



LJMU Research Online

Taylor, MJ, Turnbull, Y, Bleasdale, J, Francis, H and Forsyth, H

Transforming support for students with disabilities in UK Higher Education

<http://researchonline.ljmu.ac.uk/id/eprint/4775/>

Article

Citation (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

**Taylor, MJ, Turnbull, Y, Bleasdale, J, Francis, H and Forsyth, H (2017)
Transforming support for students with disabilities in UK Higher Education.
Support for Learning, 31 (4). pp. 367-384. ISSN 0268-2141**

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact researchonline@ljmu.ac.uk

<http://researchonline.ljmu.ac.uk/>

Transforming support for students with disabilities in UK Higher Education

Taylor M., Turnbull, Y.,* Bleasdale, J.**, Francis, H., Forsyth, H.

*M. Taylor (Corresponding author) Email (m.j.taylor@ljmu.ac.uk) Tel : +44 (0)151 231 2215
School of Computing and Mathematical Sciences,
Liverpool John Moores University,
Byrom Street,
Liverpool,
L3 3AF*

**Y. Turnbull, Email (y.turnbull@ljmu.ac.uk) Tel : +44 (0)151 231 3108
Head of Student Advice and Wellbeing Services,
Liverpool John Moores University,
Aquinas Building,
Maryland Street,
Liverpool,
L1 9DE*

***J. Bleasdale, Email (j.c.bleasdale@ljmu.ac.uk) Tel : +44 (0)151 231 3162
Student Advice Team Manager,
Liverpool John Moores University,
Aquinas Building,
Maryland Street,
Liverpool,
L1 9DE*

*H. Francis, Email (h.francis@ljmu.ac.uk) Tel : +44 (0)151 231 2476
School of Computing and Mathematical Sciences,
Liverpool John Moores University,
Byrom Street,
Liverpool,
L3 3AF*

*H. Forsyth, Email (h.forsyth@ljmu.ac.uk) Tel : +44 (0)151 231 2640
Registrar
Faculty of Technology and Environment,
Liverpool John Moores University,
Byrom Street,
Liverpool,
L3 3AF*

Transforming support for students with disabilities in UK Higher Education

Intended UK government changes to the Disabled Students' Allowance will have a significant impact on the support that UK universities provide for students with disabilities. In this paper we examine the types of transformation that may be required to university support for students with disabilities from a socio-technical perspective. The research reported in this paper involved a year-long case study in a UK university. The potential changes required to support for students with disabilities within the university studied to cater for the proposed UK government changes to the Disabled Students' Allowance included providing non-medical helper support through external agencies, the development of a dyslexia screening process, providing enhanced library services including access to printers and scanners and assistance with assistive software, provision of laptops with assistive software, making assistive software available in a limited form in computing laboratories and more co-ordinated special examination provision.

Key words: disability student higher education UK

1. Introduction

In 2014 / 2015 there were approximately 2.3m UK students in higher education (HESA, 2016). Of the students starting a UK higher education course in 2014 / 2015 approximately 83,000 were known to have a disability (HESA, 2016). Students with disabilities may face different barriers to higher education. These can concern difficulties relating to learning activities, for example engaging in field work involved in certain courses, difficulties relating to assessment activities, for example difficulties relating to reading examination papers or writing answers, or difficulties relating to engaging in the social aspects of higher education, for example relating to students with autistic spectrum disorders (Taylor et al, 2010).

It is important that students with disabilities are appropriately supported during their time in higher education (Taylor, 2005a). The UK Disabled Students' Allowance (DSA, 2016) is one element of such support, alongside the support provided by the student's higher education institution. Proposed changes to the UK Disabled Students' Allowance will change the manner in which support for students with a disability is provided. Intended UK government changes to the Disabled Students' Allowance (DSA, 2016; DSA Changes, 2016) will have a significant impact on the support that UK universities provide for students with disabilities. The changes to the UK Disabled Students' Allowance proposed include:

The limiting of funding for the purchase of standard specification computers (and warranties and insurance associated with such) as well as printers and scanners. A contribution from disabled students of £200 towards computer hardware has been proposed. This will include the limiting of funding for higher specification computers simply because of the manner in which a university course of study is delivered.

Students with disabilities will only receive support if their needs are deemed to be more complex.

Withdrawal of funding for non-medical helpers except for the most specialised cases. Universities should employ strategies to remove the need for support workers and encourage greater student independence.

Withdrawal of funding for specialised accommodation for university students with disabilities (except in exceptional circumstances).

Disability will be defined by the UK Equality Act 2010 (EA, 2010).

The new definition of disability included in the proposed changes implied that ‘mild’ conditions including dyslexia and mental health issues might not be considered a disability, but merely a special educational need. The proposed timetable for changes to the UK Disabled Students’ Allowance is between September 2015 and September 2017. The rationale for the intended changes to the UK Disabled Students’ Allowance appears to be to reduce UK government expenditure on students with a disability, by effectively withdrawing support for students with mild or moderate levels of disability, and transferring the cost of supporting such students to universities.

The originality of the research reported in this paper is the analysis of the transformation required for UK university support for disabled students resulting from the proposed changes to the UK Disabled Students’ Allowance from a socio-technical perspective. A year-long case study was undertaken in a large post 1992 UK university concerning required changes to address: the intended changes to the UK Disabled Students’ Allowance; the number of students likely to be affected by the intended changes; possible mechanisms to address the intended changes; additional staff and equipment required; and cost estimates for the intended changes. This is an important research topic, since the proposed changes to the UK Disabled Students’ Allowance will have a significant impact upon the manner in which UK universities will need to provide support for students with a disability. The aim of the research reported in this paper was to examine the impact of the intended changes to the UK Disabled Students’ Allowance, the factors associated with the transformation of student disability support, and mechanisms for the implementation of required changes.

2. Literature review

UK Disabled Students’ Allowance

The UK Disabled Students’ Allowance (DSA, 2016) was established in 1993, and was initially administered by UK Local Education Authorities before being transferred to Student Finance England in 2009 (Beauchamp-Pryor, 2012). The Disabled Students’ Allowance can be applied for by UK higher education students with a disability, a long-term health condition, a mental health condition, or a specific learning difficulty such as dyslexia. The support provided by the UK Disabled Students’ Allowance depends upon individual need and not on income.

Students with a disability in UK higher education

Riddell et al (2005) commented that prior to 1993, UK higher education was largely inaccessible to disabled people with significant impairments, and any adjustments made were at the good will of staff and students. The number of students with a disability entering UK higher education has been increasing over a number of years (Hopkins, 2011). In particular, during the last decade there has been significant growth in the number of UK higher education students with specific learning difficulties (SpLD) such as dyslexia and dyspraxia (Williams et al, 2014). In the academic year 2012 / 2013 UK higher education student intake there were

34,690 students declaring a specific learning difficulty, 1995 students declaring an autistic spectrum disorder, and 7,960 students declaring mental health difficulties out of a total of 73,135 students declaring a disability (HESA, 2016). Hopkins (2011) commented that disabled students have to work considerably harder than non-disabled students to overcome a wide range of physical, attitudinal, social, cultural and political barriers.

UK universities are required to return information to the UK Higher Education Statistics Agency on the number of disabled students in specific categories enrolled on courses. Premium funding is awarded to a university on the basis of the number of students claiming the UK Disabled Students' Allowance (Riddell and Weedon, 2014).

Support mechanisms for higher education students with a disability

UK Universities have a duty to avoid discriminatory practices under the UK Equality Act 2010 (EA, 2010). The legislation requires reasonable adjustments to be made to the curriculum, pedagogy and assessment for students with a disability. However, in order to claim their right to such an adjustment, a student must be able to demonstrate that he or she is disabled.

Models have been developed to assist in the identification and support for disabled students that include processes for disclosure, identifying and assessing need, and establishing support systems and processes (Hargreaves and Walker, 2014). There are a variety of support staff for supporting higher education students with a disability (Taylor, 2005a) including disability advisors, mental health advisors, special educational needs co-ordinators, learner support and study skills support staff such as study assistants and non-medical helpers. Non-medical help concerns the provision of support assistants such as note-takers, scribes, readers and lab assistants.

Typically higher education students with a disability will engage with the support process when they declare a disability on their UCAS application, when they enrol at university, or at some point during their studies at university. The student would then need to provide medical evidence, or undergo some form of assessment so that appropriate adjustments could be put in place. Such adjustments would typically be documented in some form of individual student learning plan (Taylor, 2005a). It is important that universities anticipate the support that students with disabilities may require, and ideally this should be done during the transfer to university (Taylor et al, 2010; Sanderson, 2001; Piggott and Houghton, 2007).

Support for different types of disability in higher education

There are a variety of issues associated with the support required for different types of disabilities in a higher education setting, in particular for students with autistic spectrum disorders (Macleod et al, 2013; Taylor, 2005b), mental health difficulties (Storrie et al, 2010; Tinklin et al, 2005), emotional and behavioural difficulties (Cooper, 2011; Taylor et al, 2008) and dyslexia (Bjorklund, 2011, Taylor et al, 2009). In particular it is important that higher education staff supporting students with a disability are aware that disabilities can have a wide range of levels of severity (for example student with autistic spectrum disorders may present a wide range of behaviours) and therefore each individual student with a disability will require an appropriate assessment of their individual needs, and appropriate adjustments will need to be devised, agreed and implemented in order to cater for such needs.

3. Research method

A case study (Yin, 2012) of the transformation required for university services in order to address the impacts of the proposed changes to the UK Disabled Students' Allowance in a large post 1992 UK university was undertaken over a year-long period. The research involved committee meetings with relevant staff in the university studied from senior management, student welfare, student disability services, library and computing staff, university registrars, teaching staff and disability co-ordinators, as well as student union representatives. The student union representatives represented the views of the students with disabilities within the university studied. All those involved were present in all the committee meetings to discuss the proposed changes to the UK Disabled Students' Allowance, in order that all perspectives were considered in the development of mechanisms to address the proposed changes. The researchers were all members of the committee set up by the university studied to develop a strategy to address the intended changes to the UK Disabled Students' Allowance.

The research questions posed by this research were:

What is the impact of the proposed changes to the Disabled Students' Allowance for a UK University?

What factors are associated with the transformation of student disability support necessitated by the proposed changes?

How can the transformation of student disability support within a university be implemented?

These research questions are important since the proposed changes to the UK Disabled Students' Allowance will limit government funding for students with a variety of disabilities, and without appropriate adjustments to the provision of disabled student support by UK universities, the level of support available to students with a disability may decline and potentially disadvantage such students.

3.1 Data collection

Notes were made of the committee meetings concerning the impact of the proposed changes to the UK Disabled Students' Allowance involving senior management, student welfare, student disability services, library and computing services, university registrars, teaching staff, disability co-ordinators, and student union representatives within the university studied. The meetings took place over a year-long period. The questions raised in these committee meetings covered the detailed nature of the intended changes to the UK Disabled Students' Allowance and the mechanisms that could be developed to address the intended changes. Statistical data regarding students with a disability was obtained from the university studied and the UK Higher Education Statistics Agency (HESA, 2016).

3.2 Data analysis

The committee meeting notes were content analysed in order to identify themes relating to the impact of the proposed changes to the UK Disabled Students' Allowance on the support for different types of disabilities within the university studied. Themes identified from the content analysis of the committee meeting notes included the need for an overall disability provision framework, specific policies on reasonable adjustments and specific learning difficulties and dyslexia screening, and potential changes required to library and computer services, non-

medical help, and special examination provision. The themes emerged from the discussion and analysis of the intended changes to the UK Disabled Students' Allowance, and the current disability support provision within the university studied.

The Soft Systems Methodology (Checkland, 1972; Checkland, 1981; Checkland, 1990) was utilized in order to examine the social and organisational aspects of the transformation of the support for disabled students within the university studied necessitated by the proposed changes to the UK Disabled Students' Allowance. The themes found using the content analysis were used to aid in the creation of the rich picture and CATWOE analysis (Checkland, 1990) during the soft systems analysis.

Overall the case study approach was beneficial as it provided an in depth understanding of the impact of the proposed changes to the UK Disabled Students' Allowance and the transformations that would need to be applied to disability support provision within the university studied in order to address the resulting changes in government funding. The main drawback to the case study approach utilized was potential limitations on the generalizability of the findings to other UK universities.

4. Research Results

4.1 Analysing the impact of the proposed changes to the UK Disabled Students' Allowance

Within the university studied, in the academic year 2014 to 2015 there were 81 students who had declared an autistic spectrum disorder, 263 students who had declared mental health difficulties and 914 students who had declared a specific learning difficulty. Students with 'mild' dyslexia formed the largest group of students with a disability within the university studied. For the academic year 2014 to 2015, 976 students within the university were in receipt of the UK Disabled Students' Allowance. Not all the students who declared a disability within the university studied went on to claim (or were not eligible to claim) the Disabled Students' Allowance. Of these 976 students, 532 had declared a specific learning difficulty, 49 had declared an autistic spectrum disorder, and 120 had declared mental health difficulties. The university currently funded dyslexia assessments for all students requesting such.

A rich picture (Checkland, 1990) (Figure1) developed from the themes found via the content analysis assisted in understanding the stakeholders and their perspectives with regard to the impact of proposed changes to the UK Disabled Students' Allowance.

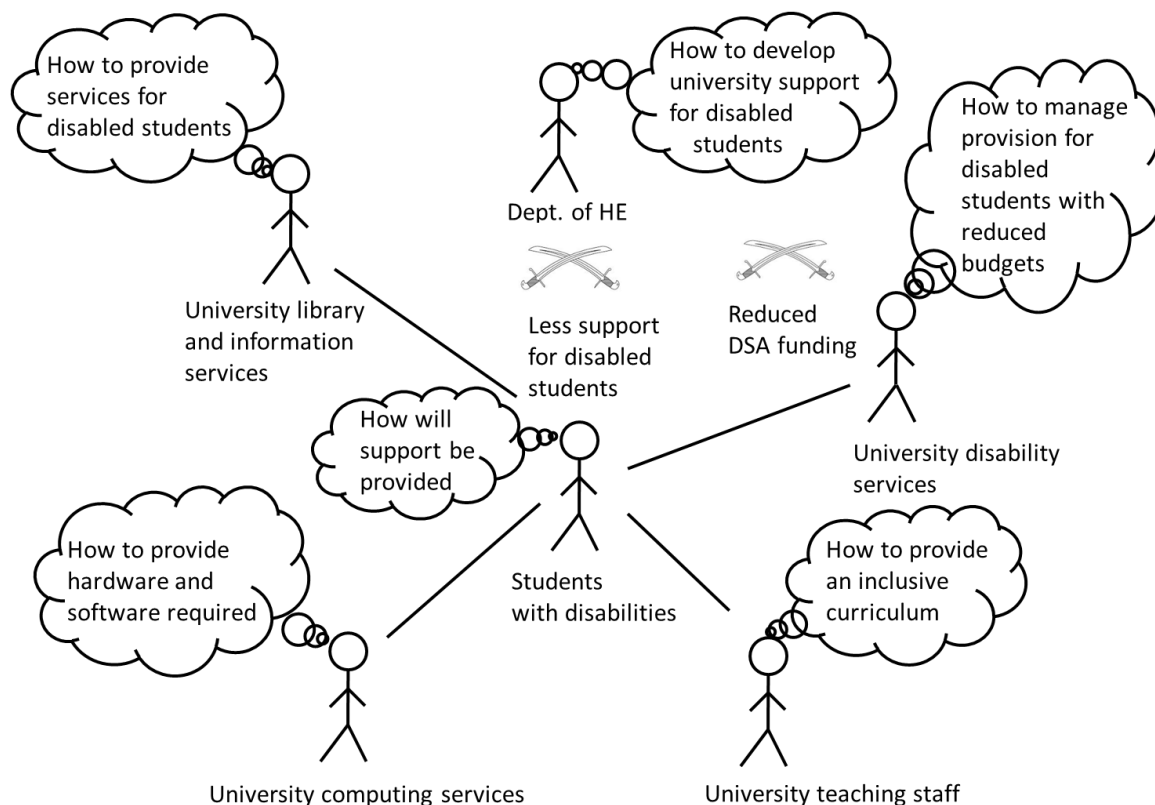


Figure 1. Rich picture for the impact of the proposed UK Disabled Students' Allowance changes

From the rich picture a root definition (Basden and Wood-Harper, 2006) for the impact of the proposed changes to the UK Disabled Students' Allowance changes was created:

Root Definition for disabled student support:

A system for providing appropriate support for university students with a disability in terms of learning and assessment strategies supported by centrally and locally provided software and hardware and support staff within the constraints of available government and university funding and legal requirements.

A root definition is a statement that concisely describes a system of interest (Checkland, 1981). A more detailed understanding of the impact of the proposed changes to the UK Disabled Students' Allowance was achieved via a CATWOE analysis (Checkland, 1990) that was developed from the themes found during the content analysis:

CATWOE for disabled student support:

Client: Staff supporting students with disabilities within the university

Actors: University staff from student welfare, student disability services, computing services, library and information services, registrars, disability co-ordinators, teaching staff, and student union representatives.

- Transformation:* Moving from a more central government funded disabled student support model to a more university funded disability support model, and moving from a very individualistic (student) model to a more inclusive, holistic model.
- Weltanschauung:* Support for UK students with a disability to be more targeted and based upon individual university provision rather than central government provision.
- Owners:* University management.
- Environment:* Reduced budgets for support for students with a disability, legal requirements for supporting students with a disability.

A CATWOE analysis examines the elements of the root definition (Checkland, 1981). The CATWOE analysis assisted in understanding the current environment for disability support for UK students and the transformation required by the proposed changes to the UK Disabled Students' Allowance. In particular, the CATWOE analysis assisted in the development of the transformation strategy for the targeting of appropriate disability support services, software and hardware, and the changes to teaching and assessment strategies required within the university studied. The CATWOE analysis also helped to understand the current environment of reducing disabled student support budgets, and the world view that increasingly specific targeting of disability support was required in such an environment of reducing budgets.

A conceptual model (Checkland, 1990) was created in order to develop a strategy for transforming the support provided for students with a disability within the university studied (Figure 2).

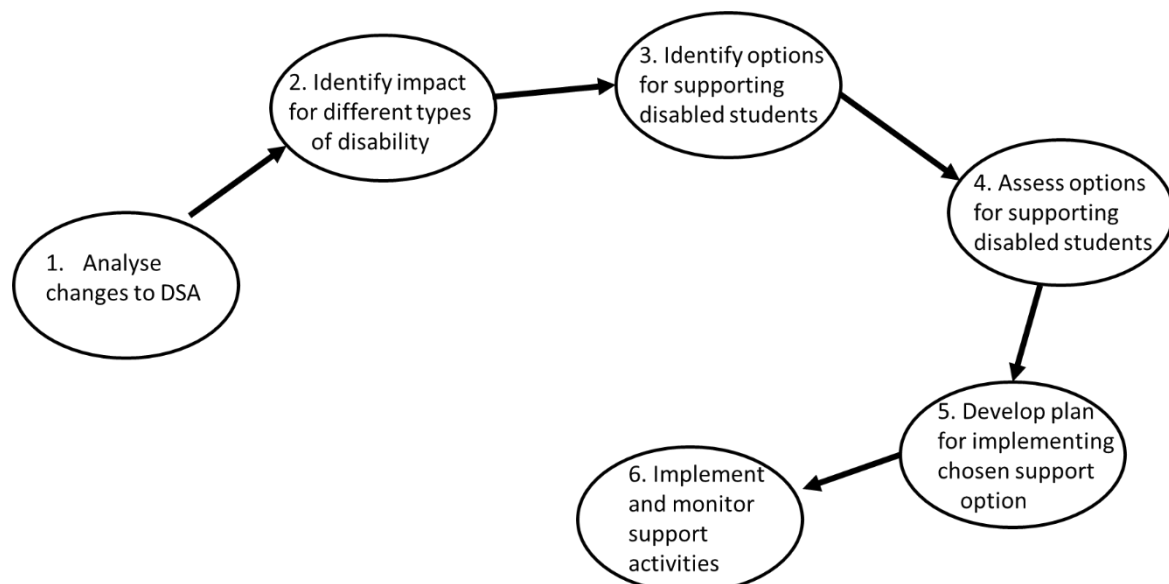


Figure 2. Conceptual model for student disability support transformation

The themes identified from the content analysis from the case study aided the creation of the rich picture and CATWOE analysis, and these then supported the development of a conceptual model that provided a framework for developing a new disability support strategy.

4.2 Factors associated with the transformation of student disability support

The university studied had a system of individual student learning plans (Taylor, 2005a) that included an assessment of the nature and severity of a student's disabilities, and the recommended specific adjustments to teaching and assessment activities that would be required for the student. This system helped to ensure that the university made reasonable and appropriate adjustments for students with a disability.

It was identified that different types of disability would be affected in different ways by the proposed changes to the UK Disabled Students' Allowance. Students with autistic spectrum disorders (Taylor, 2005b) and students with emotional and behavioural difficulties (Taylor et al, 2008) associated with mental health difficulties and autistic spectrum disorders could be affected by the withdrawal of funding for non-medical helpers, and the withdrawal of funding for specialised accommodation.

In the academic year 2013 / 2014 within the university studied 158 students accessed non-medical help provided through the UK Disabled Students' Allowance at a total cost of £280,000. The total number of services accessed by the 158 students was 193, with some students using more than one service. The type of assistance provided by the university studied and the numbers of students with a disability requiring such assistance included:

Library helper (6 students)
Study mentor (48 students)
Note taker (57 students)
Personal assistant (10 students)
Exam support (66 students)
Proof reader (6 students)

Students with dyslexia (Taylor et al, 2009) could be affected by the limiting of funding for the purchase of standard specification computers (including a proposal that students would contribute the first £200 of the cost of the computer) and warranties and insurance associated with such, assistive software, printer, scanners and consumables, as well as the limiting of funding for higher specification computers simply because of the manner in which a course of study is delivered. If appropriate, this cost could potentially be covered by the student hardship fund available within the university studied. Assistive software typically used by students with dyslexia in the university studied included mind-mapping software (MindView, 2016) that allows users to create diagrams to support analysis, organisation and report / essay writing activities, and text to speech and speech to text software tools (Kurzweil, 2016). The typical cost of a dyslexia assessment was in the region of £280 to £400 per student.

4.3 Implementing transformation of student disability support

In order to transform student disability support within the university studied, a number of new policies were created. These included an overall disability provision framework, a duty to make reasonable adjustments policy, and a specific learning difficulty and dyslexia policy.

Disability provision framework

The overall disability provision framework created within the university studied outlined the need for an accessible environment and reasonable adjustments as covered by the UK Equality Act 2010 (EA, 2010), and specifically the provision to be made for students with non-complex and special educational needs that will not be covered by the new disabled students' allowance provisions covering dyslexia, dyspraxia, dyscalculia, mental health and autistic spectrum conditions when mild or non-complex. In particular, the overall disability provision framework created discussed resource implications in terms of library provision, IT services, diagnosis costs for specific learning difficulties, support mechanisms for specific learning difficulties, study support provision, disability support staff roles, printing and photocopying resources, and learning and teaching provision.

Duty to make reasonable adjustments policy

The duty to make reasonable adjustments policy created within the university studied discussed how the institution would ensure that it had anticipated and taken reasonable steps to address barriers which could put disabled students at a disadvantage in relation to a relevant matter when compared to non-disabled students. In particular the duty to make reasonable adjustments policy set out the institutional policy in terms of ensuring that disabled students:

Have access to appropriate learning and teaching support

Are able to access buildings used for teaching and assessment

Have access to specialists for advice on available provision within the university

Have documented support plans in place

Have access to IT facilities and services

Have timely access to learning materials in an appropriate format

Have access to appropriate additional support in the form of non-medical help

Non-medical help is defined as the provision of support assistants such as scribes, readers, lab assistants, and enhanced support assistants such as examination support workers, note takers and study assistants.

Specific learning difficulty and dyslexia policy

The specific learning difficulty and dyslexia policy created within the university studied was required since the provision of support for students with specific learning difficulties was to be reduced as part of the proposed changes to the UK Disabled Students' Allowance. The specific learning difficulty and dyslexia policy intended to ensure that provision for students with mild dyslexia was incorporated into the learning environment and therefore should not need to be individually addressed. Provision for students with moderate to severe specific learning difficulties and dyslexia would continue to be addressed individually. It was anticipated that the majority of students entering the university with a specific learning difficulty or dyslexia would have received appropriate support and diagnosis whilst in primary or secondary

education. Students who had not received such a diagnosis (or had a diagnosis before the age of sixteen) would be provided with a screening provision, which is the first stage in a formal diagnosis. The screening provision would be in the form of a software tool. The outcome from the software based screening exercise would then determine the potential for further support. If the software based screening exercise indicated a possibility of moderate to severe dyslexia for a home student with English as their first language studying on a programme with a duration of an academic year or longer then the student would be considered for a formal educational psychologist's assessment. Any student diagnosed with mild, moderate or severe learning difficulties would be provided with an individual student learning plan.

Changes to support mechanisms for students with a disability

Library services

The library service would need to cater for increased demand for scanners and printers from disabled students. The library service would also need to provide support staff for assisting disabled students with the use of assistive software such as mind-mapping (Mindview, 2016), text to speech and speech to text software (Kurzweil, 2016) and screen reading applications (Jaws, 2016). Assistive software provided support for students with physical / sensory disabilities to access learning materials via the Blackboard virtual learning system (Blackboard, 2016) in use at the university studied.

The library service would also need to provide learning materials in alternative or accessible formats for students with a disability. This would involve liaison with publishers to obtain electronic texts in a timely fashion or the digitization of texts in-house where an electronic version of a text did not exist.

Library services would also need to increase provision of small group rooms and individual study carrels for disabled students using screen readers or voice recognition software.

Non-medical help

The changes required to cater for the proposed limiting of non-medical helper funding for students with a disability included:

Library helper assistance being integrated into library staff roles within the university.

Disabled student mentor assistance being provided through existing study skills support staff roles within the university.

Proof reading being provided through existing study skills support staff roles within the university.

Examination support being reduced through the use of speech to text and text to speech software.

Note taking support being reduced via a more inclusive curriculum through the existing Blackboard (Blackboard, 2016) virtual learning environment.

However, personal assistant support would still need to be provided by the university.

The university studied already had an extensive learner support facility that provided support for essay and report writing and mathematics and statistics support. The learner support facility was already planning to increase in capacity before the changes to the UK Disabled Students' Allowance were announced.

Inclusive curriculum

With regard to the provision of an inclusive curriculum in order to support less reliance on non-medical helpers for note taking for students with specific learning difficulties, the university studied implemented a policy that all relevant learning materials for a given teaching session should be available to students on the virtual learning environment in use (Blackboard, 2016) a minimum of one day before the actual teaching session. In addition, where appropriate, alternative equivalent forms of assessment would be used for students with a disability where required.

Computer services

The university studied already had a small number of computers and laptops with assistive software installed that could be used by students with a disability. The university was examining the use of 'roaming' user profiles for students with a disability that would assist with computer settings to support students with dyslexia or visual impairments across the different computer laboratories within the university.

Special examination provision

In terms of special examination provision for disabled students, the university studied already had a well-established system for the centrally co-ordinated local provision for special examination sittings. The university was already intending to further enhance the central administration of such special examination provision in order to achieve further economies of scale. In addition, the use of speech to text and text to speech software was being considered for special examination provision for some students with a disability. In appropriate circumstances alternative forms of assessment to examinations might also be considered for specific students with a disability.

Discussion

Overall the outcome of the research presented in this paper was the development of a pragmatic mechanism for transforming organizational change with regard to disability support within the university studied. The proposed changes to the UK Disabled Students' Allowance will impact the financial support for UK students with a mild or moderate level of disability. In order to lessen the effects of the proposed changes, UK universities will need to make appropriate changes to their provision for students with a disability. This will typically cover various operational aspects such as library services, computer services, disability support services, support workers and specialized accommodation. In this paper we have examined the nature of the proposed changes to the UK Disabled Students' Allowance and the mechanisms developed to effect necessary changes within the context of a large post 1992 UK university. A limitation of the study was that it was based on just one UK university. However, the analysis of the impact of the proposed changes to the UK Disabled Students' Allowance, and the analysis of the mechanisms developed to address the proposed changes could provide guidance for any

UK university. The implications for the UK higher education sector concern not only the increased cost of disability provision that UK universities will have to meet, but also the manner in which the more comprehensive support will need to be provided.

Conclusions

In this paper we have examined the proposed changes to the UK Disabled Students' Allowance, the factors associated with the proposed changes, and the transformation required for university based support for students with a disability resulting from the proposed changes from a socio-technical perspective. Since there are increasing numbers of students with a disability attending UK universities, and these numbers are likely to grow in the future, this is an important area of educational research.

The main changes to university based provision for students with disabilities within the university studied included a revision of the university policy regarding the operation and funding of dyslexia assessments, co-ordinated central and local provision of computer hardware and software required by students with a disability, co-ordinated central and local provision of library and information services, and curriculum changes to make learning and assessment more inclusive (for example, the provision of learning materials in formats that reduce the need for note takers) and more centralized co-ordination of special examination provisions.

It is hoped that the examination of the impact of the proposed changes to the UK Disabled Students' Allowance and the intended transformation of support for students with a disability within the university studied may be of use to other UK universities, and more generally for any university that provides support for students with a disability. Further research could include the study of disability provision across a number of universities both in the UK and internationally.

References

Basden, A., Wood-Harper, A. (2006) A philosophical discussion of the root definition in soft systems thinking: an enrichment of CATWOE, *Systems Research and Behavioral Science*, 23, 1, 61 – 87.

Beauchamp-Pryor, K. (2012) From absent to active voices: securing disability equality within higher education, *International Journal of Inclusive Education*, 16, 3, 283 - 295.

Bjorklund, M. (2011) Dyslexic students: Success factors for support in a learning environment, *The Journal of Academic Librarianship*, 37, 5, 423 – 429.

Blackboard (2016) Blackboard virtual learning environment
<http://uki.blackboard.com/sites/international/globalmaster/Markets/Higher-Education.html>
(accessed 14/10/2016)

Checkland, P. (1972) Towards a system-based methodology for real-world problem solving, *Journal of Systems Engineering*, 3, 2, 87 - 116.

Checkland, P. (1981) *Systems thinking, systems practice*, John Wiley, Chichester, UK.

Checkland, P. (1990) *Soft systems methodology in action*, John Wiley, Chichester, UK.

Cooper, P. (2011) Teacher strategies for effective intervention with students presenting social, emotional and behavioural difficulties: an international review, *European Journal of Special Needs Education*, 26, 1, 71 – 86.

EA (2010) UK Equality Act 2010, <http://www.legislation.gov.uk/ukpga/2010/15/contents> (accessed 14/06/2016)

DSA (2016) UK Disabled Students Allowance
<https://www.gov.uk/disabled-students-allowances-dsas/overview> (accessed 14/06/2016)

DSA Changes (2016) Written statement to Parliament: Higher education: student support - changes to Disabled Students' Allowances (DSA)
<https://www.gov.uk/government/speeches/higher-education-student-support-changes-to-disabled-students-allowances-dsa--2> (accessed 14/06/2016)

Hargreaves, J., Walker, L. (2014) Preparing disabled students for professional practice: managing risk through a principles-based approach, *Journal of Advanced Nursing*, 70, 8, 1748 – 1757.

HESA (2016) UK Higher Education Statistics Agency, <https://www.hesa.ac.uk> (accessed 14/06/2016).

Hopkins, L. (2011) The path of least resistance: a voice-relational analysis of disabled students' experiences of discrimination in English universities, *International Journal of Inclusive Education*, 15, 7, 711 – 727.

Jaws (2016) Jaws screen reader
<http://www.freedomscientific.com/Products/Blindness/JAWS> (accessed 14/06/2016)

Kurzweil (2016) Kurzweil educational software <http://www.kurzweiledu.com/default.html> (accessed 14/06/2016)

MacLeod, A., Lewis, A., Robertson, C. (2013) 'Why should I be like bloody Rain Man?!' Navigating the autistic identity, *British Journal of Special Education*, 40, 1, 41 – 49.

MindView (2016) MindView Mind Mapping Software
<http://www.matchware.com/en/products/mindview/> (accessed 14/06/2016)

Piggott, L., Houghton, A. (2007) Transition experiences of disabled young peoples, *International Journal of Lifelong Education*, 26, 5, 573 – 587.

Riddell, S., Tinklin, T., Wilson, A. (2005) New labour. Social justice and disabled students in higher education, *British Educational Research Journal*, 31, 5, 623 – 643.

Riddell, S., Weedon, E. (2014) Disabled students in higher education: discourses of disability and the negotiation of identity, *International Journal of Education Research*, 63, 38 - 46.

- Sanderson, A. (2001) Disabled students in transition: A tale of two sectors' failure to communicate, *Journal of Further and Higher Education*, 25, 2, 227 – 240.
- Storrie, K., Ahern, K., Tuckett, A. (2010) A systematic review: Students with mental health problems—A growing problem, *International Journal of Nursing Practice*, 16, 1 – 6
- Taylor M. (2005a) The Development of the Special Educational Needs Co-ordinator role in a HE setting, *Journal of Support for Learning*, 20, 1, 22 - 27.
- Taylor M. (2005b) Teaching students with autistic spectrum disorders in HE, *Journal of Education and Training*, 47, 7, 484 - 495
- Taylor, M., Baskett, M., Duffy, S., Wren, C. (2008) Teaching HE students with emotional and behavioural difficulties, *Education and Training*, 50, 3, 231 - 243
- Taylor, M., Duffy, S., England, D. (2009) Teaching students with dyslexia in higher education, *Education and Training*, 51, 2, 139 - 149
- Taylor, M., Baskett, M., Wren, C. (2010) Managing the transition to university for disabled students, *Education and Training*, 52, 2, 165 - 175
- Tinklin, T., Riddell, S., Wilson, A. (2005) Support for students with mental health difficulties in higher education: the students' perspective, *British Journal of Guidance and Counselling*, 33, 4, 495 – 512.
- Williams, P., Wray, J., Farrall, H., Aspland, J. (2014) Fit for purpose: traditional assessment is failing undergraduates with learning difficulties. Might eAssessment help?, *International Journal of Inclusive Education*, 18, 6, 614 - 625
- Yin, R. (2012) *Applications of case study research*, Sage, London, UK.