

Scholar Report

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Title of Scholarship Project:	Assessing the outcomes of Assistive Technology for disabled children/adolescents. Is it time for a new approach?

Supervisor Comments

It was my, and our (Dr Griffiths) pleasure to work with Neil during the summer of 2023. It was particularly admirable on his part that he managed to play a meaningful and positive role in our project and as part of our team, during a summer when his family moved countries and he also needed to be with them to offer support. His ability to juggle multiple responsibilities is a strength.

Neil was a dedicated member of our team. He brought to the project his profound concern for human rights and social justice. He is a fast learner and open to new ideas and ways of thinking. This summer he was introduced to new perspectives on social problems, and new ways to investigate social issues. He was able to grasp those ideas and methods quickly and apply them effectively. When allocated a task, he knew when to seek additional clarity or guidance, but was able to work well independently. He has a keen analytical mind and the work that he delivered was of an excellent standard and useful. His main task involved literature searching and critical analysis and he applied a systematic and astute approach to these tasks. He also worked well with the wider team to understand and articulate the legal context for the research project. Here he was able to draw upon his degree studies (in Law) to 'read' across various legal and quasi-legal documents.

Neil was the co-author of a paper at the AAATE Conference, Paris (August 2023). He is a confident public speaker and is able to communicate complex ideas/material in a clear manner. He also spoke with passion and that was noted and appreciated by audience members. It was clear that Neil is on the side of those who face discrimination and disadvantage.

I observed that Neil thinks deeply and is highly empathetic. He engages in self-reflection. He seeks every opportunity for personal growth. He has good interpersonal skills, and he used this to network and to create additional learning experiences through conversation with others.

The leadership skills I observed in Neil are as follows:

- Accountability
- Active listening
- Collegiality
- Commitment
- Courage

- Critical thinking
- Emotional intelligence
- Initiative
- Learning agility
- Problem solving
- Respect for others
- Self-management

I enjoyed reading Neil's report below – it is indicative of his thoughtful approach. Working on this research project appears to have prompted Neil to think about his future, who he wants to be/become and what he would like to achieve in his career and indeed life. I am so pleased that he found working with us to be a positive experience.

In terms of areas for personal growth: I would suggest that Neil might work on self-confidence (this is something that comes with time and a growing understanding of yourself) and on planning tasks i.e., time-management (this is something to act upon now, because it will make life far less stressful!).

Signature of Scholar

Neil Sadarangani

Date: 18/09/2023



Signature of Project Leader

Date: 19/09/2023

Research Overview & Focus

Our teams' research focused on 'Assessing the outcomes of assistive technology (AT) for disabled adolescents. Underlying this exploration was whether it was time for a new scientific and community approach to the normative principles and values governing this research field of AT intervention strategies as they pertain to disabled individuals. Specifically, whether we need to adopt a firmer user-centred rights-based approach in adherence with the United Nations Conventions on the Rights of Persons with Disabilities. Our team are fervent supporters of the view that AT is by no means a 'magic bullet', a be-all and end-all cure for the sociolegal issues disabled people face. Nevertheless, it does have a significant role to play in society realising the basic rights disabled children deserve. AT is needed to elucidate /how we can move towards a society which advocates for an impaired individual's sense of inclusivity, participation, dignity, and wellbeing. In essence our research is driven by our interest in how AT can help disabled individuals flourish, though flourishing is not to be understood in terms of normalcy or principles of ableism - rather to ensure society can function without discord in accordance with the uniquely varying physical and psychological features of our species.

Research conducted: activities & importance.

The initial period of my research stint, and frankly the backbone to the entire research period involved weekly academic forums with my team. Through conversations with my mentor on the scope and background of our project, the motivations underlying the project's birth and the academic prerequisites one needs to conduct research effectively, I found myself properly primed for the more technical and heavy research responsibilities I'd soon find

myself immersed in. Learning about the sociolegal and philosophical views underpinning societies' attitudes of disabled individuals, simply put, allowed me to approach my research through a more impassioned lens; that might come as a shock to those who are strong advocates of scientism who hold that logos coupled with the scientific method will ultimately enable us to fully grasp a given phenomenon. With time I came to appreciate why the sociological as opposed to medical construction of disability should prevail – an epiphany I believe was only possible through an admiration of the zealous and instinctually passionate nature of my mentor. Rather than looking at the body as in need of fixing to conform to normative medical values, I adopted a mindset, through a detailed reading of the literature landscape, that perhaps there are systemic institutional barriers, derogatory societal attitudes which impede disabled individuals' ability to attain their valued functions. As a former medical student, I've had a tendency to harbour a desire for certainty far greater than that which is realistically possible in this complex social world. Sadly, the natural sciences, its contributions to the development of medical assistive technology, cannot fully ameliorate the issues individuals with impairments face. This stage of my research allowed me to realistically identify the frontiers of AT with regard to the benefits they offer – instrumental yet only a component necessary for educational integration, 'mobility', and care.

At the heart of my research project was the production of a qualitative literature review surveying the research landscape on the current assessment instruments we use to evaluate AT outcomes as they pertain to disabled individuals. Are we really trying to understand and appreciate whether users are truly satisfied with their technology in accordance with their needs and will to life? The importance of this stage can be illuminated by the Global Alliance of Assistive Technology Organisations 2022 report which identified challenges the research community need to address to ensure AT outcomes are more user-centric, and quite frankly less focused on the efficacy of assistive technology in a vacuum. A challenge which needs to be addressed imperatively given the existence of professional silos within the field of AT and discord over the most fundamental of questions – what is the 'desired outcome' of AT for our users? The findings of my literature review served an auxiliary function which would allow our prospective cohort study to hold more credibility. By demonstrating through my review, that there was a lack of user-centred AT assessment instruments, our thesis would hold, I believe, more validity thereby allowing our findings in our future explorative study to appear more robust, and, practically speaking, useful in terms of other studies to build upon. This approach strongly aligned with my research motivations which were to ensure AT assessment instruments focus on outcomes deemed important to the user.

Part of my research responsibilities involved the dissemination of an open-ended European-wide qualitative survey, which aimed to capture young people's reflections using and accessing AT. The importance of this stage served to provide further credence on the findings established in my literature review. An analysis of the data yield demonstrated how individuals valued the sense of individuality and autonomy brought about by AT as opposed to just its mechanistic efficacy. These surveys serve to move beyond the tick-box method employed by most AT outcome assessment instruments, perhaps due to a pressure to conform to the methodological quantitative preferences of disciplines in the natural sciences. The research approaches our team employed not only addresses the practical concerns of professional siloed-centric assessment outcome instrument tools, but also the ethical imperative: do these tools allow us to understand the trials and tribulations an impaired individual is going through beyond their disability as a physical concept? Perhaps, in due course, an ontological inquiry will be needed to provide our future research with more colour.

In accordance with sociological reductionism, the natural progression of our research from this stage onwards involved a review of broader political and legal systems as being the potential cause for the experiences reflected in our survey findings. This approach would, we hope, allow us to identify how we can enhance AT outcome measurement tools using a rights-based model. I worked closely with my research professor, reviewing the UNCRPD, identifying caveats and infringements with current conventions, a country's bona fide enforceability of such conventions as they pertain to individuals with impairments' rights to assistive technology and service provisions. The importance of this stage prepared us to provide specific guidance vis-à-vis AT outcome assessment instruments.

The culmination of my research period involved presenting the findings of this ongoing research study at the AAATE (Association for the Advancement of Assistive Technology in Europe) conference. The interdisciplinary nature of the conference, ideal in my opinion, allowed me to foster collaboration with researchers from more empirical disciplines. I had the opportunity to advocate for important changes in this research field – how existing outcome measures which had an empirical backdrop had a propensity to demonstrate discord when making attempts to explore both qualitative and quantitative data sets. This conference created the perfect learning environment for both me and my peers; such a conference permitted me to in real-time reshape our approach to research. The fundamental premise I advocated for when presenting our research was that whilst quantitative data may be deterministic of AT efficacy objectively, without a genuine exploration into the mind of a user, the benefits AT has to offer are rather foreground. On the other hand, I learnt from my peers with a natural science pedigree, that we lack the strategies for direct data collection for research and policy decision making. We both have takeaways worth considering in our research which I believe will be fruitful for user experiences in the foreseeable future.

**Assessing the outcomes of AT for disabled children and adolescents.
Is it time for a new approach?**

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A project with ethical approval from AREA FREC,
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The poster features a grid of photos showing children using assistive technology, a large red heart graphic, and a list of the research team members.

The research team

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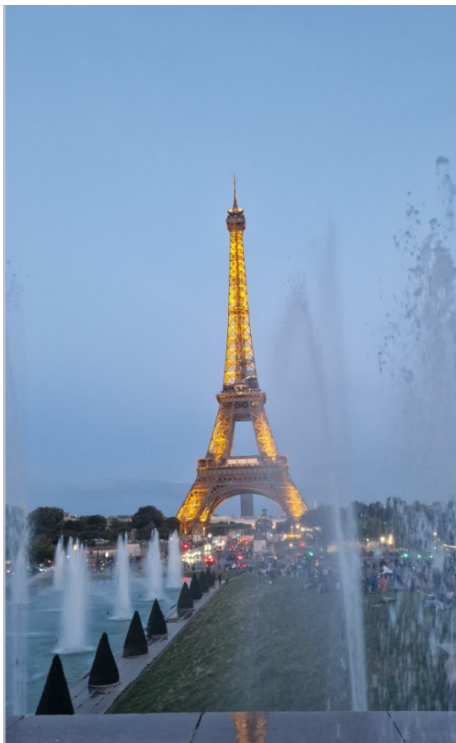
Impact of conducting research: lessons and experiences

The arbitrary nature of the summer research period gave new impetus to how I defined 'research'. To my dismay, though now looking back was in fact an amazing learning opportunity, my professor gave me the freedom to designate my own research responsibilities and timelines. As opposed to the structured framework of my academic program, I was allowed to pursue areas of the research which sparked my curiosity, in this case being its intersections with jurisprudence. The initial overwhelming sense of responsibility and duty I felt towards both my project and mentor, now I realise were clear psychological indicators of burnout. Whilst I felt the blinds go up way too quickly with balance diving head first out the window, I believe this phase was necessary for me to appreciate the never-ending nature of research, the need to be patient, ensure that I internally reward myself at each stage of the process, ensuring that I keep all my priorities in check – this experience has, simply put, taught me how to function sustainably.

Through frequent and personal contact with my research mentor I have come to genuinely appreciate the values research has to offer both in terms of one's life and career– the experience served to vitalise and invigorate my interest both in legal research and professorship. It was almost imperceptible, yet through colloquial discussions with my professor on the subjects of religion, art, history, music, even the tribulations of our personal lives, have I come to appreciate the profoundly innate scholarly spirit my professor emanates in every discussion, experience, and endeavour. It makes me proud, inspired even to follow in her footsteps, the epitome of ideals I believe a researcher should stand by– an instinctual curiosity for the world, a career where the line between life and work is happily blurred. All in all, I've learnt from my professor to respect, as it relates to a career in research, the dangers of becoming severely infatuated with the ethos of work, the constraints it imposes on your appreciation and value of leisure, the very leisure I now understand to be absolutely essential for a fruitful life in research.

What struck a chord with me is that unlike the class of researchers who are advocates of objectivity, indifference, compartmentalising research from the fire it lights within, I admire how my research mentor embraces the importance of being 'secretly' guided into certain schools of thought by experience and instincts; rather than impose the calculating objective spirit of natural sciences, why even I'd go as far as to say the social sciences as well, on the human life. It's valuable not to forget though the profundity critical independent thought offers, independent of the tribes you find yourself in. However "if you gaze long into the abyss, the abyss also gazes into you" - we are social creatures and independent thought, if excessively exercised, can break our minds. Research should involve applying one's personal experiences and struggles to inquiry, renouncing orthodox principles which do not serve to help society progress. Much like the lyrics of Tom Waits "I like my town with a little drop of poison", deeply independent thought is the drop of poison necessary to holistic research. I'd categorize my professor as a scholar of a new class who seeks to adopt an interdisciplinary approach, identifying how we can bring to the epicentre life-serving, life-affirming, and life-preserving value systems as they relate to disabled individuals. The individuality, the impassioned, as opposed to 'reasonableness' of our approach furnished our research with authenticity and a desire to change how we view individuals with impairments. My outlook is a fierce polemic against the democratic mediocrity hindering the progression of this research field. Mind you, my views on how to improve the direction of this research field continue to falter and I believe will, with certainty, change as I come to immerse myself deeper in this interdisciplinary field. For now at least, I hope to see myself as a researcher of tomorrow, possessing the creative will to overcome the entire past approach to AT as it relates to user satisfaction, if doing so would help holistically improve the lives of individuals with impairments.

I believe that the virtues underlying our research, the principles we've adopted to ensure successful development of our project, act as a microcosm for how I should approach both my education, career, and even social relationships all together. In terms of my research, I've become much more cognizant of my frustrations with the inner workings of the research community, the siloed approach professionals adopt as opposed to, well perhaps finding a more anthropocentric, dignifying or maybe even eco-centric meaning to their research? To deny an array of perspectives on what stands at the core of AT research as it pertains to the primary stakeholder - young adolescents - is to stand truth on one's head. The current epistemological approach adopts the Socratic method predominantly, in hopes of finding a 'truth' which is determinate, an apparently rational mandatory ideal towards which one nowadays tends to propel their research towards. An inherent caveat with this epistemological paradigm is that it is a system of logic based on *en sui causa*: I believe this be a rather foreground methodology to research. The field of scientific research pertaining to individuals with impairments has hitherto implicitly demonstrated a devaluation of human beings, I believe to be deeply unethical and ironically unproductive, destroying the spirit of disabled individuals and their desire to overcome the barriers put forth by society. Perfection, or in other terms the effectiveness of assistive technology, if only looked at through a single disciplines lens removes the basic humanity of individuals at the epicentre of this research field. Instead, we must embrace through interdisciplinary collaboration the essence of why we even have sought to explore the field of AT and the help it provides young children - essential for building a great society founded on constant progress. This is a rather overwhelming topic for me to flesh out in a brief report, but in short, I've learnt that our approach to sociolegal research needs to be refurbished – in need of virtuous honesty between different disciplines as to what we hope to achieve from our research.



Leadership skills developed.

I have slowly developed the capacity to appreciate and synergise my research teams learning styles and personalities, fundamental I now have learnt to resolving disagreements our team had as to the direction of our research project. Essentially, I've learnt to foster an environment effective for conducive relationships in research. I was, initially, of the firm belief that a research team needs to always work on responsibilities as a group, discussing the intricacies of each research task together in real-time so as to ensure we are all on the same page, avoiding any overlap in duties. I soon became aware that each individual has a different approach to research, wherein some may find that either working independently or as a group brings about better quality in their research product. Harnessing this knowledge, an awareness of each person's learning style allowed us to work more cohesively, bouncing ideas of each other, providing fresh insight which allowed each of us to question and reinterpret our approaches to our respective responsibilities; the coalescence of ideas from individuals in different disciplines ensured our research was robust and holistic. Ultimately a good leader, I've learnt, needs to appreciate the inherent nature of its members to ensure that we work together seamlessly.

Collaborating with my team served as the catalyst for what I've slowly come to realise is my leadership type – in this case, more relaxed, open-ended, discussion oriented and deferential based. This style of leadership within the context of research, I believe, involves providing your team with an understanding of the projects general architecture, giving the individuals involved in the tasks itself the liberty to shift the helm, devise their own plans, utilising their own ingenuousness to fulfil their responsibilities, thereby ensuring that each member has faith, morale and accountability in the research process and overarching objective - in other words you are brought into the research's idea and direction. Whilst this leadership philosophy is suffused with idealism, decentralisation is fundamental to the long-term guarantee of a fully functional astute team adept in their field. This comes with patience, placing trust in your team members that they will continue to learn with humility. However I must emphasise that rather than follow this leaderstyle style to the letter quasi directive leadership is (now I speak for the majority of leadership styles) in almost all circumstances indispensable in order to have a team operating efficiently. This is rather contentious given that efficiency may not always be a value worth standing by. In the last year or so, I've made radical attempts to disconnect from the pervading paradigms of productivity and perfection. Barring this approaches obvious, yet necessary I'd argue, flaws, it allows teams to transcend the contemporary frontiers of creativity. I realised that such a creative outlook could not be attained during the research period, since my mind was mired with the necessities of 'productivity'. But I can only speak from my experience during this research stint and I don't doubt that this will very well change in the future. For now, as I continue to work alongside my professor on this project, I honestly see this directive leadership style (bare in mind directive and authoritative are not synonymous) unraveling within me as I begin to get a stronger grasp of the research's foundational subject matter.

Future Career, educational plans & research plans

The journey I've had hitherto with my professor has been primarily responsible for the germination of career aspirations perhaps unforeseen or deeply hidden in my consciousness? An intersection between a career at the bar with legal research and professorship. The intellectual requirements of my research, I realised, strongly parallel that of my aspirations to work as a public law barrister – a heavily research-based field requiring

a meticulous nature and skill to construct challenges which defend the rights of individuals and affected groups. The sense of independence I felt during my research, the ability to structure my weeks in accordance with my desired outlook for both career and extra-legal passions and interests: music, literature, sport, religion, exploration, family, and friends are what attract me to both the bar and legal research. Tangent to my research over the summer was my community work with the Leeds Welfare Appeals & Tribunal Clinic which involved the advocacy of clients' Disability Living Allowance, appealing decisions made by the Department of Welfare and Pensions. From what sprouted as an innate interest in advocacy, reshaping our interpretation of the law, was my aspirations to work at the bar. Quite frankly, for the case that I had a strong sense of purpose and ability to develop a personal accord with my clients – now my research, I've realised, appears to resonate these same sensations. I've developed some rudimentary ideas of what values I'd like to align my career with, difficult to rationalise in a couple sentences but in short inspired by a particular phase I've entered in my classical literature journey. I can't lie when I say that I still continue to vacillate on what values to stand by - without a doubt these will change with time. My interest in the bar is closely aligned with my instinctual need to work in a field one would deem 'healthy'. Upholding civil liberties and human rights, health and education is at their core essential for our society to flourish, regardless of who the law favours. Ultimately such responsibility has a wider lasting and beneficial impact for society and affected groups. In just one summer I appear to have forged a much clearer outlook for my future – this may very well diverge in the future...who knows?

As a youth consultative member and ambassador of Hong Kong's Equal Opportunities Commission, well perhaps even as a university student in itself, I believe I have a life-long commitment to decolonising our educational curriculum revolutionizing education in accordance with the needs of our future generations, addressing institutional prejudices that have ingrained biases in terms of access to education as it relates to individuals with impairments. Hopefully moving forward this research – to think anew about evaluation methodologies and the design of AT outcome assessment instruments through engaging with young adults in the European region via long term focus groups – will provide us with insight worth utilizing in our education system. Our analysis will hopefully set the scene for new empirical research we're proposing and new user-centric policy measures to take effect which hinge on genuine user satisfaction with assistive technology in an educational setting.