TASMANIAN UNIVERSITY STUDENT ASSOCIATION

Title: The Future in Assisted Technologies Final Research Report.

TUSAxUC Student Lead Research Project

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Semester 1, 2022

Executive summary:

This research project was a ZAL201 Student Leader Project, and the brief was Disability Inclusion; this is such a large issue and area to cover. For the purpose of this small project and with consultation with my support mentors I selected to focus on the knowledge and the range of assisted learning technologies available to students with disabilities studying at The University of Tasmania. “Assistive technology (AT) is a powerful enabler of participation” (World Health Organisation, GATE program).

The aim was to assess how successful the university was in assimilating knowledge and providing assisted learning technologies to its students and to ascertain what knowledge was provided to students.

Some of the assistive technologies that we are talking about are; Braille printers, text-to-write and text-to-read programs; Dragon Dictation; iPhone assistive apps and technologies; speechifying for phones; screen text readers; computer read-aloud functions; and microphone for FM transmitters, and use of contrasting colours on board (i.e., not red, or green).

There are so many ways assistive technology and tools can improve learning outcomes for students with disabilities. Implementation for educational facilities of these tools will be challenging, however, it is essential.

Purpose:

The purpose of this report was to find out where the University of Tasmania was situated in sourcing and providing the new assisted technology to its students.

To assist in evaluating this, research was conducted to survey what other universities around Australia were achieving and make a comparison. The reason for this was to assess if improvements are needed at The University of Tasmanian in information and product delivery of assisted technologies.

Background:

"Assisted technology is moving so fast and education facilities are finding it hard to keep up. Funding for assisted technologies is often not available. They can be of assistance in classrooms and can benefit a range of students" (Assisted Technology Education Board N.S.W.).

Rationale for the Project.

On the University of Tasmania's Student Portal webpage on the Accessibility Services site, it is stated that "if you have a disability…we can help ensure it is not a barrier to your study…"

The rationale behind this project was to evaluate if students attending the University of Tasmania with learning needs had any barriers. If there were barriers, what were they and could they be overcome?

This research project would ascertain how much assistance students were receiving from the University of Tasmania. If students were receiving support and assistance another question was, how much assistance and in what form? Could this assistance be delivered better?

The Context of this Project.

The context of this report is to understand how inclusive the Tasmanian University and its campuses are too disabled students in providing them with new technologies that allow them to efficiently meet their learning needs.

By talking and actively listening to students with disabilities I will learn what it is that they need to feel inclusive.

The hoped-for outcome will be that students will feel that they have a voice and have been heard and that their opinions and experiences will count.

Another outcome is that once presented to the stakeholders my research will be developed further; with the aims in mind of improving access to knowledge and the new learning technologies and future needs of students.

Background Literature and Research.

Key thinkers of Inclusive education and assisted technologies.

One of the early supporters behind inclusive education is Chris Collett, she is an education specialist, and her book “Disability and Inclusion in early years Education” is a great tool for understanding how important to a student, inclusive classrooms and education are. Chris’s proposed challenge is “to have every child receive and inclusive education” (Collett, 2017).

Another key thinker is Tas Adams, he is at Melbourne University and has written a thesis paper on assisted learning technologies and several books on the topic and on e-learning.

Secondary Research: The latest Organizations and Research working on Assisted technologies:

The World Health Organization’s Global Collaboration on Assistive Technology (GATE) program is actively working towards access to assistive technology for all. GATE- has over 2145+ members from 110+ countries that share their work on assistive technology.

On their website they state, “Despite the global need and recognized benefits of assistive products, access to assistive products remains limited. Addressing this unmet need is essential to progress towards achievement of the Sustainable Developmental Goals and realizing the Convention of the Rights of Persons with Disabilities”.

The information provided on their site is fascinating and shows how relevant assistive technologies are.

They write that

> “Assistive technology (AT) is a powerful enabler of participation. The World Health Organisation’s Global Collaboration on Assistive technology (GATE) programme is actively working towards access to assistive technology for all.”

They continue to explain, “ AT is an interface between the person and the life they would like to lead. People’s preferences, perspectives and goals are fundamental to defining and determining the success of AT”.

On the sixteenth of May 2022

The World Health Organisation Gate program released on 18th Jan 2021 a Policy Brief: This Policy Brief was titled "Access to Assistive technology", it provides concrete actions to improve access across five key areas- people-centred, policy; products; personnel, and provision (5P) indicated in the wheel below.

The World Health Organization and (GReAT) focuses on five interlinked areas of assistive technology (5P) people-centred, policy, products, personnel, and provision.

https://www.who.int/publications/i/item/978-92-4-000504-4

In 2018, The first Global Research, Innovation, and Education on Assistive technology (GReAT) summit was held. and position papers were released. Their findings summarised that Assisted Technology is an interface that is important for people to have access to "in order to live the life that they would like to lead"

On the 16th of May 2022, A Global Report on Assistive Technology (GReAT) was released from a second summit.

https://doi.org/10.1080/17483107.2018.1471169

https://www.who.int/publications/i/item/978-92-4-000504-4 access for the second report, May 2022.

These report papers are just a couple on the WHO website; they have a vast amount of research and knowledge the above link will take interested readers there.

UNISSON Disability states on their website, "Assistive technology is changing rapidly and helping improve the lives of people with disabilities everywhere". They explain that any device that allows people to be more independent in their daily lives is assisted technology and of value for individual users.

unissondisability.org.au

Research conducted on Australian Universities:

This project conducted research on other Australian Universities by viewing their websites. The information that we wished to find was what other universities were doing in relation to assisted technologies.

The questions we wanted to be answered were; did they place importance on these technologies? If so how much and how were they were implementing the assisted technologies for their students. The findings are as below. The top two for information on their websites about assisted technologies are Griffith University and Western Sydney University. These two Universities also supply assisted technology in learning labs or as part of their library and their departments.

Griffith University: Some of the technology they provide students are; Jaws-screen reader software, literacy software such as Read and Write Gold; access plus-automated service for the conversion of documents to a range of formats; digital Braille; MP3 formats: Daisy and e-books with speech formats; Sonocent- audio note-taking software.

How they implemented the assistive technologies Students can access assistive technology labs on each campus. Equipment in labs varies. Assistance will be developed personally for student usage.

www.griffith.edu.au

Western Sydney University: Everyone at Western both staff and students has access to AT.

They make various assistive technologies widely available across all of their campuses.

How they implemented the assistive technologies on their computers, in computer labs, libraries, and Access Rooms. They say they also provide and assist students and staff to access various assistive technologies on their personal devices.

www.westernsydney.edu.au

South Australian University had very little information on its website on assistive technologies. They provide Access Plans and then work with students to access assistance from there. They do provide a list of adjustments they provide things such as; allowances to record classes, extra assistance with practicals, lecturer to use the microphone for FM transmitters, and use of contrasting colours on board (i.e. not red or green). https://southaustralian.edu.au

Australian National University Canberra--provides a wide range of study programs, and the support they provide is guided by the Disability Standards for Education (2005). https://www.anu.edu.au

Open University

provides information on assisted technologies available.

An additional thing that Open University provides is that they run a course on Assisted Assistive Technology. open.edu.au

They also provide a free guide for educators on assistive learning technologies.

info.yourdolphin.com

The University of Tasmania website has very little information on assistive technologies, none that I could find over several different searches. They do have information on disability services and that they can provide assistance, once a doctor's certificate indicating support is needed is provided to them. I was so frustrated that I could not find just information that any student could access without making an appointment and providing a doctor's certificate.

Method:

This project was research-based, the aim was to find out how much knowledge was generally available on assistive technologies.

The second aim was to find out how much knowledge University of Tasmania students had about these technologies.

Due to time constraints, on this project, the qualitative research method was undertaken. It was thought that a small number of students that would reply to our survey would be effective for this initial research project.

Questions were sent to students via email and they were invited to respond to me directly. Some questions and answers came out of informal discussions.

The questions were:

Q1: How much do you know about assisted technologies?

Q2: Are you interested in knowing about assisted learning technologies?

Q3: Has anyone at the University, tutors, or anyone from disability support provided you with information on assisted learning technologies?

Q4: Do you feel that assisted learning technologies and tools would assist you to meet your learning goals at university?

Twenty students responded in total. A small qualitative response for this research project, the responses provided great feedback.

Findings:

The findings are as follows.

Q1: How much do you know about assisted technologies?

- 15 respondents knew about assisted technologies through their own research.
- 2 found out through disability support workers, not from the University of Tasmania.
- 2 found out about assistive technologies through the University of Tasmania staff.
- 1 found out through their employment.

Q2: Are you interested in knowing about assisted learning technologies?

- 19 students said yes.
- 1 student responded "moderately interested."

Q3: Has anyone at the University, tutors, or anyone from disability support provided you with information on assisted learning technologies?

- 16 said no
- 2 said yes one was a disability support worker, one person was with IT that assisted them through the University.
- 2 had assistance through disability workers outside of University.

Q4: Do you feel that assisted learning technologies and tools would assist you to meet your learning goals at university?

- 19 replied yes to this question,
- 1 replied no, they feel that they would not really assist them with their needs.

Provided at the end of the questions and the introductory letter was space for additional information and personal stories. Here are some of the replies.

Most of the students wished to remain anonymous, I have respected their wishes and only added a name if the student has provided me with their permission.

"speech-to-text sounds valuable for students but I have trouble with integration, I have given up."

"speech-to-text was difficult to put on my devices and hard for me to use".

"I would like to find something better for me to use on my PC than what the University offers".

"I would like to know if there is assistive technology available specifically designed for students with dyslexic".

"When I first started UNI I looked everywhere on the University of Tasmania website, for assisted education and computer aids I cannot find them anywhere. I still can't."

"I was provided with Dragon; I do not use it, I find it makes too many mistakes, and with my form of disability I am better trying to write my thoughts rather than saying them."

"I am using Dragon Speech Recognition Program, this has been valuable to me".

"I have only just learned in my third year that the library has support and can transcribe lectures".

"I am interested in learning about speech-to-text programs, especially easier-to-use ones".

"Without ATs I would have been unable to get to where I am in my course".

"Without ATs I use, I could not have undertaken my course".

"IT would be nice if assistive technology and modern tools are provided for Uni Students free of charge."

Student's Suggestions or Questions.

"I want to know what UTAS are looking at to provide students with. NIDIS does not fund assistive technology for training. There is a massive gap in what is needed and what is provided for study activities".

"There is a gap between what assistive technology is being developed and what Universities provide." "Why?"

"I have trouble sitting for long times the chairs at Uni are terrible, they do not support student's backs. I cannot use the standing computer desks as I have the same issues with standing for a long time. Could UTAS provide ergonomic options?"

"I could not find information on the UTAS website to help a student with disabilities, what support they provide or what assisted tool options are available".

"No one at Uni has shown me how to use assistive technologies or how to split the screen or complete other computer tasks, I still do not know how to do this. No one has actually sat with me and gone through the processes of using them. They are just vague terms, or someone says look it up on Google. I am an older student, but I have had similar conversations with other students, they have had similar experiences with technology."

This suggestion by a student is one that is worth pursuing.

"I would be delighted if you or someone could co-ordinate a webinar/zoom on the "Assisted technologies" available at UTAS for disabled students at the start of each semester. It seems a shame that I am now only learning everything there is to know about the availability of this support. " Jennifer Woods.

Identifiable Gaps Found:

- Jennifer like other students has learned the hard way in stages what is available at UTAS. It would have been easier if this support and knowledge would have been made obvious from the beginning of her studies and throughout them" This is one of the identifiable gaps found through this project.

- NIDIS does not support students with disabilities to gain educational assisted technologies. If they do, then many students are unaware of this.
- Lack of knowledge provided by UTAS to students with disabilities on assisted technologies.
- The technology that is provided is outdated and prone to mistakes.

Not all assistive technologies work for all students, some have found Dragon, and speech-to-text tools great tools, and others have struggled. It has been the same with other assisted technologies.

Discussion and Recommendations:

Jennifer Woods one of the students suggested a webinar/zoom session for students at the start of every semester that indicates what Assistive Technologies are and how they can assist students. Then this webinar/zoom session can provide students with the knowledge of what UTAS has to assist them and how to have access to them.

This is a valuable suggestion and one that I recommend the University of Tasmania and TUSA follow up with. This way students will have ongoing information and hopefully assistance.

This could be a new student peer project; this is my recommendation.

The second recommendation is that hands-on training and information sessions in computer labs or on Uni Computers in applying and using these assisted technologies would be valuable.

Another recommendation derived from talking to students with disabilities is that the Tasmanian University holds seminars or forums on campus and off with technology companies willing to share their knowledge and applications to assist Uni students.

UTAS Website is hard to navigate if you are a student with a disability looking for assistive technologies or programs. This needs to be made simpler. This was mentioned several times.

There needs to be further research and analysis done with UTAS students this research project should be step one with a broader one to follow. Time constraints and challenges with COVID 19 affected the researcher's time spent on it. This issue needs to be discussed with more students.

Conclusion:

This was a challenging research report, but very rewarding. I have learned so much from this experience. There are a lot of gaps in knowledge about assistive technology, and in what is available at UTAS and other universities. A lot of the Universities seem to be doing better at implementing assistive technologies and providing help and assistance and information to their students.

There is a lot of research that proves that assisted learning technologies are improving very fast. This issue is a wide world one this has been indicated by the World Health Organisations spending so much time and money on it; with their implications of GATE programs and GReAT.

Assistive technologies are a growing field especially as it relates to education. Open universities and other education providers deliver courses and training on this subject and teach how assisted technologies can be implemented in schools and education facilities.

In order to provide equality and inclusive education, all the education facilities need to do everything possible to gain access to these technologies for their students.

Limitations:

The limitations of this report have been the time constraints of the project; with more time a more thorough researched report would have been presented. Another limitation was due to my work as a COVID cleaner I had very little time to work on this project.

The author's own lack of knowledge on the topic of what the students with disabilities face every day in their studies.

Acknowledgements:

I wish to thank the students who answered these questions and shared with me their experiences, I have been humbled by their experiences and their willingness to share them with me.

I would like to thank Matt and the other mentors, Carey, Sarah and Veda, and my fellow PLC and student peer support project students.

Conflict of interest:

The author has no conflicts of interest to report.

References:

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World Health Organisation GATE and GReAT programs. https://www.who.int/publications/i/item/978-92-4-000504-4

Appendix

Table 1. Example Table

	QS World University ranking (updated 29 Jan 2017)	Australian University Ranking (updated 12 Feb 2017)	Graduate satisfaction (updated 12 Feb 2017)	Total Students Rank) (updated2016)	All Students EFTSL Rank)	nternational student percentage relative to totalstudent enrolments	International student percentages relativeto on-campus students only (excluding distance student)
University of Tasmania	355	18	79%	4,571 (18)	0,943 (22)	8.2%	23.7%
University ofNew South Wales	89	15	78%	0,090 (5)	1,844 (5)	5.1%	24.5%
James Cook University	377	16	80%	1,333 (32)	5,456 (29)	2.1%	31.9%
Macquarie University	273	19	82%	2,753 (14)	1,327 (13)	6%	27.6%
Murdoch University	526	32	79%	3,143 (29)	5,665 (28)	0.6%	47.4%