Matching Students with Technology Assessment Tool

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http://www.tcd.ie/disability/services/assistive-tech/

Introduction

As the number of students with disabilities entering Higher Education and availing of supports continues to increase, providing the right 'fit' of reasonable accommodations is a vital part of the student journey. The correct assessment of technology needs enhances student engagement with technological supports, and reduces the frequency of disengagement, which can result in underutilization of resources.

The development of an assessment tool for students availing of Assistive Technology (AT) in Higher Education ensures that students are fully engaged in the selection and acceptance of technology. The tool is based on a social model of assessment: the Matching Person to Technology Framework (Scherer, 1999).

The tool highlights the need for students to engage with the technology support and intended outcomes. Emerging results indicate positive outcomes within educational and social environments.

Theoretical framework: Scherer's Matching Person to Technology framework http://matchingpersonandtechnology.com/

Method

Mixed methodology: The tool is designed to be used within a three stage process:

1. Pre entry online questionnaire hosted on the Disability Service website, which investigates past use and experiences of technology.
2. Individual AT assessment meeting to introduce how technology fits with the student's educational activities, and to set technology goals.
3. Review and support: Online form to review the effectiveness of the support provided, and to ensure that it meets the student's technological goals.

Demographic data: disability type, course.
Self-report measure (3 Likert scale items): experiences of current technology use; social characteristics; advice.
Self-report measures (5 Likert scale items): technology-needs match; technology use outside of the educational environment; confidence levels in technology use; technology-student routine match; support level required.

Sample populations

Participants: new entry First year students with disabilities attending Higher Education Institution (n = 56)
AT Online forms - stages 1 and 3 (n = 56)
AT assessment - stage 2 interviews (n = 56)

Results

Demographics

Disability categories:

37% Physical disability
32% Specific Learning Difficulty (Dyslexia, Dysgraphia and Dyscalculia).
14% Visual Impairment;
9% Mental Health Condition;
5% Developmental Co-ordination Disorder (Dyspraxia);
4% Hearing Impairment.

Research Questions

Does the Assistive Technology meet the educational needs of the student?
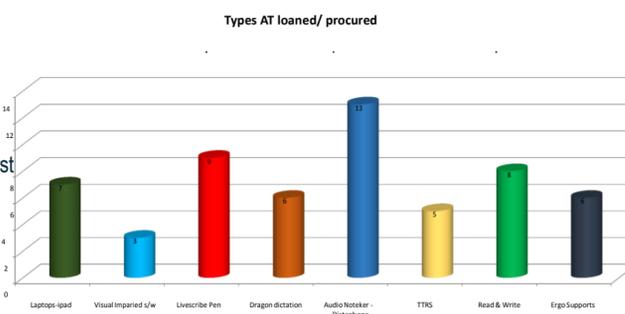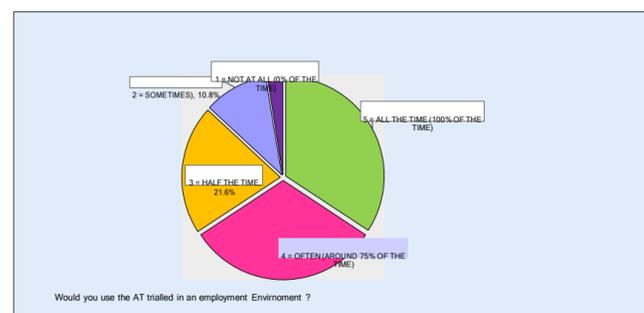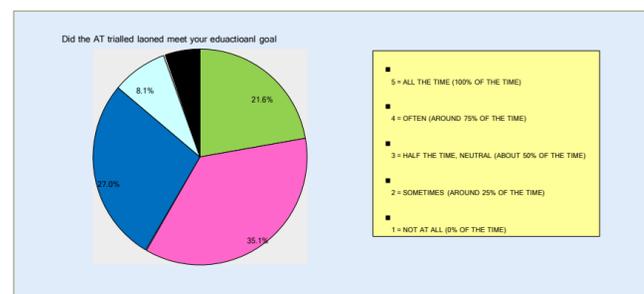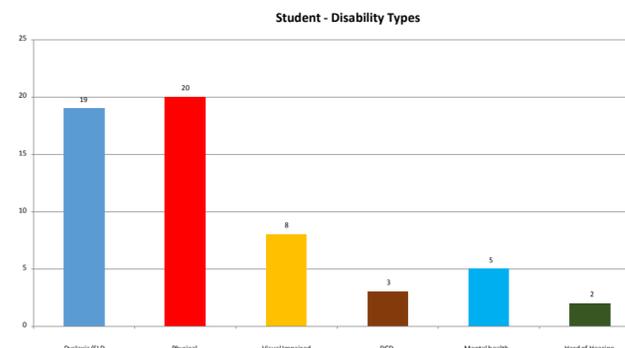
Results from completion of all three stages of the assessment tool indicate that 21.16 % of students believed that their technology needs had been met, and 35.1% stated that their needs had been met over 75% of the time. The adaption of the MTP tool of technology assessment to a shorter model of student assessment highlights the need for student input to be included at all times, to ensure that supports are worthwhile and adapted to the individual.

Would the assigned AT trialed by students be useful in an employment environment?

An indicator of the extent to which the student has adopted AT into their everyday environment, is their willingness to use it on progression from third level education to employment. The use of technology to this end make the student independent and does not let their disability become a factor that steps them applying for further positions. Their use of AT is a seen as a skill e user has developed to allow them work independently.

What is the range of AT provided to student users?

The type of technology assigned to students extended across a range of AT currently available in the market. Technology was selected after completion of the first two stages of the assessment tool. Initial training was completed to maximize usability. Dictaphones were selected by 23% of students, LiveScribe pen (16%) and Texthelp text to speech software (14%), all of which support auditory learning. As teaching is principally delivered via lectures, seminars and tutorials, this is an example of matching student needs to appropriate AT.

Student - Disability Types

Did the AT trialled laoned meet your eduactioanl goal

Would you use the AT trialled in an employment Enviroment ?

Types AT loaned/ procured

Discussion

1) Lack of a clear assessment process for engaging students in Technology supports at second level leads to a high level of abandonment, prior to entering third level.
2) The assessment tool results demonstrate that an assessment tool based on a social model ensures that the student is the focal point of identifying the correct technology support.
3) Assessment tools based on medical models can lead to a higher abandonment rate of enabling technologies, without the end user benefiting from its use.
4) Providing a dedicated AT support service for students is imperative to ensure that support is successful.
5) 56.7% of students who engaged with process stated that the AT provided met their needs in an educational environment.
6) 72% of students felt confident in the use of devices or software assigned to them.

Implications

► Disability Service at FE/HE
A standardized selection of AT should be agreed amongst higher level intuitions. Such an approach will lead to a standardization of supports nationally, and ensure that students transitioning from second level to HE are aware of the level of engagement required when accepting use of technology supports. A standardised tool for assessment of AT needs will also allow institutions to effectively quantify the level of success of such enabling supports.

► FE / HE students
A standardised AT assessment tool provides a clear process for students when seeking specific technology supports or loans of hard or software. An AT assessment tool raises the awareness of environment/ educational activities that the student will be engaged in, in addition to the level of training required in order to benefit from support. The AT assessment tool highlights weaknesses in prior technology use, and sets a level of performance expectation for any device or software procured for the student.

► HEA Funding
Economies of funding in provision of resource allocation affects the *level* of Assistive Technology aids that can be procured.
A standardised AT assessment tool provides a clear justification for allocation of funds based on user needs, and level of expertise in engaging in the use of the agreed support. It provides funding bodies with a clear pathway for provision of supports, and outcomes from its use. The AT assessment tool minimises the abandonment of externally funded supports, where they are not matched to user wants or needs. It highlights the student as the main decision maker in engaging with technology, and avoids wastage via unwanted supports that do not meet the students level of expertise or learning environment.