between letters that they may otherwise confuse
- **Magnifiers:** Allows student to enlarge text as needed

Low Tech Assistive Technologies

- **Digital tape-recorders or dictaphones.** Students can record lectures which can later be transcribed. Students can also use the dictaphone to record short amounts of information such as essay ideas, list of things to do, deadlines, etc.
- **Texts on tape.** These are widely available for fiction and literature. The American Association for the Blind also has many university text books in many disciplines available on tape. (Can be accessed through some university libraries).
- **Reading Pen.** Scans and reads aloud individual words or a line of text. It is portable and will display and read dictionary definitions.
- **Hand-Held Electronic Dictionary (Franklin).** This is a portable device which has phonetic spell correction, dictionary definitions, thesaurus and memory capability to allow the student to compile and store most frequently needed words. The latest versions also have a speak button so the student can hear the word read aloud.

Assistive Technologies to aid Study Skills

- **Inspiration**

Computer programme which allows the user to create and modify concept maps as a visual aid to learning. The user can brainstorm ideas for essay writing and can map notes for study or presentations.

- **Mindmanager**

This computer programme is also a visual aid to learning which helps the student organise ideas and notes in flow charts or visual maps.

High-Tech Assistive Technologies

- **Kurzweil 3000**

This is text to speech reading software that will scan a printed document, displays the page as it appears in the original document and reads the page aloud while highlighting each word as it is being read. However, it cannot read text out of other programmes, it is always necessary to import anything into Kurzweil 3000 that the student wishes read. This software does however, have bilingual support for students who need help with a foreign language.

- **Text help Read and Write**

This software will highlight and read aloud from word processors or other text based programmes (without importing it). The latest versions of this software have voice recognition which allows a student to speak and the computer will type what is spoken. It is currently the most popular programme text to speech software used by students with dyslexia at third level and is available now on memory stick. Some colleges have networked it so it is available at any college computer terminal.

- **Dragon Naturally Speaking.**

This voice recognition software is very useful for students with severe writing difficulties where the spelling masks the meaning. It allows the student with training to dictate into a microphone attached to the computer and the computer will type what is said.

Note: This is by no means a comprehensive list of Assistive Technology available or of the capabilities of individual devices and software mentioned. The listing of specific software does not mean that AHEAD endorses these products but rather offers the information by way of introducing the range of supports available.

Supports for students should be recommended on an individual basis after detailed individual needs analysis has been carried out by the appropriate professional. It should also be pointed out that some students derive sufficient support from regular word processing packages that have spell check, grammar check and thesaurus facilities.

Case Study 1

Tom was a Fine Art student who was dyslexic. His dyslexia was severe and affected both auditory and visual processing capabilities. When taking his Leaving Certificate exam he was allowed answer examination papers on tape due to the impact of his dyslexia on his writing skills. Tom always excelled at art and was admitted to a degree course in fine art based on his portfolio and Leaving Cert results.

Main Difficulties experienced by Tom:

- Reading Skills – poor
- Spelling masked meaning
- Limited vocabulary
- No concept of spelling, grammar or syntax

Impact On Ability To Access Course

The degree course in fine art had a written component which accounted for 20% of the final mark each year. This presented a huge obstacle for Tom who considered it unfair that his artistic and studio work would be impacted by the amount of extra time and effort he would have to devote to produce the written element unlike his fellow students who were not dyslexic. His poor reading skills meant he would struggle to do sufficient reading for research purposes. His poor spelling meant that he struggled to put ideas on paper and when he did the expression was poor. The written elements of the course were:

3 by 2000 word essays – in first, second and third year

8,000 word mini-thesis – in final year

Supports

Assistive Technology

Tom trained on Texthelp for reading and Dragon Naturally Speaking for writing.

Learning support

By working with a tutor Tom learned some reading strategies and writing skills such as task analysis. He also benefited from specialist dyslexia tuition when working on thesis spelling/ grammar /syntax addressed as they arose taught to self-edit.

Outcome

Tom graduated with 2:2 last year and is currently exhibiting his own work and teaching part-time in a community based project.

Self-esteem

Where a difficulty has gone undiagnosed until late into schooling and a student has had to struggle with `failure` at school or underachievement they will often struggle with self-confidence. Anxiety and frustration associated with having knowledge but being unable to express it in a form that is valued in assessments can stay throughout life with students even when they manage to acquire basic literacy competency. One study has shown that university students with dyslexia have significantly lower self-esteem than their peers and rated themselves as less competent in written and academic work (Riddick, B. et al., 1999).

Another study provides a detailed description of the work of an adult dyslexia research group from 1987-1989 in Leicester University (Herrington, 2001). In discussing their experiences these adults were critical of societal, family and educational attitudes (2001, page 109). They reported a feeling of disempowerment in society because of the value that is placed on the written word and the assumptions made about people with literacy difficulties as being intellectually challenged. In educational settings they were called `lazy and stupid` and felt that there was general lack of understanding and belief in the nature of their difficulties. From the perspective of family and support, they felt that their parents were not sufficiently well informed to be in position to support them when they had experienced problems in school.

Consequently students at third level may be very unsure of their skills and may avoid contributing during lectures and workshops. To help alleviate this, staff needs to be aware of those with dyslexia and be sensitive to their possible

lack of confidence. Therefore they should endeavour to strike a balance between treating dyslexic students `just like everybody else` and singling them out for preferential treatment which could embarrass them. In brief academic staff can help by providing:

- Understanding and acceptance
- Reassurance, support and encouragement
- Referral to college counsellors where appropriate
- Referral to appropriate support service

Student's Voices

Here are the views of some students with dyslexia on aspects of their experience in college:

On being helped

"The economics lecturer was brilliant I told her I couldn't take notes in lectures because I'm dyslexic. She made copies of notes for all our group and offered to print notes for me in extra large print."

"I found physics very difficult in first year as I had not done this subject for Leaving Cert and it takes me longer than other students to learn new vocabulary. I talked to the Head of the department and he asked if extra tutorials would help. The department then offered extra tutorials for any first year student struggling with physics. It was really helpful for me and for other students who needed the help."

On not being understood

"I don't go to communications lectures as the tutor asks people to read aloud in the lecture. I get copies of notes from my friends and do the assignments."

"I didn't tell anyone I was dyslexic in first year because in secondary school I was told this was a `cop-out` and was given no help. If I had known that I would be understood and get a waiver for spelling and grammar I would have come forward last year."

"I told the lecturer that I was allowed extra time at exams because I'm dyslexic and asked for extra time for a class exam. He said I couldn't be dyslexic when I got such good results in my assignments."

What he didn't see was that I spent three times as long as other students doing assignments. And just because I'm dyslexic doesn't mean I'm any less able."

On success

"I just got 70% and can progress to the degree course, I never thought I would be so happy to be studying."

Further Information: Publications and Research

Bosse, M., Taunturier, M. and Valdois S.

(2004) *The Cognitive Deficits responsible for Developmental Dyslexia: Review of evidence for a Selective Visual Attentional Disorder*. *Dyslexia*. Vol.10., pp 339-362.

Buzan, B. & Buzan.

(2000). *The Mind Map Book*. BBC Worldwide Ltd.

Clancy B.

(2001) *Dyslexia in Third Level Education*. Dublin: AHEAD Education Press.

Curry, P. and Jordan,

J.(2003). *Improving the Retention of Students Disabilities in Third Level*.

[Internet] Available at: <http://www.tcd.ie/disability/docs/pdf/SDS%20Surveys/StaffSurveyReport.pdf>

Davis, D

(1999) *The Gift of Dyslexia*. London: Souvenir Press Ltd.

Department of Education and Science

(2007). *Fund for Students with Disabilities*.

[Internet] Available at: <http://www.education.ie>

Farmer, M., Morgan, M., Riddick, B.and Sterling C.

(1999). *Self-esteem and anxiety in the educational histories of adult dyslexic students*.

Dyslexia. Vol.5, No.4.,pp 227-248.

Gilroy, D. and Miles T

(1996). *Dyslexia at College*. London: Routledge.

Hatcher J., Snowling M. and Griffiths Y.

(2002) *Cognitive Assessment of dyslexic students in Higher education. British Journal of Educational Psychology*, 72 (P119-133).

Hunter-Carsch, M. and Herrington, M.

(Eds) *Dyslexia and Effective Learning in Secondary and Tertiary Education*. London: Whurr.

Klein, C.

(2003). *Diagnosing Dyslexia: A Guide to the Assessment of Adults with Specific Learning Difficulties*. London: The Basic Skills Agency.

Mc Grath C.

(2000) *Dyslexia and Third Level education in Ireland – Future directions*.

Internet available at: <http://www.ucc.ie/publications/heuu/Newsletter/june2000/dyslexia.htm>

National Working on Dyslexia in Higher education

(1999). *Dyslexia in Higher Education: policy, provision and practice*. Hull: The University of Hull.

Ott, P.

(1997) *How to Detect and Manage Dyslexia*. Oxford: Heinemann.

Quinlivan, P.

(2000) *The Equal Status Act, 2000. Students with Disabilities and Higher Education: A Brief Guide*. Dublin: AHEAD Education Press.

Sayles A.

(2002) *Dyslexia and Higher Education*. Proceedings of the AHEAD conference on Demystifying Dyslexia in Third Level Education, University College Dublin, 25th November 2002.

Singleton, C.

(2005). *Dyslexia at College Level: critical issues in identification and support*. Proceedings of Dyslexia at Third Level, a joint Trinity College and University College Dublin workshop.

Snowling, M.

(2001) *From Language to Reading and Dyslexia*. *Dyslexia*. Vol.7. No.1., pp. 37-46.

Organisation and Contacts

Aontas

22 Earlsfort Terrace, Dublin 2.

Tel: (01) 4754121

E-mail: mail@aontas.com

www.aontas.com

Centre for Independent Living

Carmichael House, Brubswick Street, Dublin 7.

Tel: (01) 8730986

E-mail: cildub@iol.ie

www.dublincil.org

Department of Education and Science

Marlborough Street, Dublin 1.

Tel: (01) 8734700

www.irlgov.ie/educ

Disability Federation of Ireland

Fumbally Court, Fumbally Lane, Dublin 8.

Tel: (01) 4547978

E-mail: info@disability-federation.ie

www.disability-federation.ie

Dyslexia Association of Ireland

Suffolk Chambers, 1 Suffolk Street, Dublin 2.

Tel: (01) 6790276

E-mail: info@dyslexia.ie

www.dyslexia.ie

Irish Association of Teachers in Special Education

St. Patrick's College, Drumcondra, Dublin 9.

Tel: (01) 8376191

Email: info@iatseireland.com

www.iatseireland.com

National Adult Literacy Agency

76 Lower Gardiner Street, Dublin 1.

Tel: (01) 8554332

E-mail: Literacy@nala.ie

www.nala.ie

National Educational Psychological Service

Frederick Court, 24-27 North Frederick Street, Dublin 1.

Tel: (01) 8892700



AHEAD, East Hall
UCD, Carysfort Avenue
Blackrock, Co. Dublin

† (01) 716 4396
e ahead@ahead.ie
www.ahead.ie