

**Final Draft**

**Inclusive strategies for staff to improve the learning, teaching and assessment experience of students with dyslexia studying Geography, Earth and Environmental Sciences.**

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In the pursuance of value added and to meet the authors' on-going commitment to the dissemination of the outcomes of previous projects funded by HEFCE, the section of this guidance entitled " Course development, Programme planning, Approval and Review – A checklist for change" has been adapted for GEES departmental relevance from section 4 of Waterfield, J. and West, R. (2002), SENDA Compliance in Higher Education: An Audit and Guidance Tool for Accessible Practice within the Framework of Teaching and Learning. (University of Plymouth)

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## 1. Introduction

In the UK the Quality Assurance Agency (QAA) Geography Benchmark Statement of 2000 asserts that “Geography occupies a distinctive place in the world of learning” and geographers recognise “the great differences in cultures, political systems, economies, landscapes and environments across the world and the links between them”. (The QAA Benchmark statement for Geography, 2000, page 2, item 1.1)

The corresponding document for Earth and Environmental Sciences and studies also emphasises not only the earth’s physical systems but also the importance of a global view in apprehending the political and cultural relationships between society and environment. (QAA Benchmark statement for Earth Science, Environmental Sciences and Environmental Studies, 2000, section 2.1.)

With these statements in mind, departments of Geography, Earth and Environmental Sciences (GEES) are well placed to respond positively to the changing political and economic climate of Higher Education (HE) linked to the culture of increasing diversity through widening participation. With the advent of disability discrimination legislation in the UK and many other parts of the world, disabled people now have a distinctive presence in the world of HE learning.

In the UK in the past decade the HE sector has witnessed a significant increase in the numbers of disabled students applying for and studying on a wide range of courses, including more recently part-time and post-graduate study. According to the Higher Education Statistical Agency (HESA) approximately 5% of the student population have declared disabilities, although the statistics probably underestimate the true measure of the population. (quoted in Riddell et al., 2004) Of this number, in excess of one-third have dyslexia, although in some Higher Education institutions and subject areas these percentages are exceeded.

Despite the significant numbers of students with dyslexia, there still remains inconsistency of policy and practice across the sector. Whilst some institutions have policies in place and teaching and learning strategies that have considered this student group, there are often disparities in provision and practice within and between institutions and disciplines.

For the purposes of this HEFCE-funded guide, as one of a series of commissioned disability specific guides, we are concentrating on aspects of the dyslexia profile. This is not done with the intention of perpetuating a deficit, medical model of disability but to identify aspects of learning, curriculum and course planning which will provide a more inclusive learning environment. This environment will ensure that students with dyslexia and other students, disabled or not, whose learning strengths and weaknesses encompass some of the same elements, will not be disadvantaged by the continuation of the more “traditional” HE approaches to pedagogy. A “bolt-on approach” alone for disabled students will no longer be acceptable practice.

The case for inclusiveness, now a dominant factor in sector-wide policy making, was well made by the Beattie Report: “First and foremost, Inclusiveness means that the needs, abilities and aspirations....should be recognised, understood and met within a supportive environment which encourages them to achieve their goals and to make real, measurable progress” (Beattie, 1999, p. 10, item 2.4)

The challenge to “translate the concept of Inclusiveness into action” (ibid, item 2.6) is the purpose of this guide, in order that students with dyslexia can be valued for their abilities, potential and contribution, and that barriers to learning are identified and dismantled.

Steffert (1999, p.150) argues that “instructional styles that clash with learning styles cause frustration for both learner and teacher”. Thus the way that a student with dyslexia registers and processes information needs to be congruent with methods of course delivery. If we continue to deliver education mainly through written and verbal means and assess principally through the mechanisms of examinations, then we fail students with differing learning styles. Broadening the teaching and learning experience to place value on both the verbal and visual learning dimensions, will better suit learners along the lecturing continuum, the lecturing breadth of the GEES disciplines provides particular opportunities for encouraging and being responsive to a wide range of learning styles. The best pedagogy will be cognisant of this continuum and address the range of learners, from those preferring the sequential learning styles of linear, orderly and deductive approaches, to those preferring holistic styles, using shapes, images and visual thought in preference to words – the cognitive styles from the analytical to the global. Whilst the students with dyslexia may well be placed at the visual pole of this continuum, other students will be spread across the whole field. As Steffert points out “Then there are the mixed – verbal reasoners with a global preference, and visual reasoners with an analytical bias”. (ibid., p.133)

Recognising the new constituencies of students now accessing HE, who bring this range of learning styles as well as differing learning experiences, requires departments and their subject specialist staff to review traditional methods of teaching and assessment. To date, “Geography has been notable for its reflective concern with teaching methods, such that the discipline continues to lead in the creation and implementation of pedagogic innovation.” (The QAA Geography Benchmark Statement, 2000, p. 6, item 5.2) The Earth and Environmental Sciences also have strong pedagogic reputations. This creative framework offers GEES the foundation necessary to predicate teaching and the students’ learning experience on the philosophy of inclusivity rather than a “bolt-on” approach targeted at the needs of a discrete student group.

While there remains a requirement to identify any individual need, the priority has moved to focus on more integral policies, procedures and practices at a systemic level. This allows for a quality assured, planned and resourced approach to the diverse needs of the broadest student group. Waterfield (2002, p. 23) believes that “multi-sensory learning supported by technologies and inclusive teaching practices needs to be student centred and the assessment process varied to accommodate differing learning styles and strengths and to ameliorate some of the barriers to effective and efficient study”.

Cultural and economic changes are not the only drivers in HE; disability legislation in the form of Disability Discrimination Act (DDA) part 4, has further strengthened the need to address learning, teaching and assessment practices. The legislative imperative for compliance through “reasonable adjustments” and “anticipatory” practice has reinforced the agenda for change decisively.

From September 2002 this legislation has affected all aspects of HE provision and the principle behind the legislation is that disabled students should receive full access to

education and should have the same opportunities as non-disabled people to benefit from that provision.

From September 2003 compliance is more specifically required for adjustments which involve auxiliary aids and services. In addition, amendments to the DDA Part 2 which requires non-discriminatory practice by qualification and professional bodies as well as placement providers is anticipated in October 2004.

Waterfield and West (2002, pp. 8-9) state that

“we need to reflect upon whether the current teaching styles, course materials and assessment tasks allow disabled students the necessary opportunities to demonstrate their acquisition of the learning outcomes, in a way that is perceived as ‘a level playing field’. Reflecting on the key areas of admissions, teaching, learning and assessment practice, the emphasis needs to be upon parity of experience through embedded, consistent practice rather than ‘bolt on’ or ad hoc provision. In the future, while the flexibility to make an individual response to an individual need should not be lost, the emphasis will be upon being anticipatory. SENDA therefore provides the sector with an opportunity as well as a requirement to address current practice for the maintenance of academic standards and validity of approach”.

This approach supports a climate of social inclusion where students with disabilities, students from non-traditional backgrounds and those with differing learning styles will all be better served. Within this inclusive philosophy, this Guide seeks to offer helpful information and practical suggestions to HE academics wanting to know more about dyslexia. The Guide is written with special regard to academic and support staff working in the GEES disciplines. From time to time reference is made to particular teaching learning and assessment practices characteristic of the GEES subject. None the less, the needs of students with dyslexia are by no means highly discipline-dependent. There is much in this Guide therefore that will be of interest not only to GEES practitioners but to the HE academics as a whole.

## 2. What is dyslexia?

Developmental dyslexia is a genetically inherited and neurologically determined inefficiency in working memory, the information processing system fundamental to learning and performance in conventional educational and work settings. It has a particular impact on verbal and written communication as well as on organisation, planning and adaptation to change.

McLoughlin, Leather and Stringer, (2002, p. 19)

It is perhaps this very notion of conventional education that needs challenging in our HE system. West (1997) suggests that our conventional educational system may be focussing on the wrong kinds of skills and rewarding some of the wrong kinds of learning. Significant changes to learning opportunities, teaching and assessment will offer the chance for students with dyslexia to reach their potential and achieve their goals.

Under the current legislation “dyslexia” is recognised as a disability with ramifications for accessing funding under the Disabled Students’ Allowances (DSAs), which can be helpful for the individual. (See Appendix 3 for outline details of the DSAs.) The assessment of dyslexia enables the student to understand the basis of their personal experiences, develop self-understanding and identify strategies. At an institutional level, it demands a more inclusive approach to meeting the needs of a significant number of learners.

McLoughlin et al (Ibid. pp. 4-6 divide the characteristics of dyslexia into primary and secondary facets, namely:

### Primary

- ❖ **Organisation**, including time management and time keeping
- ❖ **Literacy** including word recognition, reading fluency, comprehension, spelling, written expression and fluency.
- ❖ **Numeracy**, not a conceptual difficulty, but including symbol recognition, calculations and ordering, mental arithmetic.
- ❖ **Social interaction**, due to problems with verbal fluency, saying the wrong thing, processing language, miscuing facial and body language, fear of forgetting.

### Secondary

- ❖ **Lack of confidence**, not perceiving themselves as able
- ❖ **low self-esteem**, not valuing their own abilities, finding themselves devalued by others
- ❖ **Anxiety**, general anxiety as well as particular anxiety with learning, examinations and testing
- ❖ **Social interaction**, a combination of the above factors have consequences that further impact upon social skills

These characteristics of dyslexia are made more complex by the fact that they can vary both in degree and from day to day, according to stress levels and task demands, thereby influencing performance to a greater or lesser extent.

It is important to remember, however, that people with dyslexia are not a homogeneous group. They are individuals and the impact of their dyslexia will vary

according to their own pattern of characteristics, the recency of their diagnosis, their educational experiences, their coping strategies, and their choice and pattern of study.

Often associated with dyslexia is the Meares Irlen Syndrome, not a learning difficulty as such, but a complex and variable syndrome also known as Scotopic Sensitivity. This primarily affects the activities of reading and writing. There are many parallels between dyslexia and Meares Irlen Syndrome but the latter is a visual perceptual dysfunction caused by sensitivity to light. Some students with dyslexia, when correctly diagnosed, are found to have Scotopic Sensitivity as well. Hence, processing full spectral light will cause them perceptual distortions, eye strain and fatigue. They may also experience poor co-ordination, balance and depth perception. Diagnostic assessment by a trained Meares Irlen assessor will identify ways to ameliorate these effects, which may include the wearing of filters in the form of coloured spectacles, the use of coloured transparent overlays for reading text and the use of coloured paper for producing written documents. The guidance below in section **5.2 Written materials for the student**, incorporates good practice for students with this Syndrome.

These above characteristics of dyslexia and Meares Irlen Syndrome focus on a deficit model but there are arguments to support the belief that dyslexic people may also have a positive cluster of characteristics.

West (1997) argues that some individuals with dyslexia show particular talents in the fields of art, science, architecture and engineering, which require high-level creative and visual skills. He outlines the following positive aspects of dyslexia which when utilised in the learning process can benefit the student and their peers in learning and assessment:

- ❖ good powers of visualisation
- ❖ creative thinking skills
- ❖ visuo-spatial skills
- ❖ a holistic rather than analytical approach
- ❖ good applied and problem-solving skills.

A number of the above skills, particularly those relating to spatial awareness, visual acumen and holistic thinking, have special relevance to the GEES disciplines. In addition, some of these skills are key graduate skills that institutions seek to develop in order that their graduates can be valued by employers. For these reasons it is imperative that institutional policies and departmental practices do not operate with the “notion of a fixed disabled identity.” (Riddel, et al, 2004, p.8)

Some of the characteristics of dyslexia will be familiar factors in the personal and skills profile of a wide range of people without dyslexia. They may not appear as a significant cluster of characteristics, but one or more can be present because of poor educational background, a break in learning, English as a second language, other disabilities, life experiences, or a combination of any of these. Thus, meeting the needs of students with dyslexia will constitute “good practice” for the broad diversity of the student body that characterises HE in the 21<sup>st</sup> Century.

Following this section is an aide mémoire entitled “**Dyslexia – Being positive about communication**”. It has been provided to assist staff planning and undertaking a meeting with a dyslexic student. It might also be observed that we have used the terms “students with dyslexia” and “dyslexic students” interchangeably throughout this guidance document, as these two terms are widely accepted amongst the dyslexic community.

### 3. Dyslexia - Being positive about communication

#### Background

- ❖ People with dyslexia are not a homogenous group. They are all individuals and the impact of their dyslexia will vary according to their degree of difficulty, the recency of their diagnosis, their particular strengths, their choice of study and their coping strategies.
- ❖ The disclosure of dyslexia may be a sensitive issue for the student which can make the prospect of a meeting a daunting one. For some students with dyslexia the fact of being “dyslexic” may have contributed towards uneven experiences of support, discrimination, stigma and failure. If the dyslexia is newly identified the student may not have proven strategies for processing and recalling information.

#### Before meetings

Personal tutors and fieldwork tutors may require an individual meeting with a student and the following is an aide mémoire to make the student experience accessible.

- ❖ **Provide concise information in plain language** about the meeting in advance (place, time, venue, directions, etc.). Give the names of all those attending, their areas of responsibility and the remit for the meeting.

- ❖ **Confirm the meeting appointment** verbally or in writing in the days beforehand. People with dyslexia can often forget appointment details.

#### During the meeting

##### For the meeting:

- ❖ **use a quiet space** to help maintain concentration for the individual
- ❖ **keep the carrier language simple** to avoid unnecessary decoding
- ❖ **invite questions** to monitor full comprehension
- ❖ **write down important information** for the individual to take away and remind him/her that there will be a record of the meeting
- ❖ **allow additional time** for the processing of information
- ❖ **encourage the use of a tape recorder** if the individual wants to use one.

- ❖ **Discussing previous teaching and learning experiences** and recent effective coping and support strategies with the individual will help establish the appropriateness of any course of action.

- ❖ **The person with dyslexia may experience increased anxiety** at a meeting, exacerbated by a possible difficulty in absorbing verbal information or insecurity about their own verbal expression. The supportive presence of a friend, colleague or partner at the meeting may be required by some students, to help alleviate tension. The student may need to record the meeting to support memory and aid comprehension.

- ❖ **Make a written record of the outcomes of the meeting** for the student.

#### After the meeting

- ❖ **Seek student feedback** to support monitoring and staff development.

#### 4. Establishing a departmental framework.

Meeting the needs of students with dyslexia demands a coherent approach at departmental level. A reliance on ad hoc or informal arrangements will not suffice. As outlined in the Introduction, the DDA Part 4 has made it unlawful to discriminate against disabled students. Moreover, it includes a requirement to be anticipatory. This means having in hand procedures and arrangements to ensure the needs of disabled students can be met as and when they apply. The effect of these changes is to demand a cultural shift in the way that Universities, colleges and their departments approach the disabilities agenda. Such issues can no longer be the exclusive province of a handful of disabilities specialists: they are becoming part of the academic mainstream and part of the responsibilities of departments and their academic staff.

The inclusive strategies outlined in Section 5 below of this Guide<sup>3</sup> will necessarily be predicated upon institutional policies and departmental procedures, or a recognition of the need to change these. Without this change, institutions are vulnerable in terms of legislative compliance and departments may experience a rise in appeals to assessment boards in the event of students with dyslexia believing that they have been unfairly treated.

Although the principal focus of this particular GEES guide is on students with dyslexia, their needs will be addressed effectively only if academic departments have a coherent and well-arranged approach to the wider issue of meeting the requirements of an increasingly diverse student group. GEES departments, like others, therefore need to address the following kinds of questions:

- ❖ Have the department's curricula been designed with the diverse teaching, learning and assessment requirements of students, including those with dyslexia, firmly in mind?
- ❖ What curricular changes are needed to make courses and modules more accessible?
- ❖ Are all areas of the department's activities SENDA compliant, from advertising and admissions right through to helping the transition to employment?
- ❖ Are disabilities issues regularly discussed and reviewed at departmental or teaching committee meetings?
- ❖ Are departmental staff trained in matters related to disability awareness and support? In particular, do they know where to find the relevant resources and guidance?
- ❖ Are all departmental web-sites consistent with national web-content accessibility guidelines? Are sites containing learning materials, such as those supporting field and lab work, designed to comparable accessibility standards?
- ❖ Is there a key member of staff with a special responsibility for disability inclusion?

A checklist is provided in Appendix 1 to help clarify some of the key legislative issues relating to **Programme planning, Approval and Review: A checklist for change**.

Students with dyslexia will tend to do best in departments where general disabilities procedures produce positive answers to the questions posed above. However, given that dyslexia is much the most common form of disability found in HE, it does of itself merit particular attention. Most GEES departments have learning and teaching committees and good practice would suggest that disability issues, including dyslexia, should have a regular place on the agenda.

Being asked to address the kinds of questions raised above may at first sound a little daunting, particularly in view of the many other demands on staff time. Many large GEES departments have high student-staff ratios (often in excess of 20-1) and many GEES academics are under pressure to engage in other activities such as research, recruitment and departmental administration. In order to develop practice for disability inclusion and to better serve students with dyslexia in a time-efficient way, the answer lies in close liaison with the institutional specialists for disability and educational development, and in regularly drawing on their expertise and advice. Sharing expertise amongst these colleagues will facilitate the process of challenging traditional practices of learning, teaching and assessment.

Departments should foster an environment where students feel enabled to discuss their learning needs and offer their experience as part of the evaluation for change and good practice. Such considered changes will enhance the quality of experience for all GEES students.

### **Course Marketing, Publicity and Recruitment**

Precept 4 of the QAA Code of Practice for Students with Disabilities recommends that:

**“The institution’s publicity, programme details and general information should be accessible to people with disabilities and describe the opportunities for them to participate”.**

As part of Widening Participation (WP) strategies and when considering general recruitment, success for any student is engendered by choosing the most appropriate course delivered in the most appropriate way. It is imperative that the opportunities for HE study are explained in a transparent way for students with dyslexia for whom inefficiencies in working memory and the acquisition of literacy skills may present obstacles to understanding.

All course information, open day materials, departmental WP activity documents, university web pages and the GEES entry in the HEI prospectus will need to be easily read, clear and concise in their content. The preparation of paper and electronic documents is addressed in the section of this guidance entitled **5.2 Written materials for students**.

It is important that the recruitment information for students with dyslexia explains about the flexibility and choice within the programme, the teaching and learning methods, course assessment modes, and the guidance and support available for them. A briefing on departmental inclusive practices and the support funding available to facilitate equality of access, could be provided for 6<sup>th</sup> form staff, careers advisors and staff in Further Education institutions as a necessary facet of raising the aspirations and awareness of students with dyslexia considering HE study.

Staff organising and attending recruitment events must be briefed on dyslexia in the context of HE in order that they can communicate in a positive way with potential applicants. Given that some GEES departments are facing recruitment difficulties (related in part to declining 'A' level geography numbers) being sensitive to the particular needs of dyslexic students is important, especially as dyslexia is now more widely identified and recognised.

### **Disability disclosure**

The advantages of disclosing dyslexia and the procedures regarding confidentiality must be explained to students. The Data Protection Act of 1998 classifies information relating to the student's dyslexia as sensitive data, thus staff must seek the student's permission before passing any information to other staff. Information such as psychology reports or support plan documents should be kept in a confidential manner and the student will need to be informed about who is in receipt of the information.

### **International students with dyslexia**

Given the increasing internationalisation of HE study, GEES departments wishing to operate in the world-wide "market place" have by necessity to consider the inclusion of overseas students with dyslexia. Whilst these students contribute to the development of international perspectives, cross-cultural analysis, knowledge and experience (all key factors for GEES subjects) the corollary of this recruitment is the requirement to adequately resource departments for inclusiveness and support. The experiences of international students with dyslexia will depend upon cultural attitudes and the social, political, economic and legislative frameworks operating in their countries of origin and of previous study.

These experiences will influence student expectations of how their rights will be addressed, whether there is a need to declare disability or not, the forms of support anticipated and where in the institution the responsibility for this lies. How dyslexia is constructed in terminology may also be an issue that will require clarification. Dyslexia is the term recognised by UCAS disability coding in the UK; in Australia and New Zealand the term is learning disability; in the USA terminology is undergoing review and whereas learning difficulties (LD) is commonplace, more recent discussions have focused upon specific learning disabilities (SLD).

Another area of importance is funding. In the UK the financial framework for support for students with dyslexia is provided to the individual student through the Disabled Students' Allowances (DSAs). A less targeted resource is made available to HEIs through premium funding, based on the number of students within an HEI receiving this allowance. Neither of these areas of funding is allocated for the support of international students. However, the legislative imperative of the DDA Part 4 requires institutions not to treat any of its students with disabilities in a "less favourable" way. There is, therefore, an additional resource implication in the recruitment of international students with dyslexia which might be addressed by institutional policy, e.g., "top slicing", or at departmental level through the prioritising of possible resources

GEES departments are therefore well advised to read the guidelines for the support of international disabled students produced by SKILL and UKCOSA. This can be found on the SKILL website at:

<http://www.skill.org.uk/info/infosheets/internat.doc>

Many GEES departments also offer exchange programmes which enable their own students to spend a period of time studying at a university or college overseas. In order to exercise the required duty of care it is important to find out about practical and support arrangements at the host institution and to offer appropriate guidance.

### **Admissions and Induction**

Precept 7 of the QAA Code of Practice for Students with Disabilities recommends that:

**“The arrangements for enrolment, registration and induction of new entrants should accommodate the needs of disabled students”.**

Transition to HE is stressful for most students, and for the student with dyslexia both primary and secondary characteristics may be amplified. It is important that information is available in a range of ways and in a range of places. Students need to be assured of the fact that the HEI and the department values student diversity, and that opportunities will be provided for students to develop the range of skills necessary to succeed and to make a valued contribution amongst their peers and to the institution.

Arrangements for enrolment and registration will need to provide clearly accessible forms, an option for electronic versions to be available and for form filling to take place in a non-stressful environment. This good practice will benefit anyone starting a new course.

## 5. Components of Teaching and Learning

This section of the Guide sets out to identify the main components of teaching and learning in a systematic way by examining the following areas:

- ❖ Verbal communications with the student
- ❖ Written materials for the student
- ❖ Written assignments, reports, fieldwork logs, etc.
- ❖ Mathematics, statistics and symbols
- ❖ Group work and collaboration
- ❖ Presentations and communications
- ❖ Fieldwork
- ❖ Work placement and work-based learning
- ❖ On-line learning
- ❖ Assessment

Each of the above components is presented as a table of information identifying both “The challenges of dyslexia for acquiring HE learning” and the “Inclusive strategies and reasonable adjustments” that can be made, to address the range of student learning styles.

The challenges of dyslexia, identified in the left-hand column, are grouped together to highlight clusters of related issues in the context of the relevant component of teaching and learning. The right-hand column presents a related range of inclusive strategies and reasonable adjustments under the DDA Part 4. It is not the intention of the authors that users of this guide should read across the columns. Any of the solutions in the right hand column may provide a more inclusive experience for students whose dyslexic profile includes items identified in the left hand column. All students are, after all, individuals and this guide is intended to be broadly useful rather than prescriptive. There is necessarily a degree of repetition in how both the challenges and the inclusive strategies are addressed, simply because so many of the components of teaching and learning subsume one another.

However, it is felt by the authors that the priority in guidance of this kind, addressing as it does the staff development needs of busy academic colleagues, is to write a light prose, with an easy to use set of tables focusing upon discrete key topics. To this end we hope that each table is a stand-alone document that can be used by individual members of staff as an aide mémoire on a day-to-day basis, or more generally as a training resource for staff development in inclusive practice. It is the authors belief that much of the information presented as “inclusive strategies and reasonable adjustments” might be understood in its broadest context as constituting good practice for a broad range of students, disabled and non-disabled alike, with a full range of learning styles and learning experiences.

## 5.1. Verbal communications with the student

To ensure that students appreciate the significance of what is being said to them - the subtleties of competing perspectives in a lecture theatre, or the health and safety arrangements in a workshop, or the detailed planning for a field trip - it is important for staff to ensure that strategies are in place to support the desired understandings. Given that the interface for this is likely to be the quality and degree of comprehensiveness of student note taking, it is important to adopt teaching practices to facilitate this. Students with dyslexia may purchase assistive technology through the DSA for this purpose, and the support of a non-medical helper for note taking and amanuensis.

<b>Verbal communications: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
Processing auditory information.  Developing reliable short term memory and recall.  Sequencing information.	<ul style="list-style-type: none"> <li>❖ Ensure that the overall discourse allows for reiteration, clarification of new terms and regular pauses for reflection and to catch up</li> <li>❖ Temper overall speed of delivery</li> <li>❖ Provide clear examples and explanations</li> <li>❖ Supply handouts and explanatory lists of new concepts and unfamiliar terms</li> <li>❖ Utilise other media (DVD, OHP, PowerPoint, etc.) as dynamic means of reiteration</li> </ul>
Multi-tasking (especially note taking).  Processing information under time constraints.	<ul style="list-style-type: none"> <li>❖ Be aware of the difficulties posed by multi-sensory tasking</li> <li>❖ Encourage students to audio record instructions and to audio record sessions (equipment may be funded through the DSAs).</li> <li>❖ Liaise with disability support service for a suitable note taker (funded, where appropriate, through the DSA Non-Medical Helper Allowance).</li> <li>❖ Supplement verbal information with written or E-learning versions as introductions, summaries and aide mémoires. (See the guidance below entitled <b>5.9 On-line Learning</b>.)</li> <li>❖ Arrange study skills sessions on taking accurate notes (funded through the DSAs).</li> <li>❖ Use blue marker on a white board instead of black.</li> <li>❖ Where guest lecturers are delivering sessions, ensure that they are aware of the needs of students with dyslexia.</li> </ul>

## 5.2. Written materials for the student

Despite advances in E-learning, the widespread use of hard-copy written material to inform HE study is still fundamental. Although the GEES disciplines have often been among the first to exploit the benefits of e-learning, paper-based communication remains important and much that is electronically delivered is ultimately downloaded in paper form. Making this means of communication effective and accessible to students with dyslexia is vitally important for their participation in: lectures; tutorials; laboratories; practice-based learning; fieldwork, assessment and placement.

<b>Written materials: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<p>Accurately comprehending written material.</p> <p>Scanning for information.</p> <p>Reading, analysing and summarising for acquisition, retention and revision.</p> <p>Reading freely without distractions and discomfort from visual perceptual distortions in the text.</p> <p>Reading for meaning in a distracting environment.</p> <p>Making accurate notes.</p> <p>Reading accurately at a competent rate.</p>	<ul style="list-style-type: none"> <li>❖ Specialist terms need explaining through word lists and glossaries.</li> <li>❖ Style of writing should be clear and concise in all departmental publications including publicity, marketing course handbooks, and learning materials.</li> <li>❖ Provide overviews, briefings and summaries for lectures, tutorials, practical and lab work.</li> <li>❖ Practical briefs need to be given to laboratory assistants and demonstrators to support the student.</li> <li>❖ Supply printed handouts and not hand-written ones.</li> <li>❖ Utilise a minimum 12 point font size</li> <li>❖ Use Arial or other Sans Serif font</li> <li>❖ Don't mix fonts</li> <li>❖ Avoid too much underlining, capitals and italics</li> <li>❖ Simplify dense blocks of text</li> <li>❖ Use bullet points</li> <li>❖ Leave wide spaces</li> <li>❖ Left justify text</li> <li>❖ Avoid visual clutter, text overlaid on graphics or "ghosting"</li> <li>❖ Use a range of presentation devices such as flow charts, diagrams and mind maps</li> <li>❖ Use coloured or re-cycled paper</li> <li>❖ Make documents available electronically so that students can modify them to meet their needs and to read at their own pace. (See the guidance below entitled <b>5.9 On-line Learning.</b>)</li> </ul>
<p>Pre- planning for practical activities such as fieldwork.</p>	<ul style="list-style-type: none"> <li>❖ Distribute materials well in advance of their required use.</li> <li>❖ Ensure that dates, times and place names stand out from the body of the text.</li> <li>❖ Inform students of reading lists well in advance to allow for difficulties with short-term library loans.</li> </ul>

### 5.3. Written assignments, reports, fieldwork logs, etc

Expectations for student submissions of written work are wide ranging and form the foundation of the structure of the teaching and learning framework. Much of the timetable of the core curriculum is experienced by students as “deadlines” for assessed work.

The submission of assessed written work is likely to be experienced by students with dyslexia as a stressful period. Academic peaks of this kind can exacerbate developmental dyslexia and students can find that their working memory becomes more inefficient, information processing more ineffective and written performance will decline. Teaching staff should consider recommending that the student might like to “touch base” with a support tutor or pay a visit to the dyslexia/disability support service.

<b>Written assignments, reports, fieldwork logs: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<p>Writing legibly at speed.</p> <p>Demonstrating understanding through written expression and fluency.</p> <p>Utilising spelling and grammar for Key Skills written communication.</p> <p>Proof reading successfully.</p> <p>Acquiring a subject specific vocabulary.</p>	<ul style="list-style-type: none"> <li>❖ Through the DSAs students may have access to a broad range of assistive technologies and study support, for example, a desktop or laptop computer for written work; text-to-speech software such as SpeakOut or TextHelp Read and Write for reading and writing accuracy; concept mapping software such as Inspiration and Mindful or mind mapping software like MindGenius and MindManager for planning and organisation; a dictaphone for recording verbal information; electronic thesaurus for developing subject specific terms; amanuensis.</li> <li>❖ Good quality, well presented handouts disseminated early, including word lists and glossaries of specialist terms.</li> <li>❖ Mark student work for content, making positive comments where appropriate. If you need to draw attention to spelling or grammatical errors, approach this sensitively.</li> </ul>
<p>Taking longer to achieve the objectives of written tasks with deadlines.</p> <p>Controlling and ordering the pace of learning and task completion.</p> <p>Stress induced by deadlines leading to poor performance.</p>	<ul style="list-style-type: none"> <li>❖ Provide early notification of assignment cut-off dates and flexible deadlines</li> <li>❖ Ensure that deadlines do not always “bunch up” at the end of modules, particularly when revision is also taking place.</li> <li>❖ Make sure that the student is aware of the tutorial and dyslexia support available to them.</li> <li>❖ Explore the possibilities of alternatives to written, assessed tasks.</li> </ul>

## 5.4. Mathematics, statistics and symbols

All these GEES disciplines demand that students develop at least a basic competence in data handling, statistics and numerical analysis. Although numeracy does not pose a conceptual problem for students with dyslexia, mathematics and its attendant symbolic protocols can lead to difficulties with mental arithmetic, calculations, symbol recognition and ordering. Misunderstanding the numerical task because it is embedded within worded problems may lead to an inaccurate response from some students. Directional and orientational confusion can arise when translating symbolic information and may affect tasks such as map reading and understanding timetables.

<b>Mathematics, statistics and symbols: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<p>Confusions with mental arithmetic, calculations, symbol recognition and ordering.</p> <p>Recalling previous stages of calculations and losing the minutiae in a complex problem.</p> <p>Difficulties recording accurate data.</p> <p>Accurately scanning graphs for information.</p>	<ul style="list-style-type: none"> <li>❖ Present problems in different ways to help those with different learning styles.</li> <li>❖ Assistive technologies such as talking calculators and text-to-speech software such as SpeakOut or TextHelp Read and Write (for reading and writing accuracy) may be purchased through the DSAs.</li> </ul>
<p>Misplacing and misreading decimal point.</p> <p>Missing out and misreading questions and worded problems.</p> <p>Confusion of symbols such as + and <math>\times</math>, &lt; and &gt;</p> <p>Mistakes in copying from line to line.</p> <p>Inversion of fractions.</p>	<ul style="list-style-type: none"> <li>❖ Allow time, offer clear guidance and present problems plainly to reduce student anxiety and errors.</li> <li>❖ Investigate assistive software for concept or mind mapping that can accommodate mathematical formulae, e.g., Mindmanager.</li> <li>❖ Ensure that photocopying of timetables is clear.</li> <li>❖ Encourage highlighting of key information.</li> <li>❖ Allow extra time for proof reading and checking work.</li> </ul>

## 5.5. Group work and collaboration

Across the GEES departments, group work has become a widely used form of learning activity. This applies both in campus-based learning and, of course, fieldwork. Many students talk openly of their concerns about the pressures of collaborating with their peers through group work, especially where an assessment grade will be awarded collectively. There are, inevitably, student fears about the standard of work, being perceived as a weak member of a work group or being allocated a designated task that is not playing to the student's strengths.

Students with dyslexia can experience all these anxieties, exacerbated by dyslexia-specific factors that impact on these kinds of social interaction. (See below **5.6 Presentations and communications**) However, students with dyslexia do also have distinct advantages in this area. They often demonstrate good applied and problem solving skills and many have a proven track record of creative, lateral thinking and, therefore, make excellent group work co-ordinators, particularly in brainstorming exercises and in identifying opportunities and strategies. They often have good verbal skills belied by their written contribution.

<b>Group work and collaboration: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<p>Reluctance to reveal weaker areas, e.g., spelling, handwriting, inaccurate calculations.</p> <p>Problems with verbal fluency, processing language and saying the wrong thing.</p> <p>Increased anxiety caused by group work.</p> <p>Effects of low self-esteem and lack of confidence.</p> <p>Mis-cueing facial expressions and body language.</p> <p>Not wanting different treatment to others.</p> <p>Ensuring that students with dyslexia are not stigmatised</p>	<ul style="list-style-type: none"> <li>❖ Devise and disseminate clear written briefings for all students on the inter-personal dimensions of group work.</li> <li>❖ Use question and answer sessions to explore individual anxieties.</li> <li>❖ Promote staff awareness of the dyslexia profile as one of many learning styles with its own strengths as well as weaknesses.</li> <li>❖ Give students with dyslexia the opportunity to show possible strengths, e.g., their holistic creative ideas, leadership, good visuo-spatial strengths and lateral thinking.</li> </ul>
<p>Adopting a successful time management and organisation regime.</p>	<ul style="list-style-type: none"> <li>❖ Electronic organisers, personal digital assistants (PDAs), computer-based software and diary planning software may be purchased through the DSAs.</li> </ul>

## 5.6. Presentations and communications

As part of the drive to promote key skills, many GEES departments have in recent years given increased priority of the teaching, practice and assessment of student presentations (Chalkley and Harwood, 1998). The GEES commitment to key skills is clearly evident in the Benchmarking statements. Most students express a level of anxiety about the activity of making a presentation to their peers, and similar anxieties are expressed about making oral interventions in lectures, seminar/tutorial settings and group work activities. Social interactions of these kinds may pose particular problems for students with dyslexia. This is the case both in terms of the determinacy of the primary and secondary factors of developmental dyslexia and how they might significantly adversely impact on a student's social skills.

The additional stress may exacerbate weaknesses in verbal fluency and language processing and lead to an unsuccessful social performance.

We take the notion of "communication" here to also encapsulate the support that dyslexic students can receive from their peers, and the benefits that both groups receive from such dialogue.

<b>Presentations and communications: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<p>Problems with verbal fluency, processing language and saying the wrong thing.</p> <p>The effects of a lack of confidence and low self-esteem.</p> <p>Increased anxiety occasioned by making a presentation.</p> <p>Effectively managing time.</p>	<ul style="list-style-type: none"> <li>❖ Encourage students to explore multi-media means of presenting seminars.</li> <li>❖ Consider computer based presentation packages such as PowerPoint with PowerTalk developed by Meru.</li> <li>❖ Offer support to practise presentation skills and timing.</li> <li>❖ Study skills support for better time management and recall skills may be purchased through the DSAs.</li> <li>❖ Explore the possibilities of alternatives to presentations.</li> </ul>
<p>The need to keep updating strategies to support learning and minimise the impact of dyslexia.</p>	<ul style="list-style-type: none"> <li>❖ Consider facilitating self-supporting study groups for students.</li> <li>❖ Introduce mentoring support from students with dyslexia who are already achieving in a higher year of study.</li> </ul>

## 5.7. Fieldwork

Given the importance of fieldwork to the GEES subject areas, and the resources brought to bear in preparing, undertaking and debriefing for fieldwork, there is a clear imperative for ensuring that these activities are successful experiences for dyslexic students. There are many potential obstacles to maximising this learning opportunity, but the pitfalls can be avoided by recognising the challenges faced by dyslexic students, through careful, timely and strategic planning. The table below is based on an earlier volume by Chalkley, B. and Waterfield, J., (2001), which provides more detail on the design and delivery of fieldwork for dyslexic students.

Fieldwork: the challenges of dyslexia	Inclusive strategies and reasonable adjustments
<b>Before the fieldtrip</b>	
Defining a structure of support prior to the fieldwork activity.	<ul style="list-style-type: none"> <li>❖ If disclosure is agreed, procedures for information exchange to be put in place between fieldwork staff, support services and students.</li> <li>❖ Early assessment of need for fieldwork to be part of the DSA assessment, which may fund a laptop or tablet PC, electronic organisers, personal digital assistants (PDAs) or a non-medical helper.</li> <li>❖ Ensure guest lecturers understand dyslexia.</li> </ul>
Ensuring that students with dyslexia are not stigmatised by others.	<ul style="list-style-type: none"> <li>❖ Seek disability and dyslexia awareness training for all staff and students to help challenge myths.</li> <li>❖ Encourage peer mentoring.</li> </ul>
<p>Short term memory, information processing and sequencing problems.</p> <p>Adopting a successful time management and organisation regime.</p>	<ul style="list-style-type: none"> <li>❖ Arrangements for travel, clothing/equipment and accommodation should be transparent.</li> <li>❖ Information can be available in a variety of formats (verbal, written and electronic).</li> <li>❖ Give information reminders prior to departure.</li> <li>❖ Students may use electronic organisers or personal digital assistants (PDAs) purchased through the DSAs.</li> <li>❖ Study skills support can be used to improve time management and recall skills (purchased through the DSAs.)</li> </ul>
<p>Accurately comprehending written material.</p> <p>Scanning for information.</p> <p>Reading, analysing and summarising.</p> <p>Reading freely without distractions and discomfort from visual perceptual distortions in the text.</p>	<ul style="list-style-type: none"> <li>❖ Allow additional time for slow reading and processing.</li> <li>❖ Inform students of pre-fieldtrip reading lists well in advance to allow for difficulties with short-term library loans.</li> <li>❖ Distribute course handbooks early</li> <li>❖ Explain place-names and fieldtrip specific terms through word lists and glossaries.</li> <li>❖ Handouts must comply with the guidelines above, entitled <b>5.2 Written materials for the student</b>.</li> </ul>
Listening, observing and writing (especially note taking) in the field.	<ul style="list-style-type: none"> <li>❖ Arrange study skills sessions on taking accurate notes in the field, organised through the DSAs.</li> <li>❖ Use blue marker on a white board, not black.</li> </ul>

<b>Fieldwork: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<b>During the fieldtrip</b>	
<p>Reading for meaning in a distracting environment.</p> <p>Difficulty writing accurately at speed on location and the risk of making illegible notes.</p> <p>Pressures to record information leading to poor quality field observations and “sense of place”.</p> <p>Verbalising experience from field notes which are an incomplete record.</p>	<ul style="list-style-type: none"> <li>❖ Provide pre-fieldtrip handouts of place-names and glossaries of terms.</li> <li>❖ Negotiate with students on the need for a field notebook being kept in the field.</li> <li>❖ Use of an audio recording device or amanuensis purchased through the DSAs.</li> <li>❖ Use of personal digital assistant (PDAs) with a cut down version of Office or a portable keyboard such as a Dana with Palm software, purchased through the DSAs. A laptop/tablet PC with text-to-speech and mind mapping software, although suitable, may not be robust enough in the field.</li> <li>❖ Electronic thesaurus for use at base to improve the quality of field notes.</li> <li>❖ Encourage work between peers to share information and ideas.</li> <li>❖ Allow students time to improve notes.</li> </ul>
<p>Understanding and remembering time-tables, directions and maps.</p>	<ul style="list-style-type: none"> <li>❖ Provide students with a daily itinerary.</li> <li>❖ Allow time to process information and ensure that it is in an accessible format.</li> <li>❖ Review student understanding.</li> </ul>
<p>Not wanting to be treated differently to other students.</p> <p>Anxiety caused by group work and peer assessment.</p>	<ul style="list-style-type: none"> <li>❖ Give students with dyslexia the opportunity to show possible strengths, e.g., their holistic creative ideas, leadership, good visuo-spatial strengths and lateral thinking.</li> <li>❖ Consider alternative assessment tasks.</li> </ul>
<p>Multi-tasking difficulties: listening, recording, observing and critically thinking causes overload, fatigue and anxiety, which reduces performance.</p>	<ul style="list-style-type: none"> <li>❖ Be clear verbally about the principal tasks, the priority and relative significance of points.</li> <li>❖ Ensure that documents meet the criteria for accessibility set out in the guidelines above, entitled <b>5.2 Written materials for the student</b>.</li> <li>❖ Ensure guest lecturers understand the impact of dyslexia.</li> <li>❖ Encourage the student to use assistive technologies in the field.</li> <li>❖ Pair and share responsibilities between students.</li> <li>❖ Try to reduce the amount of information processing required.</li> </ul>
<p>Distractibility in the field caused by background noise, unfamiliar surroundings and visual stimuli.</p>	<ul style="list-style-type: none"> <li>❖ Staff to be cognisant of the problem.</li> <li>❖ Select quieter field locations.</li> <li>❖ Separate observation, listening and recording tasks.</li> <li>❖ Offer evening de-briefing and feedback sessions.</li> </ul>
<b>After the fieldtrip</b>	
<p>Translating poor field notes into a version to support formative assessment.</p>	<ul style="list-style-type: none"> <li>❖ Allow additional time.</li> <li>❖ Consider alternative assessments.</li> </ul>

## 5.8. Work placement and work-based learning

In recent years, an increasing number of GEES departments have begun to offer various forms of work-based learning, often in the form of a 10 or 20 credit module. Placements taking a full year or semester remain rare but more and more departments are offering short-term placements with organisations such as planning departments, mineral companies, water companies, the Environment Agency and conservation bodies.

Many of the challenges for the dyslexic student on work placement or work based learning will be the same as those pertaining to the previous sub-sections. Taking the student away from the usual study environment has many advantages providing they have adequate technological support such as a laptop PC, an audio recorder and assistive software for text to speech and mind mapping (all available through the DSAs). This may also be an opportunity for the student to deploy some of the positive aspects of dyslexia which many will demonstrate, such as their holistic approach, creative ideas, leadership skills, good visuo-spatial strengths and lateral thinking.

<b>Work placement and work based learning: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
Facing the challenge of choosing to declare dyslexia.	❖ Recommend sessions with careers advisors to address disclosure issues.
Working away from the usual support systems.  Orientation in a new environment.  Managing a new work and time regime.  Dealing with possible anxiety and stress in unfamiliar situations with new colleagues.	<ul style="list-style-type: none"> <li>❖ Alert the student to the DSAs process in plenty of time for support to be put in place.</li> <li>❖ Ensure that the assessment for the DSAs covers work placement and work based learning issues.</li> <li>❖ Provide students with contact numbers for support services and support tutors.</li> <li>❖ Make sure the student has clear instructions, directions and guidance prior to commencement.</li> </ul>

## 5.9. On-line learning

With an increasing emphasis being placed upon the advantages of e-learning in the HE sector, it is important that websites and university student portals are made accessible to students with dyslexia. It should also be recognised that e-learning as a medium must be accessible to all groups of disabled users and that design strategies followed to meet the needs of one group should not affect the quality of access of another. Guidelines on accessible website design can be found at the techdis website: <http://www.techdis.ac.uk/seven/>

Specific information concerning dyslexia and e-learning can be found at: <http://www.techdis.ac.uk/seven/dyslexia-index.html>

Overall, the principles behind the accessibility of e-learning are not dissimilar to those outlined in the guidance above for **5.2 Written materials for the student**.

<b>On-line learning: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<p>Accurately comprehending written material.</p> <p>Scanning for information.</p> <p>Reading, analysing and summarising.</p> <p>Making accurate notes.</p> <p>Reading accurately at a competent rate.</p>	<ul style="list-style-type: none"> <li>❖ Avoid large blocks of text and keep text page content to a minimum.</li> <li>❖ Use bullet points and summaries rather than dense prose.</li> <li>❖ Style of writing should be clear and concise</li> <li>❖ Utilise minimum 12 point font size</li> <li>❖ Use Arial or other Sans Serif font</li> <li>❖ Don't mix fonts</li> <li>❖ Avoid too much underlining, capitals and italics</li> <li>❖ Leave wide spaces</li> <li>❖ Left justify text</li> <li>❖ Give users the interactive option to change font, text size and background colour.</li> <li>❖ Ensure that text based learning content can be read by text-to-speech programs or are speech enabled through browser technology such as BrowseAloud or ReadSpeaker.</li> <li>❖ Design PDF files that are accessible with no encryption or security locks to allow students to make use of PDFAloud or Acrobat Reader version 6 with accessibility elements downloaded to include the built in text reader.</li> <li>❖ Develop PowerPoint presentations that have been saved to the web using the Accessible Web Publishing Wizard for Microsoft Office offered by University of Illinois at Urbana/Champaign <a href="http://cita.rehab.uiuc.edu/software/office/">http://cita.rehab.uiuc.edu/software/office/</a> This facilitates reading by a text-to-speech programme. Accurate results can be achieved by always using the templates for slides offered by Microsoft and tagging or labelling graphics.</li> </ul>

<b>On-line learning: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
Reading freely without distractions and discomfort from visual perceptual distortions in the text.	<ul style="list-style-type: none"> <li>❖ Text interspersed with visuals must be sensitively displayed.</li> <li>❖ Avoid visual clutter, text overlaid on graphics or “ghosting”</li> <li>❖ Navigational icons are valuable but cannot be read by on-line browsers (text alternatives must be provided).</li> <li>❖ Website links located within the text can be confusing – make a separate display list</li> <li>❖ Having defined a successful layout, apply it to all pages.</li> </ul>

## 5.10. Assessment

Over the past decade the significant rise in the numbers of disabled students entering higher education, and particularly those with dyslexia, has resulted in escalating numbers now receiving special examination arrangements (extra time, separate rooms, use of a PC, amanuensis, etc.). The current arrangements of thousands of special provisions for examinations every academic year stretch resources, physical facilities and administration within the sector. In many institutions this is becoming an unmanageable situation and so it is timely that compliance with the DDA Part 4 provides an opportunity to review current policy and practice.

The development of special arrangements as a solution to "levelling the playing field" has not been based on rigorous research, and there is little to support the validity of the range of special examination arrangements currently deployed in this way. Indeed, anecdotal evidence is emerging that the current practice of offering additional time to dyslexic students may be, in part, counter-productive in that extending work time merely tires students who are prone to produce work of less quality when fatigued. It is undeniable, however, that these arrangements have become expedient as a "bolt on" solution to existing practice. While it is clear that there will always be a need for some special arrangements to be made, many students with dyslexia may be better served by alternative assessments.

Although it is not the remit of this guidance to focus on alternative assessment modes, it is the opinion of the authors that alternative assessment strategies should be pursued to minimise the impact of disability on a student's performance. To test this conjecture a 3 year HEFCE funded project entitled Staff-Student Partnerships for Assessment Change and Evaluation (SPACE), co-ordinated by the University of Plymouth with 8 regional partners, will be reporting its findings in 2005. It is universally accepted that academic requirements and standards cannot be compromised and should be applied to all students whether or not they have a disability. However, alternative assessments should be developed to accommodate the learning styles of all students' including those with dyslexia. Otherwise assessment results will reflect the impact of the dyslexia and prevent students acquiring independence in their learning.

Colleagues are encouraged to consider alternative assessments when evaluating the applicability of the following guidance. In this context attention is also drawn to **Appendix 1, Programme planning, Approval and Review: A Checklist for Change**, which locates the issue of alternative assessments within this broader strategic context.

<b>Assessment: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
Demonstrating a range of distinctive learning styles.	<ul style="list-style-type: none"> <li>❖ Ensure that the liaison with the disability/dyslexia support service and the examinations office is effective for special arrangements.</li> <li>❖ Identify opportunities for students to demonstrate the achievement of the learning outcomes in alternative ways, such as through problem-based assessment, viva voce examinations, audio-visual material, additional course-work with flexible deadlines, etc.</li> <li>❖ Consider assessment methods used in other subjects that could be utilised or modified for GEES.</li> <li>❖ Evaluate the effectiveness of special examination arrangements and alternative assessments.</li> </ul>
Processing auditory information.	<ul style="list-style-type: none"> <li>❖ Ensure that all verbal information is clearly reiterated in plain language and backed up with a text version that adheres to the guidelines above, entitled <b>5.2 Written materials for the student</b>.</li> </ul>
Reading accurately at a competent rate.	<ul style="list-style-type: none"> <li>❖ Students may be able to purchase set books and key texts through the DSAs.</li> <li>❖ Provide extended access to key texts otherwise restricted through short-term library loans.</li> </ul>
<p>Accurately comprehending written material.</p> <p>Scanning for information.</p> <p>Reading, analysing and summarising.</p>	<ul style="list-style-type: none"> <li>❖ Assessment questions must be worded in a clear and concise way</li> <li>❖ Ensure that feedback on all assessed work is accessible.</li> <li>❖ Use print rather than joined up handwriting, and verbal comments as reiteration.</li> </ul>
<p>Legibly writing at speed.</p> <p>Demonstrating understanding through written expression and fluency.</p> <p>Utilising spelling and grammar for Key Skills written communication.</p> <p>Proof reading successfully.</p>	<ul style="list-style-type: none"> <li>❖ Use of a PC. Assistive technologies such as text to speech and mind mapping software can be purchased through the DSAs.</li> <li>❖ Try to mark student work for content, making positive comments where appropriate. If you need to draw attention to spelling or grammatical errors, approach this sensitively.</li> </ul>

<b>Assessment: the challenges of dyslexia</b>	<b>Inclusive strategies and reasonable adjustments</b>
<p>Taking longer to achieve the objectives of written tasks with deadlines.</p> <p>Controlling and ordering the pace of learning and task completion.</p>	<ul style="list-style-type: none"> <li>❖ Check that the range, loading and time-tabling of assessment tasks is suitable.</li> <li>❖ Apply special arrangements to in-class assessments.</li> <li>❖ Consider flexible deadlines for assessed coursework.</li> <li>❖ Consider alternative assessment tasks.</li> </ul>
<p>Stress and anxiety leading to poor performance.</p>	<ul style="list-style-type: none"> <li>❖ Ensure that assessment submission arrangements are “user friendly” and transparent.</li> <li>❖ Make sure that the student is aware of the tutorial and dyslexia support available to them.</li> </ul>
<p>Not wanting to be treated differently to other students.</p> <p>Reluctance to reveal weaker areas, e.g., spelling, handwriting, inaccurate calculations.</p> <p>Problems with verbal fluency, processing language and saying the wrong thing.</p> <p>Increased anxiety occasioned by group work.</p> <p>Suffering the effects of a lack of confidence and low self-esteem.</p> <p>Mis-cueing facial expressions and body language.</p>	<ul style="list-style-type: none"> <li>❖ Do opportunities exist for students to receive disability awareness training about equality of opportunity as part of Personal Development Planning, especially with regard to peer assessment, group assessment and problem based assessment?</li> <li>❖ Staff should facilitate dialogue within the student group to ensure that the allocation of tasks is equitable and values the diversity of student input.</li> <li>❖ Guidelines for students in self and peer assessment should be available in accessible formats</li> <li>❖ Give students with dyslexia the opportunity to show possible strengths, e.g., their holistic creative ideas, leadership, good visuo-spatial strengths and lateral thinking.</li> </ul>
<p>Adopting a successful time management and organisation regime.</p>	<ul style="list-style-type: none"> <li>❖ Study skills support for better time management and recall skills purchased through the DSAs.</li> </ul>

## 6. Conclusion

Throughout this Guide we have sought to provide an accessible framework for GEES staff to embed good practice into course structure, planning and delivery to provide a more equitable experience for dyslexic students studying on GEES courses. By recognising the challenging elements of the dyslexic profile as a range of learning styles, some of the solutions for staff to consider in the pursuit of inclusive teaching and learning can be applied to meeting the broadest needs of the changing student population entering HE in the twenty-first century. By providing an approach that is less linear and more global, less about the individual deficit and more about valuing difference, we have attempted to promote the idea that inclusivity is borne out of embedded strategies and reasonable adjustments rather than “ad hoc” and reactive responses to individual student need.

Adopting this strategy allows the individual student to be first and foremost a student, rather than be ascribed a disabled identity in the learning, teaching and assessment environment. It will still remain necessary under the current funding structure for dyslexic students to receive their DSA funding, in acknowledgement of the additional time required for the input and output of new learning. This approach will contribute towards “the levelling of the playing field” in a way that is systemic, consistent and without prejudice. Such considerations and activities will form part of the day-to-day work of academic staff, rather than be experienced as an additional burden of work for hard pressed staff, to meet the needs of targeted students. The current arrangements of support materials and special examination arrangements for some students, place individual staff and departments in a vulnerable position when these are not met. The “special” status of these arrangements positions the student recipients apart from their peers. In our experience, student feedback shows that dyslexic students find it difficult to have to seek “special arrangements”: it can create an unhealthy culture of envy amongst peers especially when what is provided often just constitutes good practice for all.

As outlined in their respective Benchmark statements, and referred to in our Introduction, GEES professionals have tasked themselves with “recognising differences in cultures and the links between them” and interpreting “the cultural relationship between society and the environment”. If we apply these ideals to the world of teaching and learning in HE, then we must take on board the challenge of diversity and provide an environment where this can flourish and where the individual student can be valued and make a valued contribution.

## Appendix 1

### Programme planning, Approval and Review: A checklist for change.

Framework policies for curriculum planning	Action comments
❖ What is the procedure for ensuring that anticipatory "reasonable adjustments" will be made to make the curriculum accessible, through the planning, approval and review of courses/programmes?	
❖ What procedures have been adopted to ensure that all staff involved in course/programme planning, approval, review and delivery are aware of their responsibilities under the DDA Part 4?	
❖ How will responsibilities under DDA Part 4 be monitored and reviewed?	
<b>Approval and review of programmes and courses</b>	
❖ Do approval panels include a member who is knowledgeable about dyslexia to address issues of DDA Part 4 compliance?	
❖ Do members of the approval panel have opportunities during the approval process to inspect programme-related facilities for students with dyslexia?	
❖ Do reports from the approval panel identify the fact that satisfactory and/or unsatisfactory measures are in place for the access of students with dyslexia? In what ways is approval contingent upon satisfying such criteria?	
❖ In annual programme reviews is there a monitoring procedure or statement demonstrating DDA Part 4 compliance?	
❖ Does the review monitor and evaluate the use and outcomes of any alternative assessment undertaken, e.g., in place of a fieldwork log, etc?	
<b>Programme/Course Teams</b>	
❖ Has the course team demonstrated that the learning, teaching and support elements of programmes/courses are accessible to students with dyslexia?	
❖ Is it made clear in the resource base and specialist facilities underpinning the course/programme what is available to support the delivery to students with dyslexia?	
❖ In the mapping of assessment to learning outcomes, is there clear evidence of the availability of alternative assessment tasks, to meet the needs of students with dyslexia?	
❖ Is the range, loading and time-tabling of assessments suitable for students with dyslexia?	
❖ What procedures are used to ensure that "reasonable adjustments" have been made to non-campus locations for accessibility, e.g., fieldwork, off-site, placement and overseas?	

## Appendix 2

### Some staff development topics for inclusive strategies in the support of dyslexic students.

As practitioners, we are often asked by staff responsible for organising staff development to suggest pertinent topics for meetings and workshops on dyslexia awareness. What follows is a short indicative list of some topics that colleagues have found useful. Many have arisen as a result of addressing previous staff anxieties about the learning styles of this cohort of students.

- ❖ Can we reduce the discriminating and excluding features of current policy and practice?
- ❖ How do you respect confidentiality, when many students with dyslexia are reticent to reveal this to their tutors or peers for fear of discriminatory attitudes or because of their own sense of identity?
- ❖ Entry into HE is a stressful time for all students but for dyslexic students there is an additional strain on established coping mechanisms and old strategies may not easily transfer to the new HE environment.
- ❖ Adults with dyslexia assume that most people are very skilled in the areas they have difficulties with – thus thinking their own skills are much worse than they really are. How can we address this?
- ❖ Mature students, newly diagnosed with dyslexia and with poor school experiences, may have an outmoded sense of the rarefied academic nature of university life. How do departments engage with the resulting anxieties?
- ❖ By operating in a right-brained mode students with dyslexia may show an aptitude for making connections, visualizing global ideas, relying on long-term memory, but require practice and concrete examples for fundamental understandings. What are the best ways of addressing these characteristics in terms of activities such as, group work, peer assessment, work-based learning, student presentations? (select one.)
- ❖ Being ‘taught’ one-to-one may raise ghosts of previous learning experiences which engendered confusion, under-achievement, labelling, poor self-esteem, as well as burdens of guilt and anger.
- ❖ Certain periods in the dyslexic student’s life at an HEI may be more stressful than others – the build up of assessments at the end of the module, submission of a final dissertation, examinations, year-on transition. Heightened anxiety intensifies the dyslexia mode of operation. What’s the solution?
- ❖ Can we assess student ability and not the effects of disability?
- ❖ Can we accommodate the learning styles of a range of learners at assessment?
- ❖ If Meares Irlen Syndrome is also present, what are the implications going to be for both the student and the teaching and learning strategies?

## Appendix 3

### The Disabled Students' Allowances (DSAs)

Many of the inclusive strategies identified in this Guide can be funded through the DSAs.

In brief, DSAs are available for full-time and part-time undergraduate students and full and part-time postgraduate students, and students on distance learning courses. Eligibility does not extend to International students or students from the EU eligible only for support with fees, although some exceptions exist for students who have family members with "migrant worker" status. Students on sandwich-courses on a full-year paid placement are also not eligible. Eligibility is not dependant upon any form of means testing.

Students who may be eligible for DSAs, but not in receipt of one, should be encouraged to seek the guidance of the disability support service in their HEI, where assistance will be available to facilitate an application. In the case of dyslexia, the student's LEA will require a full diagnostic assessment of dyslexia, carried out after the age of 16, from a suitably qualified person. LEAs will not meet the costs of diagnosing dyslexia, but for students who cannot afford the fee, an HEI's Access to Learning Fund could.

There are three main awards under the general rubric of the DSAs, each with its own index-linked, targeted funding, as follows:

**Specialist Equipment Allowance** can be used for the purchase of items of equipment, training in equipment use, repair, technical support and insurance.

**Non-medical helper's allowance** can be used for purchasing note-takers, extra support for literacy and to strengthen personal management skills.

**General Disabled Students' Allowance** can be used for purchasing paper, photocopying and buying key course books that might otherwise be only available through restricted short-term library loans.

Entitlement to the equipment and services funded by the DSAs must be supported through a DSA assessment undertaken by a qualified assessor.

Full and further details of the DSAs can be found at: Bridging the gap: a guide to the Disabled Students' Allowances (DSAs) in higher education (DfES).

Copies are available by calling a free information line on 0800 731 9133 and quoting reference S/BTGB/V4.

The guide is also available on-line at:

<http://www.dfes.gov.uk/studentssupport/formsandguides/>

or from the Student Finance Direct website at:

<http://www.studentfinancedirect.co.uk>

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## **Additional sources of information on the world wide web**

### **Adult Dyslexia Organisation (ADO)**

Provides help and assistance to all dyslexic adults:

<http://www.futurenet.co.uk/charity/ado>

### **The British Dyslexia Association**

Offers advice, information and help to families, professionals and dyslexic individuals:

<http://www.bda-dyslexia.org.uk/>

### **The Dyscalculia and Dyslexia Interest Group**

A discussion group of the Engineering LTSN:

<http://ddig.lboro.ac.uk/pages/presentations>

### **Coloured overlays and coloured lenses**

Frequently asked questions about Meares Irlen answered in a clear and concise way:

<http://www.essex.ac.uk/psychology/overlays/faq%20OC6.htm>

### **The Disability Rights Commission:**

<http://www.drc-gb.org>

For the legislative framework and the Disability Discrimination Act Part II:

<http://www.drc-gb.org/law/dda.asp>

### **The Dyslexia Institute**

Information about dyslexia services, dyslexia associated training, teaching and publication details:

<http://www.dyslexia-inst.org.uk>

### **Dyslexic.com**

Includes information on Meares Irlen Syndrome and web links to research findings on the use of coloured overlays:

<http://www.dyslexia.com/database/articles/vision.htm>

### **SKILL: Bureau for students with disabilities**

Offers a wide range of information and website links for students with disabilities:

<http://www.skill.org.uk>

SKILL also offers information for international students with disabilities:

<http://www.skill.org.uk/info/infosheets/internat.doc>

### **Techdis**

An organisation aimed at enhancing access for people with disabilities to learning, teaching and research:

<http://www.techdis.ac.uk>

Guidelines on accessible website design can be found at the techdis website:

<http://www.techdis.ac.uk/seven/>

Techdis also provides information on dyslexia and e-learning:

<http://www.techdis.ac.uk/seven/dyslexia-index.html>

NB. All addresses for the world wide web listed above were correct on 8 May 2004.