Examining academic confidence and study support needs for university students with dyslexia and/or developmental coordination disorder.

Emma Sumner [a]*, Laura Crane[a] and Elisabeth L. Hill [b]
[a] Department of Psychology and Human Development, UCL Institute of Education
[b] Department of Psychology, Goldsmiths, University of London

*Corresponding author:
Emma Sumner
Department of Psychology and Human Development
UCL Institute of Education
University College London
25 Woburn Square
London
WC1H 0AA
Email: e.sumner@ucl.ac.uk

Abstract
Higher education providers are seeing a shift from externally-funded support for students with specific learning difficulties (SpLD), to a need to develop more inclusive practices generally. However, the precise needs of students with different SpLD diagnoses is unknown. 367 students in England and Wales (163 students with dyslexia, 50 students with developmental coordination disorder (DCD/'dyspraxia'), 62 students with dyslexia and DCD, and 92 non-SpLD students) completed an online questionnaire to determine: (i) how confident they are with their study-related capabilities, (ii) the types of support they access, and (iii) their views on current inclusive practices. Students with dyslexia and students with dyslexia/DCD reported lower confidence in their grades and studying than non-SpLD students, and accessed more technology-related support than students with DCD only. Examination accommodations supporting writing were common for all SpLD students. Inclusive practices were perceived positively, although different priorities were seen across groups. The findings demonstrate the complexities inherent in providing effective support for all students at university, with the varied profiles across and within SpLD groups suggesting that an individualised approach is necessary. Practical implications are discussed.

Keywords: dyslexia, dyspraxia, developmental coordination disorder, higher education, academic confidence, study support.

Practitioner points
- Students with dyslexia and dyslexia/DCD present with lower academic confidence than their peers
- Students with dyslexia and dyslexia/DCD access more technology-related support than students with DCD
- SpLD students reported using examination accommodations that support their writing
- Inclusive practices are viewed positively by all higher education students, regardless of diagnosis
- Higher education providers must look at developing staff training on inclusive practice, their resources (assistive technology), and assessment practices

Introduction

Over the past decade or so, there has been a significant increase in the number of students entering higher education (HE) with a learning difficulty (Higher Education Funding Councils for England [HEFCE], 2016). In the 2018/19 academic year, students with a specific learning difficulty (SpLD) accounted for 5.8% of the HE population in the United Kingdom (UK), compared to only 2.6% in 2005/2006 (Higher Education Statistics Authority, 2020)[1]. Two common conditions that fall under the HE umbrella term of SpLD, and will be the focus of the present study, are dyslexia and developmental coordination disorder (DCD; often referred to as dyspraxia in HE[2]). Dyslexia is characterised by difficulties with accurate and fluent reading (American Psychiatric Association [APA], 2013), and has a prevalence of 6-10% (Bishop, 2010). DCD is diagnosed based on problems with acquiring proficient motor skill, which impacts on activities of daily living and academic achievement (e.g., handwriting) but cannot be explained by low intelligence or a general medical condition (APA, 2013). DCD has an estimated prevalence of 2-6% (APA, 2013; Lingam, Hunt, Golding, Jongmans & Emond, 2009). The difficulties experienced by both individuals with dyslexia and DCD have been shown to persist into adulthood (Hatcher, Snowling & Griffiths, 2002; Purcell, Scott-Roberts & Kirby, 2015) and their defining characteristics often relate to barriers to learning throughout education (APA, 2013; Rose, 2009).

One concerning finding is that students with a SpLD, such as dyslexia and/or DCD, are more likely to leave HE without completing their course and with poorer grades than their typically-developing peers (HEFCE, 2016; Richardson, 2015; Richardson & Wydell, 2003). Students with dyslexia have been reported as having low self-esteem in relation to producing written work (Fuller, Healey, Bradley & Hall, 2004; Riddick, Sterling, Farmer & Morgan, 1999; Webster, 2016), as well as elevated levels of academic and social anxiety (Carrol & Iles, 2006). Moreover, studies confirm that students with dyslexia produce written text that is graded lower than those without dyslexia (Connelly, Campbell, MacLean & Barnes, 2006; Tops, Callens, Van Cauwenberghe, Adriaens & Brysbaert, 2013). Survey research in the UK has highlighted how students with dyslexia experience significant problems with note-taking and expressing ideas in writing (Mortimore & Crozier, 2006). Further, students with dyslexia have reported valuing adjustments in essay marking to compensate for their literacy difficulties (Webster, 2016).

Confidence has been shown to be a predictor of academic achievement at university (Bartimote-Aufflick et al., 2016). Sander and Sanders (2009) define academic confidence in students as a 'stong belief, firm trust or sure expectation' of how they deal with the demands

---

[1] These are the latest figures that show the breakdown of disability type. Note that in these figures, 'SpLD' includes dyslexia, dyspraxia and attention difficulties.

[2] 'DCD' is the term used throughout this paper as it is recognised internationally and has an agreed defintion

of undertaking an academic course (p.19). Specifically, it refers to their ability to plan and carry out behaviours that are relevant to academic tasks. Using the Academic Behavioural Confidence (ABC) scale (Sander & Sanders, 2009), students with dyslexia (in comparison to non-SpLD peers) have demonstrated lower confidence in relation to the grades they believe they can achieve, their ability for studying, and their verbalising abilities (asking and responding to questions). However, no group differences were noted for confidence in attendance (Sander, 2009).

In comparison to students with dyslexia, very little is known about how confident students with DCD are with their study capabilities, nor about their academic experiences. Kirby and colleagues (2008) reported higher levels of study-related difficulties for students with DCD than students with a diagnosis of both dyslexia and DCD, as well as students who only had a diagnosis of dyslexia. Students with DCD had more difficulties related to handwriting, organisation and time management than those with dyslexia. Despite presenting with differing profiles, they noted that all students (irrespective of their diagnosis) received similar types of support; specifically, extra time in exams, laptops, and mentorship. Of note, Kirby et al. (2008) explored a small number of support options (exam time, laptop use, a scribe, and mentoring) that were available at the time, but the provisions typically offered by HE providers now are more extensive in terms of technology and assistance. There are also now a range of inclusive practices that should be employed by HE providers (e.g., making lecture content available before sessions, providing reading in advance) to support all students.

Exploring the support available to students with dyslexia and DCD is a critical issue given the increasing numbers of such students entering HE. Inclusive practice and support provision for HE students with a SpLD has, to a large extent, been driven by legislation (Equality Act, 2010; Goode, 2007). In the UK, the introduction of a government grant, the Disabled Students' Allowance (DSA), in 1993[3], was one approach to widening access for students. Whilst providing funding for individually tailored support (e.g., specialist equipment, non-medical helpers) was shown to impact positively on perceptions of educational attainment (Griffin & Pollak, 2009), changes to this provision have been implemented by the UK government. Specifically, a shift away from supporting individual students through external government (DSA) funding has been adopted, which means that, in line with their duties under the Equality Act 2010, HE providers are accountable for providing (and funding) reasonable adjustments for these students; only in more 'complex' cases will DSA support be able to be accessed (when it is clearly evidenced that the student requires something more specific than what is provided by the institution). Of note, organisations are evaluating the impact of the changes, such as the initial financial cost to some students requiring equipment related to assistive technology (British Assistive Technology Association, 2018).

As a result of these changes, HE providers are required to proactively develop inclusive learning environments that reduce the need for individual support. While universities typically offer examination adjustments for students with a SpLD, other suggested steps are to consider adjustments in teaching practice and embed inclusive course design; for example, providing lecture capture (a digital recording of what happens in the classroom), providing teaching materials in advance (in a range of formats), teaching study skills, and reviewing the availability of assistive technology (Department of Business, Energy and Industrial Strategies, 2015). While the proposed changes mean that all students should benefit from more inclusive approaches to teaching (including those that do not have, or have

---

[3] DSA is available in England and Wales, with a similar scheme in Scotland and Northern Ireland.

not disclosed, a SpLD), they also raise new challenges for identifying and fully supporting the learning needs of students with dyslexia and DCD.

The aims of the present study were: (1) to explore how confident students with dyslexia and/or DCD are with their study-related capabilities; (2) to provide useful data regarding the usage of offered DSA specialist support and examination adjustments by students with dyslexia and/or DCD; and (3) given the shift to inclusive approaches, to determine the practices that students perceive to be helpful for their studies. Linked to the first aim, we administered the ABC scale (Sander & Sanders, 2009), which was developed to provide information for lecturers, to enable them to design relevant learning environments for students according to their varying levels of confidence. In relation to the second and third aims, it was important to determine whether students were accessing the student-focused specialist support and technology currently offered by DSA funding, as well as examination adjustments that are typically offered to students with a SpLD, whilst also taking into account their views on common inclusive teaching and learning practices. Of particular interest were any similarities in the profiles of required support for students with dyslexia or DCD. Given that dyslexia and DCD often co-occur (Ramus, Pidgeon & Frith, 2003) and, therefore, ensuring a representative sample, direct comparisons were made across students with dyslexia, students with DCD, and students with dyslexia and DCD ('dyslexia/DCD'). These three groups were compared to students without a SpLD ('non-SpLD') on the measure of academic confidence and inclusive teaching practice items to determine the specificity of support needs, but not on the questions related to DSA support and examination accommodation as non-SpLD students would not be expected to be accessing this support. The research questions were:

1. Can scores on the Academic Behavioural Confidence scale distinguish between the four groups (dyslexia; DCD; dyslexia/DCD; non-SpLD)?
2. Do students with dyslexia, DCD, and dyslexia/DCD access the same level of specialist support available through the university/DSA funding and examination adjustments?
3. How helpful do students with dyslexia, DCD and dyslexia/DCD find the types of inclusive teaching practices that can be offered by HE providers, and how does that compare to non-SpLD students?

Method

Participants

Using a purposive sampling method, the disability services of all 106 universities listed in England and Wales in 2016/17 were contacted and asked to distribute information about the study to undergraduate and postgraduate students with a diagnosis of dyslexia and/or DCD. This elicited responses from 392 students. Students were part of the 2016/17 intake. Using the same intake, the same universities were also asked to send out the study information to their students who did not have a SpLD. This elicited responses from 200 students. Only complete responses were included in the analyses, resulting in a final sample of 367 students: 163 with dyslexia, 50 with DCD, 62 with dyslexia/DCD and 92 non-SpLD. See Table 1a-1c for demographics and course-related information.

[insert Table 1a, 1b, 1c here]

Materials

Two surveys were administered online using Qualtrics. The first was designed for students with a SpLD and the second was specific to the non-SpLD group. The two surveys followed the same structured and required the same responses from students. The only exception was that the questions in the 'specialist support from university' and 'examination

adjustments' sections were omitted for the non-SpLD students. Questions were organised into the following sections:

   Background information about the student. Collecting demographic information (age, gender, and ethnicity) and information about the students' studies (university course, level, length of study).

   Information about the students' diagnosis. Non-SpLD students confirmed that they did not have a diagnosis of a SpLD, while SpLD students confirmed their diagnoses, along with any co-occurring difficulties experienced, and identified if they were receiving DSA and/or the Disability Living Allowance (DLA).

   Academic confidence. The ABC scale (Sander & Sanders, 2009) asks students to rate 24 items on 5-point scales of agreement (1 = not at all confident; 5 = very confident). Of these, 17 items were used to form four sub-scales: *grades* (e.g., 'pass assessments at the first attempt'), *studying* (e.g., 'planning revision schedules'), *verbalising* (e.g., 'ask lecturers questions about the material they are teaching, during a lecture') and *attendance* (e.g., 'be on time for lectures').

   Specialist support from University. Twenty-five items were taken from the Quality Assurance Framework (2014), which are used to determine specialist technology and support provided by the university or DSA funding. These covered individual and group study-related support, access to equipment/software, and counselling/emotional support. Only SpLD students identified which type of support they were accessing at the time of completing the survey.

   Examination adjustments. SpLD students were asked if they have examinations within their university course. If so, they answered ten questions about the adjustments that they access (e.g., extra time, access to a reader, use of a word processor, etc).

   Inclusive provision. Eight questions were listed, relating to inclusive provisions arranged by lecturers/teaching staff as mentioned in previous research and UK government reports (e.g., adjustments to the pace of lectures, access to content in advance, use of readable fonts, etc.). All students were asked to identify if they felt that the provision would be helpful for their studies or not.

Procedure

   Ethical approval was obtained from Goldsmiths, University of London, Ethics Committee. All information was collected anonymously and respondents gave consent to taking part in the study before proceeding to the questions. Total numbers of participants are indicated in each table as some participants omitted certain questions depending on their course design and some missing datapoints were found (missing data were not reconstructed).

Data analysis

Statistical analyses were conducted in SPSS. Tests of normality and homogeneity were checked prior to test selection. Normally distributed data (research question 1) meant that parametric tests were used (multiple analysis of variance [MANOVA] and follow up analysis of variance [ANOVA]) to compare across groups. Pillai's Trace was used (MANOVA) as it is the most robust when analysing data from uneven sample sizes (Field, 2017). Data that violated parametric assumptions (research questions 2 and 3) were analysed using a Kruskal-Wallis test, with follow up Mann Whitney U tests.

Results

Can scores on the ABC scale distinguish between the four groups (dyslexia; DCD; dyslexia/DCD; non-SpLD)?

Table 2 presents the scores on the four sub-scales (Grades, Studying, Verbalising, Attendance) of the ABC. MANOVA revealed a significant effect of group (*dyslexia, DCD, dyslexia/DCD, non-SpLD*) on the mean scores for the four sub-scales: Pillai's V = .11, $F(12,1086)$ = 3.45, p <.001, n^2_p =.038. Group had a significant effect on three of the sub-scales: Grades ($F(3,363)$ = 8.46, p <.001, n^2_p =.07), Studying ($F(3,363)$ = 6.40, p = <.001, n^2_p =.05), Verbalising ($F(3,363)$ = 4.13, p =.007, n^2_p =.03); but not Attendance ($F(3,363)$ = 2.53, p =.06, n^2_p =.02). Post hoc tests revealed significantly lower mean Grades and Studying scores for students with dyslexia (p <.001) and students with dyslexia/DCD (p <.001), indicating less confidence in these areas than the non-SpLD group. Students with DCD demonstrated significantly higher levels of confidence than students with dyslexia/DCD on the Grades scale (p =.03). Further, students with dyslexia (p =.03) and students with dyslexia/DCD (p =.02) had significantly lower mean Verbalising scores than students with DCD. Remaining group comparisons were non-significant.

[insert Table 2 here]

Do students with dyslexia, DCD, and dyslexia/DCD access the same level of specialist support available through the university, DSA funding and examination adjustments?

Table 1b highlights that 68.1% of students with dyslexia, 54% of students with DCD, and 79% of students with dyslexia/DCD received DSA. It should be noted that not all students with a SpLD will receive DSA. For instance, international students cannot receive DSA and neither can students with a pre-16 diagnosis of dyslexia. Others may not apply if their needs are met by the adjustments made within their university regardless of DSA status.

Specialist funded support and examination accommodations accessed by the three groups are illustrated in Tables 3 and 4. For statistical analyses, DSA support was collapsed into overarching categories of 'technology and software' (mean of eight items), '1:1 tutorials' (mean of seven items), 'group tutorials' (mean of seven items) and 'assistance' (mean of three items). The 'examination accommodations' category (mean of ten items) was also analysed. Note that the examination findings (Table 4) relate only to those students who reported having written examinations as part of their university course: 68.7% of students with dyslexia (n =112), 62% of students with DCD (n =31), and 72.5% of students with dyslexia/DCD (n =45).

[insert Tables 3 and 4 here]

A Kruskal-Wallis test revealed significant group differences for technology use, $H(2)$ = 12.84, p =.002. Mann-Whitney tests demonstrated that reported access to specialist technology was significantly higher in students with dyslexia (U = 2859.00, p =.001, r = .22) and dyslexia/DCD (U = 991.00, p =.001, r = .32), compared to students with DCD; while the dyslexia and dyslexia/DCD groups were comparable (U = 4723.00, p =.49, r = .04). No group differences were found for: 1:1 tutorials ($H(2)$ = 3.98, p =.14); group tutorials ($H(2)$ = 1.61, p =.45); assistance ($H(2)$ = 4.55, p =.10); and examination accommodations ($H(2)$ = 1.62, p =.44).

Generally, small numbers of students were accessing specialist technology, and even more so for the 1:1, group tutorials and extra assistance categories. For students with dyslexia (58.9%), DCD (38%), and dyslexia/DCD (67.7%), the funded laptop was the most accessed support. Looking descriptively at the individual items, students with DCD consistently reported lower usage of all technology and software items than students with dyslexia and dyslexia/DCD, but the three groups were not dissimilar in the remaining support items (Table

3). For examination adjustments, close to three quarters of students in each group were given extra time (dyslexia, 81.3%; DCD, 71%; dyslexia/DCD, 75.5%) and close to half of the groups took their exams in a separate room (dyslexia, 42%; DCD, 46.7%; dyslexia/DCD, 44.4%). The use of accommodations that supported writing in exam conditions (using a word processor, spellchecker, and not being penalised for spelling mistakes) were also common adjustments for all groups.

How helpful do students with dyslexia, DCD and dyslexia/DCD find the types of inclusive teaching practices that can be offered by HE providers to be, and how does that compare to non-SpLD students?

All four groups were asked about eight forms of inclusive learning support (Table 5). The number of items rated as helpful were summed. A Kruskal-Wallis test revealed significant group differences for ratings of inclusive support, $H(3) = 43.19$, $p <.001$. Mann-Whitney tests demonstrated that students with dyslexia and dyslexia/DCD rated more items as helpful than students with DCD ($U = 2464.50$; $p =.001$, $r = .23$; $U = 770.50$, $p <.001$, $r = .37$ respectively) and their non-SpLD peers ($U = 4325.50$, $p <.001$, $r = .33$; $U = 1290.00$, $p <.001$, $r = .44$ respectively). No differences were found between the DCD and non-SpLD groups ($U = 1871.00$, $p =.47$, $r = .06$); the dyslexia and dyslexia/DCD groups were also comparable ($U = 4723.00$, $p =.49$, $r = .06$).

[insert Table 5 here]

On the whole, the inclusive practices were well-received by all groups. The two that were rated as most helpful by students with dyslexia were considerations to work when marking (the use of a cover sheet to indicate a SpLD to prevent penalising for spelling mistakes; 81.6%) and provisions of key texts (76.1%). Similarly, students with dyslexia/DCD, felt that the marking considerations were most helpful (87.1%) and that access to slides before lectures (83.9%) was a useful resource. Students with DCD rated each practice the lowest out of the three SpLD groups. Access to slides before lectures and provision of key texts were rated the two most helpful practices by students with DCD (64.0% and 64.0%) and non-SpLD students (65.2% and 73.9%).

Discussion

At a time when universities are expected to widen participation to a more diverse student population, extend their inclusive teaching and learning practices, and begin to fund the individual support offered to students with disabilities, this study compared the experiences of students with and without specific learning difficulties in terms of their academic confidence and their study and support profiles.

Academic behavioural confidence

In line with existing research using the ABC scale (Sanders, 2009), the present findings answer the first research question by demonstrating that university students with dyslexia rate their confidence in grades and studying as lower than their non-SpLD peers, but no differences were found for the ratings of their confidence in attendance (being on time, attending taught sessions). Extending the work of Sanders (2009) to other groups of students, those with diagnoses of dyslexia/DCD rated their confidence in grades and studying below non-SpLD students. Lower confidence ratings for these two groups on questions related to grades are perhaps not so surprising given that the questions concerned writing assignments in an academic style and meeting coursework standards; areas that students with dyslexia perform poorly on due to their literacy difficulties (Connelly et al., 2006; Tops et al., 2013). Moreover, students with dyslexia report persistent difficulties with concentration and

organisation but no problems with expressing ideas orally (Mortimore & Crozier, 2006), which aligns with the struggles the dyslexia groups reported on the studying scale of the ABC (the ability to plan revision schedules and manage workloads). Yet these groups reported similar performance to the non-SpLD group on the verbalising scale (responding to questions and engaging in debates with peers). It follows that the ratings of confidence by students with dyslexia and dyslexia/DCD indicate the specific need for support in meeting written coursework standards and managing study schedules.

Interestingly, students with DCD were not identified in the present study as presenting with marked low academic confidence: they were comparable to the non-SpLD group in each area of the ABC and scored significantly higher than students with dyslexia/DCD on confidence in grades. They also scored significantly higher than the dyslexia and dyslexia/DCD groups on verbalising. These findings may indicate the additive effect of experiencing both dyslexia and DCD but goes against the finding of Kirby et al. (2008) who reported that students with DCD have higher levels of study-related difficulties than students with a diagnosis of dyslexia and DCD. This could be accounted for by the present study comprising a larger sample and asking questions related to more general study/academic characteristics (Kirby and colleagues focused more on motor-related difficulties, such as handwriting, and social difficulties).

Accessing specialist support

The second research question considered the type of support that students with SpLD access and whether the three SpLD groups differed. On the whole, relatively small percentages of students access specialist support (technology-related, 1:1 or group tutorials, assistance). The low percentages may partly be due to a number of the students not receiving external (DSA) funding or universities not offering these provisions from internal funds (reasons for this were not explored). Higher percentages of use can be seen for students with dyslexia/DCD, pointing again towards an additive effect of experiencing both literacy and motor difficulties, although this was not analysed statistically. The only distinguishable profile was for technology and specialist software usage. Students with dyslexia and dyslexia/DCD were comparable in this respect, accessing more technology-related support (funded laptop, text-to-speech, mind-mapping software, recording devices) than students with DCD. Mortimore and Crozier (2006) previously reported that students with dyslexia experience difficulties with note-taking in lectures. Few students in the present sample appear to be accessing note-taking support (either by offered strategies in 1:1/group settings, or note-taking assistance), but recording devices were used by more than a third of students in the three SpLD groups, which may alleviate note-taking demands.

The highest ratings were observed for accessing extra time in written examinations (close to three quarters of students used this adjustment in each SpLD group) and the use of accommodations that support writing in exam conditions (using a word processor, spellchecker, and not being penalised for spelling mistakes). Yet little research has examined the direct benefits of these adjustments on academic performance (i.e., whether extra time results in better written work being produced). One study has, in fact, demonstrated that typically-developing students benefit more from extended time than those with reading difficulties (i.e., dyslexia; Lewandowski, Lovett & Rogers, 2008). The present findings, although useful in documenting the use of accommodations, could be developed to investigate the impact of support on academic performance.

Inclusive teaching practices

For the final research question (how helpful inclusive practices were perceived to be), considerable numbers of all students recognised the benefits of the eight identified practices. The proportion of students indicating that the named practices were helpful ranged from 64.4-81.6% for students with dyslexia; 22.0-64.0% for students with DCD; 64.5-83.9% for

students with dyslexia/DCD; and 39.1-73.9% for non-SpLD students. Again, students with dyslexia and dyslexia/DCD demonstrated a different pattern to DCD students (who were similar to the non-SPLD group) by identifying this support as more helpful. The inclusive approach to reduce marking bias for spelling mistakes was rated as most helpful by both students with dyslexia and dyslexia/DCD, recognising the prevailing spelling difficulties in these groups of students (Tops et al., 2012). In comparison, this was not viewed as helpful by as many DCD or non-SpLD students. Rather, accessing content in advance was recognised to be helpful for all student groups, but especially so for students with DCD and the non-SpLD group. Research previously suggested that far more students than those identified with SpLDs experience difficulties with learning (Avramidis & Skidmore, 2004), and that inclusive practices would benefit all students, not just those with an identified disability (Madriaga et al., 2010). Non-SpLD students in this sample also identified the usefulness of inclusive practices and these findings support the argument that embedded inclusive approaches to teaching is an important step for all students regardless of disability status (Williams, Pollard, Langley, Houghton, & Zozimo, 2017).

Implications and further research

When considering implications of the findings, it is important to note that the present sample (combining all groups) was predominately female (70.29%) and from a White ethnic background (83.10%). These figures are higher than the HE student characteristics reported by HESA (2020) for the 2018/19 academic year, which report 57.14% female students and 74.54% White students. This over-representation of females in the dyslexia, dyslexia/DCD and non-SpLD groups (albeit not for the DCD group) was the result of purposive sampling. It could be argued that access to support may be even more pronounced for the dyslexia and dyslexia/DCD groups if more males had been recruited given that existing research shows more significant reading and writing problems in boys with dyslexia than girls (Berninger et al., 2008). Future research should seek to ensure that the views of a representative sample are collected, in addition to researching the confidence and study support needs of minority groups specifically.

It could also be argued that confirmation of an SpLD was warranted for inclusion in the study, particularly for the DCD group in a university sample. Concerns have previously been raised around the diagnosis of DCD ('dyspraxia') in the UK when assessors have based the diagnosis on cognitive profiles rather than motor skills as per DSM-5 (APA, 2013) criteria (see Sumner, Pratt & Hill, 2016). A challenge here has been that motor batteries are not accessible to HE assessors. Useful developments are, however, being made in the field to support assessors with assessing for DCD in a university age population (see the Diagnostic Interview for Developmental Coordination Disorder in Adults [DIDA]; Kirby et al., 2018). The present study relied on the respondents to self-report any diagnosis. Yet, it is still important to ackowledge that the present sample is representative of the diagnostic categories they are assigned to within the univeristy system. Care may also be taken when interpreting the findings as being solely linked to the SpLD conditions that were the focus of the study. The three SpLD groups presented with a range of co-occurring difficulties, which is often typical of neurodevelopmental disorders (e.g., possible co-occurrence with attention difficulties; Kaplan et al., 2001); and it is possible that some had undiagnosed difficulties. While inclusion of all participants enhances the representativeness of the sample, we acknowledge that a higher proportion of co-occurring difficulties for the dyslexia/DCD group in each category of need apart from mental health and behavioural conditions. That the dyslexia and DCD groups reported roughly similar proportions of additional difficulties, but students with DCD were found to have higher rates of affective and behavioural difficulties, may relate to their higher percentage of accessing counselling provision.

Students with dyslexia and those with dyslexia/DCD consistently highlighted the need to access support with written work. For example, in the ABC responses, the examination adjustments regularly accessed (i.e., spellchecker, laptop, extra time), and the perceived usefulness of inclusive practices (i.e., no bias to spelling mistakes). These findings support existing research that has detailed the learning and written assessment challenges observed in university students with dyslexia in Australia (MacCullagh, Bosanquet, & Badcock, 2017), America (Dziorny, 2012), Sweden (Olofsson, Taube, & Ahl, 2015) and the UK (Pino & Mortari, 2014); and stress that support in writing is a key area of need. Further, the additive effect of having a diagnosis of both dyslexia and DCD is apparent, as these students accessed more support than the other SpLD groups and had lower scores in academic confidence (although not significantly different to students with dyslexia only).

The findings also add to the knowledge base of the experiences of university students with DCD. Our findings suggest that the writing-related support accessed by students with DCD may relate more to their handwriting (motor) difficulties, as examination accommodations reflect those that are typically given to students that struggle with legibility or sustaining handwriting speed for long periods of time (nearly three-quarters reported recieving extra time, nearly half of the group use word processors, and some have access to a scribe), and a third of students with DCD reported using recording devices in lectures. A profile of support needed for more general writing difficulties (e.g., support to help with composing text such as software or spellchecker) is less evident; a surprising finding given that children with DCD demonstrate significant writing problems (Prunty et al., 2014). It is possible that the presentation of difficulties changes over time. Kirby et al. (2008) identified notable difficulties with social skills at university level that may be a consequence of the general motor difficulties experienced by students with DCD. Knowledge and awareness of DCD is substantially less than that of dyslexia (Wilson, Neil, Kamps, & Babcock, 2012) and our findings may, to an extent, indicate the consequences of this lower awareness over the students' life time. Further research considering the range of university experiences (academic and social) would be useful, as well as using qualitative methods to expand our knowledge of the choices made by students or challenges of accessing support. It is possible that the subject studied and the assessment practice would relate to perceived needs and academic confidence. This was beyond the scope of the present study as unequal numbers of students made up the various disciplines. However, future research, taking a focused approach on subject-type or duration/level of study could explore whether a relationship exists with the students' perceived needs and academic confidence.

Finally, the current study sheds light on the complexities inherent in providing effective support for all students at university, with the varied profiles across and within SpLD groups suggesting that an individualised approach is necessary. The use of specific technology support is observed in the present findings for students with dyslexia and dyslexia/DCD, as well as adjustments for examinations. Although a steer to inclusive institution-led practices is supported by the present findings in that they are perceived to be helpful, considering the needs of students within a wider context, such as the skills related to academic self-confidence, may be helpful in judging the type and intensity of the support needed for students with a SpLD. An earlier case study of a HE provider determined that work needed to be done to strengthen links between management policy and teaching staff to better support students with dyslexia (Mortimore, 2013). More recently, Williams et al. (2017) investigated the views of HE providers in the wake of changes in government funding. They identified a challenge of the DSA reductions as being that institutions must now trial different inclusive approaches and be more proactive and anticipatory in doing so. It was reported that HE providers hoped that by increasing mainstream reasonable adjustments they would, over time, see a reduction in the additional funding for individual needs. To

successfully achieve the aim of widening participation for students with SpLD, HE providers must look at developing staff training on inclusive practice, their resources (including assistive technology), and assessment practices. For instance, Pino and Mortari (2014) report findings that highlight how students with learning difficulties (dyslexia) feel discriminated against with written examinations as the main assessment method in HE, as their written work often does not reflect their knowledge of the subject and full capabilities. The principles of Universal Design for Learning could be incorporated in addition to the inclusive practices presented here. These develop tailored support by presenting information in different formats (audio, visual, etc), encouraging staff to look for other ways to motivate students (such as addressing workspaces and feedback), and considering different assessment formats aside from writing (Rose & Meyer, 2006).

Conclusions

The present study was the first to compare the experiences of students with dyslexia, DCD and combined diagnoses of dyslexia/DCD, along with non-SpLD students, in terms of academic confidence and support needs. Students with dyslexia and dyslexia/DCD demonstrated lower academic confidence in the grades that they can achieve (related to the standard of written work that they can produce) and their ability to study effectively, in comparison to non-SpLD students. In contrast, students with DCD rated their academic confidence similarly to their non-SpLD counterparts. The three SpLD groups were similar in terms of their access to 1:1/group tutorials, assistance, and examination adjustments, but students with dyslexia and dyslexia/DCD were found to access more specialist technology than students with DCD. Inclusive practices were generally well-received by all SpLD and non-SpLD students, highlighting the potential benefits for HE providers in further developing these teaching approaches. Further research is required to determine how inclusive approaches can successfully replace funded individually-tailored support for students with disabilities and to evaluate their impact on academic performance.

References

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.* Arlington, VA, American Psychiatric Association.

Avramidis, E. & Skidmore, D. (2004). Reappraising Learning Support in Higher Education. *Research in Post-Compulsory Education, 9(1),* 63-82. doi:10.1080/13596740400200167

Bartimote-Aufflick, K., Bridgeman, A., Walker, R., Sharma, M. & Smith, L. (2016). The study, evaluation, and improvement of university student self-efficacy. *Studies in Higher Education, 41*, 1918-1942. doi: 10.1080/03075079.2014.999319

Berninger, V. W., Nielsen, K. H., Abbott, R. D., Wijsman, E., & Raskind, W. (2008). Gender differences in severity of writing and reading disabilties. *Journal of School Psychology, 46*(2), 151-172. doi.org/10.1016/j.jsp.2007.02.007

Bishop, D. V. M. (2010). Which Neurodevelopmental Disorders Get Researched and Why? *PLoS ONE 5*(11): e15112. doi.org/10.1371/journal.pone.0015112

Carroll, J. M. & Iles, J. E. (2006). An assessment of anxiety levels in dyslexia students in higher education. *British Journal of Educational Psychology, 76*, 651-662. doi: 10.1348/000709905X66233

Connelly, V., Campbell, S., MacLean, M., & Barnes, J. (2006). Contribution of lower order skills to the written composition of older students with and without dyslexia. *Developmental Neuropsychology 29*, 175-196. doi: 10.1207/s15326942dn2901_9

Department of Business, Energy and Industrial Strategies. (2015). Consultation on targeting funding for disabled students in HE from 2016/17 onwards. Retrieved from

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/439947/bis-15-81-consultation-on-targeting-funding-for-disabled_students-in-higher-education-from-2016-17.pdf

Dziorny, M. A. (2012). Online course design elements to better meet the academic needs of students with dyslexia in higher education. UMI Dissertations Publishing, University of North Texas.

Equality Act (2010). Retrieved from http://www.legislation.gov.uk/ukpga/2010/15/contents

Field, A. (2017). *Discovering statistics using IBM SPSS statistics, 5th edition*. London: SAGE Publications.

Fuller, M., Healey, M., Bradley, A. & Hall, T. (2004). Barriers to learning: a systematic student of the experience of disabled students in one university. *Studies in Higher Education, 29(3),* 303-318.

Goode, J. (2007). 'Managing' disability: early experiences of university students with disabilities. *Disability and Society, 22(1),* 35-48. doi: 10.1080/09687590601056204

Griffin, E. & Pollak, D. (2009). Student Experiences of Neurodiversity in Higher Education: Insights from the BRAINHE Project. *Dyslexia, 15,* 23-41. doi: 10.1002/dys.383

Hatcher, J., Snowling, M.J., & Griffiths, Y.M. (2002). Cognitive assessment of dyslexic students in higher education. *British Journal of Educational Psychology, 72,*119-133.

Higher Education Funding Councils for England. (2016). Student characteristics. Retrieved from http://www.hefce.ac.uk/analysis/HEinEngland/students/

Higher Education Statistics Authority. (2020). Higher Education Statistics for the UK 2018/19. Retrieved from https://www.hesa.ac.uk/data-and-analysis/students/table-15

Kaplan, B. J., Dewey, D. M., Crawford, S. G., & Wilson, B. N. (2001). The term comorbdity is of questionable value in reference to developmental disorders: Data and theory. *Journal of Learning Disabilities, 34*, 555-565. https://doi.org/10.1177/002221940103400608

Kirby, A., Barnett, A.L. & Hill, E.L. (2018). Diagnostic Interview for Developmental Coordination Disorder in Adults (DIDA). Retrieved from http://www.movementmattersuk.org/dcd-dyspraxia-adhd-spld/developmental-disorders- documentation/information-for-assessors.aspx

Kirby, A., Sugden, D., Beveridge, S., Edwards, L. & Edwards, R. (2008). Dyslexia and Developmental Co-ordination Disorder in Further and Higher Education – Similarities and Differences. Does the 'Label' Influence the Support Given? *Dyslexia, 14,* 197-213. doi: 10.1002/dys.367

Lewandowski, L. J., Lovett, B. J., & Rogers, C. L. (2008). Extended time as a testing accommodation for students with reading disabilities. *Journal of Psychoeducational Assessment, 26*, 315-324. doi: 10.1177/0734282908315757

Lingam, R., Hunt, L., Golding, J., Jongmans, M., & Emond, A. (2009). Prevalence of developmental coordination disorder using the DSM-IV at 7 years of age: a UK population-based study. *Pediatrics, 123*, 693-700. doi: 10.1542/peds.2008-1770

MacCullagh, L., Bosanquet, A. & Badcock, N. A. (2017). University students with dyslexia: a qualitative exploratory study of learning practices. *Dyslexia, 23*, 3-23. doi:10.1002/dys.1544

Madriaga, M., Hanson, K., Heaton, C., Kay, H., Newitt, S. & Walker, A. (2010). Confronting similar challenges? Disabled and non-disabled students' learning and assessment experiences. *Studies in Higher Education, 35(6),* 647-658. doi: 10.1080/03075070903222633

Mortimore, T. (2006). Dyslexia in higher education: creating a fully inclusive institution. Journal of Research in Special Educational Needs, 13, 38-47. doi.org/10.1111/j.1471-3802.2012.01231.x

Mortimore, T. & Crozier, R. (2006). Dyslexia and difficulties with study skills in higher education. *Studies in Higher Education, 31(2)*, 235-251. doi: 10.1080/03075070600572173

Olofsson, A., Taube, K., & Ahl, A. (2015). Academic achievement of university students with dyslexia. *Dyslexia, 21*, 338-349. doi:10.1002/dys.1517

Pino, M. & Mortari, L. (2014). The Inclusion of Students with Dyslexia in Higher Education: A Systematic Review Using Narrative Synthesis. *Dyslexia, 20,* 346-369. doi:10.1002/dys.1484

Prunty, M. M., Barnett, A. L., Wilmut, K., & Plumb, M. S. (2014). An examination of writing pauses in the handwriting of children with Developmental Coordination Disorder. *Research in Developmental Disabilities*, *35*, 2894-2905. doi:10.1016/j.ridd.2014.07.033

Purcell, C., Scott-Roberts, S. & Kirby, A. (2015). Implications of DSM-5 for recognising adults with developmental coordination disorder (DCD). *British Journal of Occupational Therapy, 78(5),* 295-302. doi.org/10.1177/0308022614565113

Quality Assurance Framework. (2014). Disabled Students Allowances-Quality Assurance. Retrieved from http://www.dsa-qag.org.uk/docmanpublic/framework-documents/1587-assessment-centre-qaf-14-15-v4-14/file.

Ramus, F., Pidgeon, E., & Frith, U. (2003). The relationship between motor control and phonology in dyslexic children. *Journal of Child Psychology and Psychiatry, 44,* 712-722. doi:10.1111/1469-7610.00157

Richardson, J. T. E. (2015). Academic attainment in students with dyslexia in distance education. *Dyslexia, 21*, 323-337. doi.org/10.1002/dys.1502

Richardson, J. T. E., & Wydell, T. N. (2003). The representation and attainment of students with dyslexia in UK higher education. *Reading and Writing: An Interdisciplinary Journal, 16*, 475-503. doi.org/10.1023/A:1024261927214

Riddick, B., Sterling, C., Farmer, M., & Morgan, S. (1999). Self-esteem and anxiety in the educational history of adult dyslexic students. *Dyslexia, 5*, 227-248.

Rose, J. (2009). Identifying and teaching children and young people with dyslexia and literacy difficulties. Retrieved from: http://www.teachernet.gov.uk/wholeschool/sen/

Sander, P. (2009). Current developments in measuring academic behavioural confidence. *Psychology Teaching Review, 15(1),* 32-44.

Sander, P. & Sanders, L. (2009). Measuring academic behavioural confidence: the ABC scale revisited. *Studies in Higher Education, 34(1),* 19-35. doi:10.1080/03075070802457058

Sumner, E., Pratt, M. L., & Hill, E. L. (2016). Examining the cognitive profile of children with Developmental Coordination Disorder. *Research in Developmental Disabilities, 56,* 10-17. https://doi.org/10.1016/j.ridd.2016.05.012

Tops, W., Callens, C., van Cauwenberghe, E., Adriaens, J., & Brysbaert, M. (2013). Beyond spelling: the writing skills of students with dyslexia in higher education. *Reading and Writing: An Interdisciplinary Journal, 26*, 705-720. doi:10.1007/s11145-012-9387-2

Webster, D. M. (2016). Listening to the Voice of Dyslexic Students at a Small, Vocational Higher Education Institution to Promote Successful Inclusive Practice in the 21st Century. *International Journal of Learning and Teaching, 2,* 78-86. doi: 10.18178/ijlt.2.1.78-86

Williams, M., Pollard, E., Langley, J., Houghton, A-M., & Zozimo, J. (2017). *Models of Support for Students with Disabilities*. Institute for Employment Studies Report to HEFCE. Retrieved from: http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/Independentresearch/2017/Models,of,support,for,students,with,disabilities/modelsofsupport.pdf

Wilson, B. N., Neil, K., Kamps, P. H., & Babcock, S. (2012). Awareness and knowledge of developmental co-ordination disorder among physicians, teachers and parents. *Child Care Health and Development, 39*, 296-300. doi: 10.1111/j.1365-2214.2012.01403.x

Table 1a. Demographic information (n=367)

		Dyslexia (n=163)	DCD (n=50)	Dyslexia/DCD (n=62)	Non-SpLD (n=92)
Gender	Male	39 (23.9%)	20 (40%)	20 (32.2%)	18 (19.6%)
	Female	118 (72.4%)	26 (52%)	40 (64.5%)	74 (80.4%)
	Other/Prefer not to say	6 (3.7%)	4 (8%)	2 (3.2%)	0 (0%)
Age	18-21 years	69 (42.3%)	26 (52%)	35 (56.4%)	35 (38.0%)
	22-30 years	56 (34.4%)	19 (38%)	19 (30.6%)	36 (39.1%)
	31-40 years	19 (11.7%)	4 (8%)	6 (9.7%)	8 (8.7%)
	41-50 years	16 (9.8%)	0 (0%)	9 (0%)	5 (5.4%)
	>50 years	3 (1.8%)	1 (2%)	2 (3.2%)	8 (8.7%)
Ethnicity	White	139 (85.3%)	45 (90%)	53 (85.5%)	68 (73.9%)
	Black	8 (4.9%)	2 (4%)	1 (1.6%)	6 (6.5%)
	Asian	8 (4.9%)	2 (4%)	1 (1.6%)	12 (13.0%)
	Chinese	1 (.6%)	0 (0%)	0 (0%)	2 (2.2%)
	Mixed	1 (.6%)	1 (2%)	1 (1.6%)	0 (0%)
	Other/Prefer not to say	6 (3.7%)	0 (0%)	6 (9.7%)	3 (3.3%)

Table 1b. Demographic information for the SpLD groups

		Dyslexia (n=163)	DCD (n=50)	Dyslexia/ DCD (n=62)
Age at diagnosis	10 years or less	31 (19.0%)	11 (22.0%)	14 (22.6%)
	11-15 years	31 (19.0%)	6 (12.0%)	6 (9.7%)
	16-21 years	65 (39.9%)	20 (40.0%)	28 (45.2%)
	>21 years	36 (22.1%)	13 (26.0%)	14 (22.6%)
Other conditions	Physical disability	11 (6.7%)	3 (6%)	8 (12.9%)
	Another SpLD	11 (6.7%)	3 (6%)	8 (12.9%)
	Language/commun ication difficulties	1 (.6%)	0 (0%)	2 (1.6%)
	Affective condition	23 (14.1%)	10 (20%)	19 (30.6%)
	Behavioural condition	11 (6.7%)	8 (16%)	7 (11.3%)
	Mental health condition	12 (7.3%)	5 (10%)	3 (4.8%)
	Genetic condition	2 (1.2%)	1 (2%)	3 (4.8%)
	Other [a]	6 (3.6%)	2 (4%)	4 (6.4%)
Receiving funding	Disability Student Allowance (DSA)	108 (66.3%)	27 (54%)	44 (71%)
	Disability Living Allowance (DLA)	1 (0.6%)	0 (0%)	1 (1.6%)
	DSA and DLA	3 (1.8%)	0 (0%)	5 (8%)
	None	51 (31.3%)	23 (46%)	12 (19.4%)

[a] Referred to medical conditions

Table 1c. Course-related information

		Dyslexia (n=163)	DCD (n=50)	Dyslexia/ DCD (n=62)	Non-SpLD (n=92)[a]
Level of study	Undergraduate	114 (69.9%)	37 (74.0%)	53 (85.5%)	
	Postgraduate	49 (30.1%)	13 (26.0%)	9 (14.5%)	
Mode	Full-time	141 (86.5%)	45 (90%)	57(91.9%)	81 (88.0%)
	Part-time	22 (13.5%)	5 (10%)	5 (8.1%)	11 (12.0%)
Subject area	Arts & Humanities	36 (22.09%)	14 (28.0%)	17 (27.41%)	17 (18.47%)
	Buisness & Management	8 (4.91%)	0 (0%)	1 (1.61%)	1 (1.09%)
	Engineering & Technology	13 (7.97%)	2 (4.0%)	5 (8.06%)	5 (5.43%)
	Life Sciences & Medicine	47 (28.84%)	21 (42.0%)	13 (20.97%)	46 (50.0%)
	Natural Sciences	21 (12.88%)	2 (4.0%)	6 (9.67%)	13 (14.13%)
	Social Sciences	37 (22.69%)	11 (22.0%)	20 (32.36%)	10 (10.87%)
Assessment	Examination	112 (68.7%)	31 (62%)	45 (72.5%)	54 (58.7%)
	Written coursework	138 (84.7%)	40 (80%)	54 (87.1%)	69 (75%)
	Dissertation	96 (58.9%)	32 (64%)	34 (54.8%)	65 (70.7%)
	Practical coursework	80 (49.1%)	26 (52%)	30 (48.4%)	42 (45.7%)
	Presentations	103 (63.2%)	29 (58%)	42 (67.7%)	51 (55.4%)
	Other	21 (12.9%)	1 (14%)	9 (14.5%)	9 (9.8%)

Note. [a]Level of study data was missing for this group

Table 2. Descriptive statistics for the four groups on the four Academic Behavioural Confidence sub-scales

		Grades		Studying		Verbalising		Attendance	
	n	M	SD	M	SD	M	SD	M	SD
Dyslexia	163	3.17	.92	3.07	1.00	2.93	1.08	4.15	.92
DCD	50	3.46	.78	3.10	1.03	3.40	.98	3.95	.95
Dyslexia/DCD	62	3.00	.72	2.82	.83	2.83	.98	3.85	1.06
Non-SpLD	92	3.60	.79	3.48	.93	3.20	.98	4.21	.83

Note. Ratings were on a 5-point Likert scale (1='not at all confident'; 5='very confident')

Table 3. Specialist support accessed

	Currently accessed		
	Dyslexia (n=162)	DCD (n=49)	Dyslexia/DCD (n=61)
Technology and software			
Funded laptop	96 (58.9%)[a]	19 (38.0%)	42 (67.7%)[b]
Text to speech software	72 (44.2%)	14 (28.0%)	35 (56.5%)
Mind mapping software	67 (41.1%)[b]	14 (28.0%)	28 (45.2%)[a]
Touch type software	16 (9.8%)[a]	3 (6.0%)[a]	1 (11.3%)[b]
Voice activated software	55 (33.7%)	5 (10.0%)[a]	18 (29.0%)[a]
Proofreading assistant	42 (25.8%)[a]	7 (14.0%)	18 (29.0%)
Recording device	81 (49.7%)[a]	16 (32.0%)[a]	27 (43.5%)[a]
Electronic calendar	18 (11.0%)[b]	2 (4.0%)[a]	8 (12.9%)[c]
1:1 tutorials			
1:1 organisation/time management	30 (18.4%)[c]	12 (24.0%)[c]	19 (30.6%)[a]
1:1 essay support	52 (31.9%)[b]	18 (36.0%)[a]	28 (45.2%)[a]
1:1 reading strategies	27 (16.6%)[b]	6 (12.0%)[b]	12 (19.4%)[b]
1:1 note-taking strategies	23 (14.1%)[c]	6 (12.0%)[a]	12 (19.4%)[c]
1:1 examination and revision strategies	35 (21.5%)[a]	10 (20.0%)[a]	17 (27.4%)[b]
1:1 research strategies	24 (14.7%)[b]	9 (18.0%)[b]	13 (21.0%)[b]
1:1 presentation skills	23 (14.1%)[a]	8 (16.0%)[a]	13 (21.0%)[a]
Group tutorials			
Group organisation/time management strategies	6 (3.7%)	2 (4.0%)[b]	2 (3.2%)[b]
Group essay support	19 (11.7%)[b]	5 (10.0%)[b]	2 (3.2%)[b]
Group reading strategies	7 (4.3%)[b]	1 (2.0%)[b]	3 (4.8%)[b]
Group note-taking strategies	6 (3.7%)[a]	1 (2.0%)[b]	3 (4.8%)[a]
Group examination and revision strategies	9 (5.5%)[c]	2 (4.0%)[c]	4 (6.5%)[a]
Group research strategies	6 (3.7%)[a]	1 (2.0%)[b]	3 (4.8%)[b]
Group presentation skills	10 (6.1%)[a]	3 (6.0%)[c]	2 (3.2%)[a]
Assistance			
Library support assistant	24 (14.7%)[a]	6 (12.0%)[a]	10 (16.1%)[a]
Counselling and emotional support for SpLD	7 (4.3%)[b]	5 (10.0%)[a]	5 (8.1%)[a]
Manual note-taking assistant	13 (8.0%)[c]	1 (2.0%)[a]	6 (9.7%)[a]

Note. [a] One missing datapoint; [b] Two missing datapoints; [c] Three missing datapoints;

Table 4. Use of examination accommodations

	Currently accessed		
	Dyslexia (n=112)	DCD (n=31)	Dyslexia/DCD (n=45)
Extra time	91 (81.3%)	22 (71.0%)	34 (75.6%)
Access to a reader or Text-to-Speech	17 (15.3%)	1 (3.2%)	3 (6.7%)
Access to a scribe or voice activated software	9 (8.1%)	1 (3.2%)	1 (2.2%)
Use of word processor	30 (26.8%)	14 (45.2%)	14 (31.8%)[a]
Word processor with spell check activated	29 (25.9%)	10 (32.3%)	11 (24.4%)
Sitting in a separate room	47 (42%)	14 (46.7%)[a]	20 (44.4%)
Option of oral examination	4 (3.6%)	0	1 (2.2%)
Use of coloured overlays/papers	27 (24.1%)	1 (3.2%)	8 (17.8%)
Support to monitor time	6 (5.4%)	1 (3.2%)	3 (6.7%)
No loss of marks for spelling/grammar mistakes	34 (30.4%)	8 (25.8%)	17 (37.8%)

Note. [a] 1 missing data point

	Perceived as helpful			
	Dyslexia (n=158)	**DCD (n=42)**	**Dyslexia/DCD (n=60)**	**Non-SpLD (n=90)**
Adjustments to pace of lectures/ allowing time to ask questions.	105 (64.4%)	20 (40.0%)	44 (71%)	40 (43.5%)
Access to Slides before Lectures	121 (74.2%)	32 (64%)	52 (83.9%)[a]	60 (65.2%)
Use of Readable Slides (larger font, choice of colour background)	108 (66.3%)	11 (22.0%)	43 (69.4%)	41 (44.6%)
Adjustments made when work is marked (spelling mistakes ignored)	133 (81.6%)	29 (58.0%)	54 (87.1%)[a]	36 (39.1%)
Alternative forms of information (e.g., video, lecture capture).	105 (64.4%)	22 (44.0%)	40 (64.5%)[a]	48 (52.2%)
Provision of key texts.	124 (76.1%)[c]	32 (64.0%)	50 (80.6%)	68 (73.9%)
Extended deadlines for coursework	111 (68.1%)	28 (56.0%)	51 (82.3%)	36 (39.1%)
Option to clarify understanding of lecture content/essay title.	122 (74.8%)[b]	31 (62.0%)[a]	51 (82.2%)	57 (62.0%)

Note. [a]1 missing data point; [b]2 missing data points; [c]4 missing data points

Table 5. Perceived value of inclusive practices