Conference Proceedings

Welcome to the Conference Proceedings of the 40th Annual Pacific Rim International Conference 2025

Kiriko Takahashi and Jared Galeai

Center on Disability Studies, University of Hawai‘i at Mānoa

Abstract

This is a welcome message for the Conference Proceedings of the 40th Annual Pacific Rim International Conference 2025 hosted by the Center on Disability Studies, College of Education, University of Hawai’i at Mānoa.

Keywords: Pacific Rim, disability, conference

Welcome to the Conference Proceedings of the 40th Annual

Pacific Rim International Conference 2025

The 40th Annual Pacific Rim International Conference, held April 15 and 16, 2025, in Honolulu, Hawai‘i, marked an extraordinary milestone for one of the world’s longest-running gatherings devoted to disability inclusion. Hosted by the Center on Disability Studies at the University of Hawai‘i at Mānoa, the conference celebrated its 40th year with the theme, “By Us and For Us: Legacy and Future of Our Movement.” This year’s anniversary theme invited participants from around the world to reflect on forty years of leadership and learning while charting the future of global disability scholarship and activism. This year’s event brought together hundreds of presenters, researchers, artists, and advocates who shared innovative ideas, strategies and lived experience, offering a vivid portrait of people committed to celebrating and improving the lives of people with disabilities.

The 2025 conference featured sessions across ten strands—Adapted Physical Activity, Disaster Resilience and Built Environments, Early Childhood and Early Intervention, Employment, Health Justice, Indigenous Epistemology, Low Incidence Disabilities, Neurodiversity, STEM Pathways, and Technology. The conversations across these areas underscored the importance of intersectional and community-led approaches to disability inclusion, situating the work of Pac Rim within a broader global dialogue on rights, representation, and belonging.

Many of the conversations were concerned with how support may honor autonomy. In “Risk as a Right: Supporting Dignity of Risk in Disability Services,” Lindsay Piper reframed

risk as a condition for growth rather than a problem to be eliminated, while "Beyond Compliance: Cultivating Compassionate Care in Residential Disability Services," by Brittany Clendening, pressed for practices grounded in presence and mutual respect.

Extending this attention to autonomy into the educational sphere, "Creating Inclusive Campuses: The Impact of Disability Student Advocacy Clubs," by Amanda Patrick, Megan Theobald, and Kiriko Takahashi, traced how student-led organizing cultivates belonging and peer mentorship. "Examining the Effects of a Multi-Sensory Class on Teachers' Classroom Practices," Rene Rotondo's contribution, showed how sensory-rich instruction may energize participation for all learners, and Sharnet Chavis's "Mindfulness to Support Diverse Learners" offered a culturally affirming approach that joins awareness, breath, and compassion to sustain student well-being and attention.

Another current followed the pathways that connect learning to livelihood. "Building Disability Knowledge Through Community-Based Internships and Service-Learning Programs," by Kelle Murphy, A. Josephine Blagrave, and Alex Stribing, detailed partnerships that weave academic preparation with community contribution. "Meanings of and Barriers to Work: Narratives from Japan," by Yumi Yuzawa, attended to the hopes and hesitations of older adults with mental illness seeking re-entry into work, while "Employment of the Physical Disability in China: A Social Capital Approach" explored how networks and mutual support shape opportunities and mobility. Together, these perspectives highlighted employment as a site where dignity, structure, and aspiration meet.

"AI Innovations for Person-Centered Empowerment," by Syard G. Evans and Lindsey Parker, introduced the Visioning an Empowered Life (VEL) project—an artificial intelligence tool co-developed with Awake Labs to strengthen person-centered planning. The project's

emphasis on collaboration underscored a broader lesson: technology deepens care when it follows the lead of the people it serves.

Several contributions turned toward culture and practice as engines of change. “Sports Cultures of Young People with Disabilities as Challenges to the Ideals of Ability,” by Susan Eriksson, showed how youth athletes redefine achievement on their own terms; and “Opportunity in Action: Neurodiversity in a STEM Career,” by Jacquelyn A. Ruffner, traced a professional journey that transforms difference into method, arguing for workplaces where neurodiverse problem-solving becomes an organizational strength.

Taken together, the scholarship and creative practice represented in these proceedings demonstrate how far the field of disability studies has evolved since the first Pacific Rim conference. The 2025 gathering affirmed that disability research and activism are most powerful when they are participatory, community-driven, and intersectional. Each presenter contributed to a growing body of knowledge that not only documents experience but transforms it—moving towards building structures of care, justice, and possibility that are truly by us and for us.

The Center on Disability Studies extends gratitude to all who presented, attended, and supported Pac Rim 2025, ensuring that this annual tradition remains both a celebration of legacy and a blueprint for the future.

Conference Proceedings

The Accessible British Columbia Act: How Can an Intersectionality Clause Inform Responsive Implementation of Individualized Funding?

Robin Metcalfe and Laura Mudde

University of British Columbia Okanagan

Abstract

Individualized Funding (IF) aims to uphold the rights of people with disabilities, providing opportunities for self-determination, choice and control, and inclusion in accessing person-centered support services. However, these promises have been problematized as inequitable when support services and policy do not consider intersectional barriers to funding. A new accessibility law in British Columbia (Canada) could present an opportunity to address intersectional barriers to IF experienced by people with disabilities in British Canada and beyond.

Keywords: accessibility, intersectionality, individualized funding

The Accessible British Columbia Act: How Can an Intersectionality Clause Inform Responsive Implementation of Individualized Funding?

An Individualized Funding (IF) model serves as a mechanism that promotes community participation and independent living, following the principles set out by Independent Living Movements of the 1970s and 1980s (Hutchison et al., 2000; Lord & Hutchison, 2003), the United Nations Convention on the Rights of People with Disabilities (UNCRPD) and the personalization agenda guiding disability policies of the 21st century (Carey et al., 2018; Stancliffe, 2012). In general, IF is funding allocated directly to an individual, their family member, or legal representative and is meant to provide access to the support necessary to meet disability-related needs. Importantly, funding allocation and spending toward support services are determined with direct reference to the specific needs and aspirations of the person with a disability (Stainton et al., 2024).

The international emergence of IF models in disability policy has been extensively followed and researched. A 2023 comprehensive scoping review of the international academic literature charted the facilitators and barriers in the experiences of people with disabilities seeking access to this type of funding in directing their support services (Stainton et al., 2024). The systematic search following PRISMA Scoping Review (PRISMA-ScR) and PRISMA for Searching (PRISMA-S) extensions of eight databases yielded 347 articles (Stainton et al., 2024). The eligibility criteria meant that peer-reviewed primary (quantitative, qualitative, and mixed-methods) and secondary journal articles, published between 2011 and 2023, in English, including all age groups and geographic regions, were used to compare IF models and

experiences. It is important to note here that, although extensive, these eligibility criteria and the nature of academic research representation led to the inclusion of articles only from what can be considered the "Global North" (e.g., Meekosha, 2011). While the search protocol and charted data are discussed elsewhere (Stainton et al., 2024), preliminary findings highlight important facilitators and barriers in the experiences of people with disabilities.

Regarding positive outcomes, research generally showed that IF gave people with disabilities the potential for increased autonomy and decision-making about their care. Important measures addressed in the research were opportunities for choice and control, social inclusion, and economic participation (e.g., Foster et al., 2022; Phuong, 2017). However, certain negative outcomes were also indicated, with research finding that some people with disabilities and their family members and/or carers experienced being worse off with an IF model as compared to previously available block funding (e.g., Mavromaras et al., 2017). Block funding here refers to funding allocations where the government provides funding to service providers directly to provide specific standardized services in a specific region.

Policy-based and community-based analyses included in the international scoping review asserted that negative outcomes of IF models can entrench existing marginalizations. Such marginalizations are often complex and diverse, including inequalities related to one's disability type(s), gender, race, culture, class, sexual orientation, religion, age, ethnicity, and political status. According to some researchers, IF models entrench experiences of disparities among equity-defending groups, further complicating access to services based on geographic, socioeconomic, and housing status (e.g., Carey et al., 2021; Churchill et al., 2017). From an analytical standpoint, these tendencies of policy and practice to further entrench existing marginalizing experiences for people with disabilities points to a complex *intersectional* reality

of barriers. The existence of intersecting barriers has been emphasized by various researchers and advocacy initiatives.

Intersectionality Theory

Intersectionality, a term conceptualized by Kimberlé Crenshaw in 1989, provides a foundational framework for understanding how compound marginalizations along multiple axes of identity (e.g., race, class, gender, sexuality, and disability) shape lived experiences in diverse social realities and contexts. Crenshaw's work (2019) addresses the multiple social forces, identities, and ideologies that inform and uphold power and disadvantage. Specifically, intersectionality theory critiques traditional political frameworks that fail to account for the complexities of multiply-marginalized identities.

Within the context of disability, the intersectionality framework is pivotal for recognizing disabled people's experiences and compounded marginalizations. Patricia Hill Collins (2000; 2019) deepens intersectionality's relevance in disability justice by demonstrating the interplay of race, class, and gender in shaping the experiences of disabled individuals. In social action movements and societal systems, impoverished disabled women of color experience distinct forms of oppression. Hill Collins (2019) sees the potential of intersectionality theory as a social justice and action framework that has yet to be fully realized beyond being a metaphor (p. 25). In linking historically dominant body politics and eugenics approaches to ability and disability, Hill Collins shows how evaluative language along an unfit/fit binary (both physical and mental) attached itself to moral discourses of normalcy and deviance as social constructs (p. 259). In turn, such normativity excludes those deemed unfit or deviant from requiring equitable access, inclusion, and choice and control also seen in other axes of identity that socially stratify different expressions of race, gender, class, and sexuality.

As Audre Lorde (1984) substantiates, these politics of identity that ignore value-laden categories of difference only serve to further marginalize those kept at the fringes of society.

As such, the identification of these intersecting barriers might not come as a surprise. Yet, research regarding IF models showing how such models further entrench these realities, or even increase already disparate experiences related to people with disabilities' access to services, is cause for concern.

Accessible British Columbia Act

The Accessible British Columbia Act (2021) establishes that barriers can be caused by environments, practices, and policies and it explicitly acknowledges that barriers can be created by intersecting forms of discrimination. The Act defines disability in a way that is inclusive of a wide scope of experiences and recognizes the disabling impacts of barriers. The Act applies to public sector organizations in British Columbia (BC) and by extension, BC's IF model, which is delivered through a provincial Crown corporation. This means that such corporations are required to address the intersectional barriers people may experience in their policies and programs.

Consultations with disabled people and disability communities in BC ensured that intersectionality theory is positioned in the Act where it is directly relevant to the purpose of the law: to identify, remove, and prevent barriers. It was significant that the Act involved wide consultation in its development and, specifically, consultation with disabled people and disability communities (Jacobs, 2016; Jacobs et al., 2016). Although there are a few examples of Canadian federal/provincial legislation references to intersectionality in preambles or principles (e.g., Jacobs et al., 2021) the Accessible British Columbia Act is unique for the more operational and binding integration of intersectionality theory. This is an opportunity where

British Columbia can show leadership in this important dimension. For example, an analysis of the ambitions and achievements for antidiscrimination and citizen participation under the Accessibility for Manitobans Act, Jacobs et al. (2016), argued for "more significant scope for the statute to address intersectionality within disability discrimination" (p. 1).

Methods

Given the inclusion of intersectionality theory in the new Accessible British Columbia Act, this exploratory case study applies an intersectionality theory lens to IF to understand the positive, neutral, and negative outcomes of IF models, and to identify insights that can be applied to the implementation of IF in BC, Canada. The authors' conference proposal and proceedings invited a closer look at intersecting barriers in people's experiences with IF, and conversation about the potential that legislation and/or policy attention to intersecting forms of discrimination can promote improved responsiveness of the funding model to dynamic, varied, and overlooked support needs and challenges. We apply an intersectionality theory lens to review the IF model generally and review specific publicly accessible BC government IF policy documents. This exploration of policy and law in BC can provide important considerations for other IF models and policies to address the experiences of people with disabilities and the intersectional barriers to accessing support services.

Results and Discussion

Findings presented at the conference were tentative as analysis is not yet complete. Initial analysis suggests an intersectionality theory lens provides an important analytical tool for the review of IF programs because it allows for the complexity of intersectional experiences to question the standard application of IF models.

At present, intersectionality theory is not widely taken up and, as a concept, is not well known to people designing, implementing, and delivering support services connected to IF models. In the prevailing volatile climate for equity and inclusion initiatives, it is especially significant that the BC government created a stand-alone accessibility law that directly references intersectionality. This law, then, affirms a commitment to addressing intersecting forms of discrimination and establishes an orientation for public sector organizations towards intersectional analyses in programming and services.

An intersectionality theory lens promotes more responsive implementation of IF by compelling funders and service providers to re-think the disadvantages that can accrue for certain communities, families, and individuals. Illustrative examples of compounding disadvantages (intersecting forms of discrimination) can include diminished service provider options in remote northern communities after switching from block funding. Whereas contract terms for block funding could require services to be provided in remote regions, IF models promote market-based service options. Service providers may reduce or eliminate service provision in remote regions because the profit margin can be thinner. This has critical implications for northern First Nations communities. Service providers may also relocate based on economic arguments, preferring to provide services in urban centers where incomes are higher and service charges can therefore be higher. Such economic arguments have direct implications for lower-income communities, where households are more likely to include, for example, lone-parent families, racialized communities, and older adults on fixed incomes. Moreover, the market for services produced by IF can lead to greater variation and volatility in pricing and quality of services, and these instabilities are most difficult to withstand for multiply marginalized people and families.

The Accessible British Columbia Act has taken an important step by explicitly citing intersectionality theory in its legal definition of accessibility barriers—a first in Canadian accessibility laws. Its mere existence can guide changes needed to address the reported negative experiences with IF models and other public policies. Following this law, or creating ones like it, can mean real programmatic change, including but not limited to disability community leadership in inclusive policy design, disaggregated data collection, intersectional program evaluations, and mechanisms of accountability that go beyond aspiration.

Applying intersectionality theory to mechanisms of monitoring, evaluation, accountability, and learning for policymakers, public agencies, researchers, and disability services could mean:

- Embedding intersectionality principles into every stage of (IF) program development and review.
- Listening to and co-designing with people most excluded from mainstream disability support.
- Ensuring that accessibility law leads to enforceable and measurable change, not just symbolic recognition.
- Creating space for disabled people's organizations to lead educational activities that build awareness about intersectionality in theory and praxis.
- Understanding access not as a reactionary technical fix, but also as a matter of social justice that guides design.

It is noteworthy that only 12 studies in the extensive review directly referenced intersectionality as a theory or framework (Stainton et al., 2024). This may suggest a lack of intersectional understanding of barriers and experiences of reported marginalizations and may

reflect a failing in other IF research to attend to diverse and interconnected experiences in IF policy design and/or reform. Additionally, intersectional analyses are well-suited to moving beyond so-called "additive" approaches, which address people's experiences and barriers as if they were independent factors. (e.g., AMPARO Advocacy Inc., 2017). The studies that referenced intersectionality, as well as advocacy organizations, emphasize the need for intersectional theory to guide policy and practice. Further exploration of an intersectional approach in the review of IF models would better reflect diverse, lived experiences of disabled individuals. We propose that such an approach addresses objectification and essentialization of disability, while recognizing the complex, intersectional factors that shape accessibility, support needs, and the realization of the rights of people with disabilities and their family members, carers, and communities.

Intersectionality: From Theory to Praxis

Consultation with disabled people and communities was a cornerstone of developing the Act and establishing its legitimacy. Other provincial accessibility laws have not involved this degree of public and disability communities' involvement. The level of consultation embodies the BC government's commitment to be guided by "the principle of 'nothing about us'" (Government of British Columbia, 2019, p. 4). With the incorporation of intersectionality theory, the Act can be a conduit to foster systemic change through cultural as well as structural transformation because it offers a strong foundation for valuing intersectional analyses and pursuing needed changes. This crucial element helps ensure that social policies, like IF, address oppression faced by multiply marginalized people/communities. It is essential that IF policy and service delivery is user-centered (people and families receiving and eligible to receive IF, and service providers), iterative, and inclusive. Intersectional analyses of IF may be a pathway

for greater engagement with disability justice theory (e.g., Sins Invalid, 2018), radical disability politics, and disability political identities and cultures. This may be a way of moving beyond traditional medical and legal definitions of disability, and potentially increasing openness to critiques and insights advanced through crip theory and disability justice theory.

There will eventually be an accountability mechanism established under the Act. The compliance and enforcement mechanism of the Act (Part 5) has yet to come into force (Legislative Assembly of British Columbia, 2021). In Part 5, sections 21-25 set out provisions for the minister to appoint a director whose responsibility is to designate inspectors and oversee the process of inspections (section 23); to establish monetary penalties (section 24); establish compliance agreements to bring organizations into compliance; and to receive the amount that an organization/person is required to pay as a result of non-compliance (section 25). There is no timeline given for when Part 5 will come into force, although the BC government is currently working on the first two accessibility standards (for service delivery and employment) and these are somewhat delayed.

Based on the experience in Ontario, Manitoba, and Nova Scotia, where stand-alone accessibility laws have been in place for longer than in British Columbia, a robust accountability mechanism is important. We also know it is essential to have guidance and support for organizations to make needed changes, and this means ensuring there is funding and access to training and other resources to align with the Act and the imperatives of addressing intersecting forms of discrimination. With leadership by multiply marginalized disabled people and disability communities for training, implementation, and organizational alignment, the Act provides an opening to ensure we are engaging intersectionality theory in:

- Public sector organization internal training.

- IF program reviews.
- Design and delivery of support services.

Working Conclusions

This study offers important suggestions to attend to the varied and diverse experiences of people with disabilities and the intersectionality of barriers to equitable access, such as seen in IF models. We urge the recognition and exploration of people's intersectional experiences of barriers in IF systems, offering the example of the Accessible British Columbia Act as impetus for policymakers, educators, and service providers to reflect on how intersectionality praxis can incorporate intersectional insights and allocate resources to this effort. What is more, in highlighting the importance of such an endeavor in BC and beyond, we urge cultural and structural shifts in policy and practice that not only address questions of equitable access but disability justice.

As set out from the start, IF models have been presented in promising ways, offering people with disabilities greater autonomy, dignity, and inclusion. When well-designed, the models can reflect the principles of choice and control that underpin both the independent living movements and the UNCRPD. However, as research has shown, promises remain unevenly realized—especially for those people experiencing multiple marginalizations related to disability type(s), gender, race, culture, class, sexual orientation, religion, age, ethnicity, place/type of living, and political status. We argue, like many before us, that intersectionality theory offers a critical framework for addressing these uneven realizations of greater autonomy, dignity, and inclusion. This means moving beyond additive understandings of experiencing barriers and recognizing how systemic oppressions intersect to shape access. Intersectionality

as praxis demands a nuanced, justice-oriented, and inclusive approach to disability policy that centers the lives and leadership of multiply marginalized disabled people. We suggest that both the analytical tools and ethical grounding for developing more effective and equitable IF systems require us to put lived experiences at the center to be responsive to individual and community needs.

References

Accessible British Columbia Act, S.B.C. c.19 (2021). https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/21019

AMPARO Advocacy Inc. (2017). Annual Report. https://www.amparo.org.au/wp-content/uploads/2017/03/Annual-Report-2017-2018.pdf

Carey, G., Malbon, E., & Blackwell, J. (2021). Administering inequality? The National Disability Insurance Scheme and administrative burdens on individuals. *Australian Journal of Public Administration, 80*(4), 854–872.

Carey, G., Malbon, E., Olney, S., & Reeders, D. (2018). The personalisation agenda: The case of the Australian National Disability Insurance Scheme. *International Review of Sociology*, *28*(1), 20–34.

Churchill, A., Sotiri, M., & Rowe, S. (2017). The Community Restorative Centre. https://www.crcnsw.org.au/wp-content/uploads/2025/03/CRC_NDIS_BriefingPaper_Jan2017.pdf

Crenshaw, K. (2019). *On intersectionality: Essential writings*. New Press.

Foster, M., Hummell, E., Fisher, K., Borg, S. J., Needham, C., & Venning, A. (2022). Organisations adapting to dual aspirations of individualisation and collaboration in the National Disability Insurance Scheme (NDIS) market. *Australian Journal of Public Administration, 81*(1), 127–144.

Government of British Columbia. (2019). *Framework for accessibility legislation*. https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/initiatives-plans-strategies/accessibility-directorate/framework-for-accessibility-legislation.pdf

Government of British Columbia. (2021). *Accessible British Columbia Act,* SBC 2021, c 19. https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/21019

Hill Collins, P. (2019). *Intersectionality as critical social theory*. Duke University Press.

Hill Collins, P. (2000). Gender, Black feminism, and Black political economy. *The Annals of the American Academy of Political and Social Science*, 568, 41–53.

Hutchison, P., Pedlar, A., Dunn, P., Lord, J., & Arai, S. (2000). Canadian independent living centres: Impact on the community. *International Journal of Rehabilitation Research, 23*(2), 61-74.

Jacobs, L. (2016). 'Humanizing' Disability Law: Citizen Participation in the Development of Accessibility Regulations in Canada. *Revue Internationale des Gouvernements Ouverts*, 3, 93-120.

Jacobs, L., Anderson, M., Rohr, R., & Perry, T. (2021). *The annotated Accessible Canada Act - Complete text.* (CanLIIDocs 987). University of Windsor, Faculty of Law. https://canlii.ca/t/t58r

Jacobs, L, De Costa, B., & Cino, V. (2016). The Accessibility for Manitobans Act: Ambitions and achievements in antidiscrimination and citizen participation. *Canadian Journal of Disability Studies, 5*(4), 1-24.

Legislative Assembly of British Columbia. (2021, June 3). *Bill 6: Accessible British Columbia Act, Third Reading*. https://www.leg.bc.ca/parliamentary-business/overview/42nd-parliament/2nd-session/bills/3rd_read/gov06-3.htm

Lord, J., & Hutchison, P. (2003). Individualised support and funding: Building blocks for capacity building and inclusion. *Disability & Society, 18*(1), 71-86.

Lorde, A. (1984). *Sister outsider: Essays and speeches*. The Crossing Press.

Mavromaras, K., Moskos, M., Mahuteau, S., & Isherwood, L. (2018). *Evaluation of the NDIS: Final report*. *National Institute for Labour Studies.*

Meekosha, H. (2011). Decolonising disability: Thinking and acting globally. *Disability & Society, 26*(6), 667-682.

https://researchnow.flinders.edu.au/en/publications/evaluation-of-the-ndis-final-report

Phuong, D. L. (2017). How well does the Australian National Disability Insurance Scheme respond to the issues challenging indigenous people with disability? *Aotearoa New Zealand Social Work, 29*(4), 49–60.

Sins Invalid. (2019). Skin, tooth, and bone: The basis of movement is our people (2nd ed.).

Stainton, T., Hole, R., Mudde, L., Gray, T., Côté-Dear, M., & Lomness, A. (2024). *Individualized funding and supports: A scoping review.* Canadian Institute for Inclusion and Citizenship. https://citizenship.sites.olt.ubc.ca/files/2024/10/CIIC-Individualized-Funding-Scoping-Review-March-2024.pdf

Stancliffe, R. J. (2012). Inclusion of adults with disability in Australia: Outcomes, legislation and issues. *International Journal of Inclusive Education*, *18*(10), 1053–1063.

Conference Proceedings

Mindfulness to Support Diverse Learners:

An Inclusive, Culturally Affirming Approach for Black, Indigenous, and People of Color (BIPOC) Individuals with Emotional, Behavioral, and Cognitive Adversities

Sharnet Chavis

Chavis On The Go

Abstract

This paper highlights evidence-based mindfulness practices for diverse learners with emotional, behavioral, or cognitive adversities. It emphasizes inclusive, culturally affirming environments and introduces the 3 R's—Rise, Rejuvenate, Reoccur—and the ABC's—Awareness, Breath, Compassion—as an adaptable framework that promotes regulation, healing, and empowerment to support equitable outcomes for success among marginalized students.

Keywords: mindfulness, regulation, diverse

Mindfulness to Support Diverse Learners:
An Inclusive, Culturally Affirming Approach for Black, Indigenous, and People of Color (BIPOC) Individuals with Emotional, Behavioral, and Cognitive Adversities

Introduction and Positionality

As a Black woman raised in a low-income, single-parent household and educated in predominantly white institutions, I have experienced firsthand the inequities embedded within our educational systems. Although I was not formally identified for special education, my own diverse learning needs went unmet, reflecting a broader trend of systemic neglect. Over the past 34 years, I have worked in special education spaces as an advocate, clinician, and educator. My practice, grounded in mindfulness, is guided by a commitment to supporting those silenced by systems that often have ignored their needs. I developed the ABC's of mindfulness—Awareness, Breath, and Compassion within the 3 R's framework—Rise, Rejuvenate, Reoccur—to empower learners, particularly BIPOC individuals, facing emotional, behavioral, or cognitive adversities.

Disparities in Special Education and the Urgent Need for Inclusive, Strength-Based, and Culturally Affirming Environments

Black, Indigenous, and People of Color (BIPOC) are disproportionately represented in special education and are more frequently labeled with stigmatizing classifications such as emotional or intellectual disabilities (Appling & Robinson, 2021; Cavendish et al., 2018; Morgan, 2020). In the 2020-2021 school year, 84% of students in special education were

students of color (National Center for Education Statistics, 2023), again highlighting the disparities that continue to exist within the educational system. In addition, Black and Brown students were suspended or expelled at twice the rate of White students (Ash et al., 2023; Heidelburg et al., 2022). Despite protections under the Individuals with Disabilities Education Act (IDEA), BIPOC students continue to experience lower academic achievement, higher rates of grade retention, disruptive behavioral referrals, increased dropout and incarceration rates, and fewer postsecondary opportunities (Appling & Robinson, 2021; Gage et al., 2021; Mahabbati et al., 2022) as compared to non-BIPOC students (Appling & Robinson, 2021; Morgan, 2020; St. Mary et al., 2018). Additionally, zero-tolerance policies (Ceballos et al., 2021; Stiefel et al., 2022) and evaluators assessments of their needs have perpetuated these inequities (Bean, 2013; Cooc, 2017; Fish, 2019; Morgan, 2020) as their biases and values may not have cultural considerations. These practices result in BIPOC students being more closely monitored (Ash et al., 2023; Viano &Truong, 2022), with lower expectations from educators (Hines et al., 2022), especially for Black boys (Ash et al., 2023; Ura & d'Abreu, 2022). These practices created a lack of physical and emotional safety in school for these students (Heidelburg et al., 2022; Perzigian & Braun, 2020; Viano &Truong, 2022).

Mindfulness is a well-established, evidence-based intervention shown to support the well-being of individuals with disabilities across a range of domains, including stress reduction, emotional regulation, and improved focus (Călin & Ginara, 2023; Gabriely et al., 2020; Heidelburg et al., 2022; Nagy et al., 2022; van de Weijer-Bergsma et al., 2012). Despite the widespread application of mindfulness in educational and clinical settings, there is a research-to-practice gap in its use with individuals experiencing emotional, behavioral, or cognitive adversities (de Bruin et al., 2015; Gandía-Abellán et al., 2023; Haydicky et al., 2012; Lee et al.,

2023; McFall & Jolivette, 2024; Ridderinkhof et al., 2020; Sibinga et al., 2013). Importantly, most of these individuals are Black and Brown students, who continue to face systemic barriers to accessing a supportive intervention (Morgan, 2020).

The compound effect of these disparities and the limited access to culturally responsive, evidence-based mindfulness practices contribute to a vastly different educational experience for Black and Brown students compared to their non-diverse peers. These students are more likely to be exposed to factors that can result in enduring negative outcomes (Appling & Robinson, 2021; Gage et al., 2021; Mahabbati et al., 2022). These include not only immediate academic setbacks but also long-term life trajectories and even generational impacts (Cartledge & Robinson-Ervin, 2016; Fish, 2019; Heidelburg et al., 2022; Roeser et al., 2022).

Creating Inclusive and Culturally Affirming Learning Spaces

An inclusive and culturally affirming environment prioritizes psychological safety (Collins et al., 2022; Darling-Hammond & Depaoli, 2020; Garran & Rasmussen, 2014), shared power (Daftary, 2018; Dyer & Gushwa, 2023), and the affirmation of diverse ways of knowing (Bhambhani & Gallo, 2022; Duane et al., 2021; Nagy et al., 2022). Practices include interactive, culturally tailored activities that promote connection (Lee et al., 2023; McFall & Jolivette, 2024) and self-awareness (Black & Fernando, 2014) through breathing exercises (Gabriely et al., 2020; Hatfield et al., 2023; McFall & Jolivette, 2024); visualization (Lee et al., 2023); community-oriented compassion mindfulness techniques (Gandía-Abellán et al., 2023; Gitterman & Knight, 2016; Iacono et al., 2022; Ion, 2023; Lavy & Berkovich-Ohana, 2020); and storytelling (Ion, 2023). Creating a story helps participants connect with those positive feelings or emotions from previous experience. Stories also tell about us, our experiences and how we cope, and help us to be understood (Holmes & Sealock, 2019; McKenzie-Mohr &

Lafrance, 2017), thus building a culturally affirming space. Lastly, including brave space agreements (Arao & Clemens, 2023; Simon et al., 2022) acknowledge the discomfort of growing together as a community, while fostering empathy and dialogue around identity, authenticity, acceptance of differences, and equity. Materials that reflect participant identities and diverse facilitator representation (Abrams & Moio, 2009; Duane et al., 2021; Iacono et al., 2022) are crucial to increasing student engagement and counteracting systemic biases.

The ABC's of Mindfulness: Awareness, Breath, and Compassion

Mindfulness is an adaptable, evidence-based strategy proven to improve emotional regulation (Hill & Updegraff, 2012; Mahabbati et al., 2022); stress reduction (Ion, 2023; Roeser et al., 2022); focus (Black & Fernando, 2014; Harmony & Woodard, 2020); positive connections (Collins et al., 2022; McFall & Jolivette, 2024; Phan & Renshaw, 2021); and well-being among students with disabilities (Cardinal, 2020; Ceballos et al., 2021; Hwang & Kearney, 2013; Malboeuf-Hurtubise et al., 2017; Leland, 2015; Roeser et al., 2022).

Mindfulness, at its core, is the intentional practice of being fully present—attuned to one's surroundings, bodily sensations, thoughts, and emotions in the current moment (Bishara, 2022; Hwang & Kearney, 2013; Kabat-Zinn, 2003). This state of awareness is cultivated through the conscious connection of mind and body, a nonjudgmental acceptance of one's feelings and experiences, and the development of skills that supports the letting go of current feelings to support being present in the moment (Fuchs et al., 2017; Kabat-Zinn, 2003; Kaczmarek & Steffens, 2019; Phan & Renshaw, 2021). As individuals engage in this process, they begin to foster greater self-compassion, extend empathy toward others, and contribute to the emergence of a supportive, caring community. The outcomes of mindfulness practice are

well-documented and include reduced stress, enhanced focus, and emotional resilience (Ion, 2023; Lavy & Berkovich-Ohana, 2020).

The ABC's framework (Chavis, 2024) includes:

- A – Awareness: practices like sound awareness (Sekhon, 2023), mindful walking (Iacono et al., 2022), guided meditation (Lee et al., 2023), body scans (Sekhon, 2023), and grounding all help learners connect mind and body, increase patience and tolerance, process sensory input, and develop present-moment focus (Ion, 2023; Lee et al., 2023)
- B – Breath: breathing exercises such as 4-7-8 breath (McFall & Jolivette, 2024), cupcake breathing (Gabriely et al., 2020), and five-finger breaths (Hatfield et al., 2023) calm the nervous system, improve energy, reduce stress (Roeser et al., 2022), improve concentration, and regulate mood **(**Sekhon, 2023).
- C – Compassion: through gratitude practices, storytelling, and micro self-care, participants build self-love, appreciation for others, greater happiness, peace **(**Lavy & Berkovich-Ohana, 2020), and a caring community (Cardinal, 2020; McFall & Jolivette, 2024**).**

Mindful Movements

Mindful movements offer a powerful, embodied approach to supporting regulation, focus, and emotional well-being (Robert-McComb et al., 2015), particularly for learners with emotional, behavioral, or cognitive adversities (Clark et al., 2015). These gentle, intentional physical practices help integrate mind and body awareness while promoting calmness, energy, and resilience (Fuchs et al., 2017; Hatfield et al., 2023; Malboeuf-Hurtubise et al., 2017; McFall & Jolivette, 2024).

Each of these movements can be useful for individuals with emotional, behavioral, or cognitive adversities as they support building connected communities (Collins et al., 2022; Ion, 2023; Leland, 2015; McFall & Jolivette, 2024). They also help support an inclusive space where Black and Brown students can experience a sense of belonging (Fisher et al., 2020). The facilitator of inclusive spaces, being flexible and accepting of cultural considerations (Fuchs et al., 2013), will also support these practices. Supporting participants in this way includes welcoming all to participate, participating with eyes open or closed, opting in instead of opting out, and practicing the movements in their own way. This could include choosing to just breathe naturally and with the exclusion of the movements.

Mindful movements when incorporated with mindful breathing have many benefits:

- Mountain Pose: encourages grounding, improves posture and stability, strengthens the legs, and calms the mind, fostering focus and vitality (James-Palmer et al., 2020; Hagen & Nayar, 2014; McFall & Jolivette, 2024).
- Palm Tree Side Bends: enhance circulation, reduce fatigue, relieve stress, and support digestion while improving concentration and mental clarity (James-Palmer et al., 2020).
- Shoulder Shrugs: release upper body tension and calm the nervous system during moments of emotional stress (McFall & Jolivette, 2024; Passy, 2014).
- Seated Twists: relieve stress, contribute to overall well-being, relax and calm; connect the body and breath (McFall & Jolivette, 2024); soothe the nervous system and gently stimulate the spine, aiding both physical and emotional flexibility (Hagen & Nayar, 2014).

- Bear Hug: promotes self-compassion, emotional balance, sense of well-being and relaxation; increases flexibility in the upper back and supports respiratory health through chest expansion (Hagen & Nayar, 2014). These hugs can give you the same sensations as receiving a hug from another person (Dueren et al., 2021).
- Goddess Pose: elevates mood, improves focus, supports cardiovascular health, and enhances digestion while fostering a sense of strength and empowerment (James-Palmer et al., 2020; McFall & Jolivette, 2024).
- Cat/Cow Flow: opens the lungs and chest, reduces anxiety, enhances focus and creativity, and brings calm through rhythmic movement of the spine and breath (James-Palmer et al., 2020).

These practices are accessible in both seated and standing positions, making them inclusive for a wide range of abilities and settings. Regular integration of mindful movement can foster resilience, emotional regulation, and a deeper sense of connectedness within learning environments (Hagen & Nayar, 2014; James-Palmer et al., 2020; Passy, 2014).

Implementing the 3 R's: Rise, Rejuvenate, Reoccur

The 3 R's framework (Chavis, 2024) serves as a holistic approach for student empowerment while using mindfulness as an evidence-based intervention. This process helps individuals to mindfully RISE to be their best authentic self, build skills so they feel REJUVENATED, promoting a positive well-being, and provide interventions to support positive outcomes to REOCCUR, building their success in school and in the workplace.

Using this method, individuals will:

- Rise: acknowledge the systemic barriers and prepare learners to elevate their voices.
- Rejuvenate: use mindfulness to restore self-regulation, confidence, and community.
- Reoccur: Create sustainable, recurring practices and systems that reinforce equity and healing.

Conclusion

In closing, my journey has been one of navigating and challenging systems that often place limits on BIPOC learners. The integration of culturally affirming mindfulness practices can serve as a tool of resistance and restoration. By adopting inclusive frameworks like the ABC's and the 3R's (Chavis, 2024), educators and practitioners can build environments that not only support diverse learning needs but actively disrupt cycles of inequity. Let us rise, rejuvenate, and allow positive change to reoccur.

References

Abrams, L. S., & Moio, J. A. (2009). Critical race theory and the cultural competence dilemma in social work education. *Journal of Social Work Education*, *45*(2), 245–261. https://doi.org/10.5175/JSWE.2009.200700109

Appling, B., & Robinson, S. (2021). K–12 school counselors utilizing critical race theory to support the racial identity development and academic achievement of African American males. *Professional School Counseling*, *25*(1_part_4). https://doi.org/10.1177/2156759X211040043

Arao, B., & Clemens, K. (2023). From safe spaces to brave spaces: A new way to frame dialogue around diversity and social justice. In Landreman, L. M. (Ed.). *The art of effective facilitation: Reflections from social justice educators.* (pp. 135–150). Routledge.

Ash, T. L., Helminen, E. C., Yamashita, S., & Felver, J. C. (2023). Teachers' anti-Black biases in disciplinary decisions: The role of mindfulness. *Journal of School Psychology,* 96, 75–87. https://doi.org/10.1016/j.jsp.2022.11.003

Bean, K. F. (2013). Disproportionality and acting-out behaviors among African American children in special education. *Child & Adolescent Social Work Journal, 30*(6), 487–504. https://doi.org/10.1007/s10560-013-0304-6

Bhambhani, Y., & Gallo, L. (2022). Developing and adapting a mindfulness-based group intervention for racially and economically marginalized patients in the Bronx. *Cognitive and Behavioral Practice*, *29*(4), 771–786. https://doi.org/10.1016/j.cbpra.2021.04.010

Bishara, S. (2022). Linking cognitive load, mindfulness, and self-efficacy in college students with and without learning disabilities. *European Journal of Special Needs Education*, *37*(3), 494–510. https://doi.org/10.1080/08856257.2021.1911521

Black, D. S., & Fernando, R. (2014). Mindfulness training and classroom behavior among lower-income and ethnic minority elementary school children. *Journal of Child and Family Studies*, *23*(7), 1242–1246. https://doi.org/10.1007/s10826-013-9784-4

Călin, M. F., & Ginara, D. M. (2023). The effects of mindfulness practices on well-being. *Technium Social Sciences Journal*, *46*, 268–278.

Cartledge, G., & Robinson-Ervin, P. (2016). Issues and interventions for African American students with and at-risk for emotional and behavioral disorders: An introduction to the special Issue. *Behavioral Disorders*, *41*(4), 175–177. https://doi.org/10.17988/bedi-41-04-175-177.1

Cavendish, W., Connor, D., Gonzalez, T., Jean-Pierre, P., & Card, K. (2018). Troubling "The problem" of racial overrepresentation in special education: A commentary and call to rethink research. *Educational Review*, *72*(5), 567–582. https://doi.org/10.1080/00131911.2018.1550055

Ceballos, P. L., Lemberger-Truelove, M. E., Molina, C. E., Laird, A., & Carbonneau, K. J. (2021). Culturally diverse middle school students' perceptions of a social and emotional learning and mindfulness school counseling intervention. *Journal of Child and Adolescent Counseling*, *7*(2), 72–86. https://doi.org/10.1080/23727810.2021.1948809

Chavis, S. (2024). Mindful 3R's: A mindfulness curriculum: Supporting diverse learners with emotional and intellectual adversities. [Unpublished manuscript]. Simmons University.

Clark, D., Schumann, F., & Mostofsky, S. H. (2015). Mindful movement and skilled attention. *Frontiers in Human Neuroscience*, *9*. https://doi.org/10.3389/fnhum.2015.00297

Collins, T. A., La Salle, T. P., Rocha Neves, J., Foster, J. A., & Scott, M. N. (2022). No safe space: School climate experiences of Black boys with and without emotional and behavioral disorders. *School Psychology Review*, 1–14. https://doi.org/10.1080/2372966X.2021.2021783

Cooc, N. (2017). Examining racial disparities in teacher perceptions of student disabilities. *Teachers College Record*, *119*(7), 1–32.

Daftary, A. (2020). Critical race theory: An effective framework for social work research. *Journal of Ethnic & Cultural Diversity in Social Work*, *29*(6), 439–454. https://doi.org/10.1080/15313204.2018.1534223

Darling-Hammond, L., & DePaoli, J. (2020). Why school climate matters and what can be done to improve it. *State Education Standard*, *20*(2), 7. https://eric.ed.gov/?id=EJ1257654

de Bruin, E. I., Blom, R., Smit, F. M., van Steensel, F. J., & Bögels, S. M. (2015). MYmind: Mindfulness training for youngsters with autism spectrum disorders and their parents. *Autism*, *19*(8), 906–914. https://doi.org/10.1177/1362361314553279

Duane, A., Casimir, A. E., Mims, L. C., Kaler-Jones, C., & Simmons, D. (2021). Beyond deep breathing: A new vision for equitable, culturally responsive, and trauma-informed mindfulness practice. *Middle School Journal*, *52*(3), 4–14. https://doi.org/10.1080/00940771.2021.1893593

Dueren, A. L., Vafeiadou, A., Edgar, C., & Banissy, M. J. (2021). The influence of duration, arm crossing style, gender, and emotional closeness on hugging behaviour. *Acta Psychologica*, *221*, 103441. https://doi.org/10.1016/j.actpsy.2021.103441

Dyer, J. & Gushwa, M. (2023). DEIPAR. Department of Social Work, Simmons University, Boston Massachusetts.

Fish, R. E. (2019). Standing out and sorting in: Exploring the role of racial composition in racial disparities in special education. *American Educational Research Journal*, *56*(6), 2573–2608. https://doi.org/10.3102/0002831219847966

Fisher, A. E., Fisher, S., Arsenault, C., Jacob, R., & Barnes-Najor, J. (2020). The moderating role of ethnic identity on the relationship between school climate and self-esteem for African American adolescents. *School Psychology Review, 49*(3), 291–305. https://doi.org/10.1080/2372966X.2020.1760690

Fuchs, C., Lee, J. K., Roemer, L., & Orsillo, S. M. (2013). Using mindfulness and acceptance-based treatments with clients from nondominant cultural and/or marginalized backgrounds: clinical considerations, meta-analysis findings, and introduction to the special series: clinical considerations in using acceptance and mindfulness-based treatments with diverse populations. *Cognitive and Behavioral Practice*, *20*(1), 1–12. https://doi.org/10.1016/j.cbpra.2011.12.004

Fuchs, W. W., Mundschenk, N. J., & Groark, B. (2017). A promising practice: School-based mindfulness-based stress reduction for children with disabilities. *Journal of International Special Needs Education, 20*(2), 56–66. https://doi.org/10.9782/2159-4341-20.2.56

Gabriely, R., Tarrasch, R., Velicki, M., & Ovadia-Blechman, Z. (2020). The influence of mindfulness meditation on inattention and physiological markers of stress on students

with learning disabilities and/or attention deficit hyperactivity disorder. *Research in Developmental Disabilities*, *100*, 103630. https://doi.org/10.1016/j.ridd.2020.103630

Gage, N. A., Kramer, D. A., & Ellis, K. (2021). High school students with emotional and behavioral disorders perceptions of school climate. *Journal of Disability Policy Studies*, *32*(2), 83–94. https://doi.org/10.1177/1044207320934800

Gandía-Abellán, H., Nieto, C., & García-Rubio, C. (2023). Mindfulness for adults with autism spectrum disorder and intellectual disability: A pilot study. *Journal of Intellectual Disabilities*, *27*(4), 927–943. https://doi.org/10.1177/17446295221107283

Garran, A. M., & Rasmussen, B. M. (2014). Safety in the classroom: Reconsidered. *Journal of Teaching in Social Work*, *34*(4), 401–412. https://doi.org/10.1080/08841233.2014.937517

Gitterman, A., & Knight, C. (2016). Curriculum and psychoeducational groups: Opportunities and challenges. *Social Work*, *61*(2), 103-110. https://doi.org/10.1093/sw/sww007

Hagen, I., & Nayar, U. S. (2014). Yoga for children and young people's mental health and wellbeing: Research review and reflections on the mental health potentials of yoga. *Frontiers in Psychiatry, 5,* 35. https://doi.org/10.3389/fpsyt.2014.00035

Harmony, C., & Woodard, C. R. (2020). Mindfulness training for staff in a school for children with autism and other developmental disabilities: Effects on staff mindfulness and student behavior. *Advances in Neurodevelopmental Disorders*, *4*(2), 113–121. https://doi.org/10.1007/s41252-020-00148-9

Hatfield, M. K., Ashcroft, E., Maguire, S., Kershaw, L., & Ciccarelli, M. (2023). Stop and just breathe for a minute: Perspectives of children on the autism spectrum and their

caregivers on a mindfulness group. *Journal of Autism & Developmental Disorders*, *53*(9), 3394–3405. https://doi.org/10.1007/s10803-022-05542-x

Haydicky, J., Wiener, J., Badali, P., Milligan, K., & Ducharme, J. (2012). Evaluation of a mindfulness-based intervention for adolescents with learning disabilities and co-occurring ADHD and anxiety. *Mindfulness*, *3*. https://doi.org/10.1007/s12671-012-0089-2

Heidelburg, K., Phelps, C., & Collins, T. A. (2022). Reconceptualizing school safety for Black students. *School Psychology International*, *43*(6), 591–612. https://doi.org/10.1177/01430343221074708

Hill, C. L. M., & Updegraff, J. A. (2012). Mindfulness and its relationship to emotional regulation. *Emotion*, *12*(1), 81–90. https://doi.org/10.1037/a0026355

Hines, E. M., Ford, D. Y., Fletcher, E. C., & Moore, J. L. (2022). All eyez on me: Disproportionality, disciplined, and disregarded while Black. *Theory Into Practice*, *61*(3), 288–299. https://doi.org/10.1080/00405841.2022.2096376

Holmes, K., & Sealock, K. (2019). Storytelling as a portal to deeper wisdom in the curriculum studies of education and nursing. *Qualitative Research Journal*, *19*(2), 93–103. https://doi.org/10.1108/QRJ-D-18-00023

Hwang, Y.-S., & Kearney, P. (2013). A systematic review of mindfulness intervention for individuals with developmental disabilities: Long-term practice and long-lasting effects. *Research in Developmental Disabilities*, *34*(1), 314–326. https://doi.org/10.1016/j.ridd.2012.08.008

Iacono, G., Craig, S. L., Crowder, R., Brennan, D. J., & Loveland, E. K. (2022). A qualitative study of the LGBTQ+ youth affirmative mindfulness program for sexual and gender

minority youth. *Mindfulness*, *13*(1), 222–237. https://doi.org/10.1007/s12671-021-01787-2

Ion, S. (2023). Mindfulness to calibrate behavior and emotions in children, adolescents and adults with autism spectrum disorders (ASD). *Social Work Review / Revista de Asistenta Sociala*, *3*, 211–219.

James-Palmer, A., Anderson, E. Z., Zucker, L., Kofman, Y., & Daneault, J.-F. (2020). Yoga as an intervention for the reduction of symptoms of anxiety and depression in children and adolescents: A systematic review. *Frontiers in Pediatrics*, *8*, 78. https://doi.org/10.3389/fped.2020.00078

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, *10*(2), 144–156. https://doi.org/10.1093/clipsy.bpg016

Kaczmarek, M. C., & Steffens, M. C. (2019). "Mind full or mindful" – can mere cognitive busyness lead to compliance similar to an emotional seesaw? *Social Influence*, *14*(3–4), 117–132. https://doi.org/10.1080/15534510.2019.1682656

Lavy, S., & Berkovich-Ohana, A. (2020). From teachers' mindfulness to students' thriving: The mindful self in school relationships (MSSR) model. *Mindfulness*, *11*(10), 2258–2273. https://doi.org/10.1007/s12671-020-01418-2

Lee, E. O., Anson, L. E., Tindol, K. V., & Chirimwami, V. (2023). How mindfulness strategies can support social and emotional learning skill development for elementary grade students with emotional and behavioral disorders. *Beyond Behavior*, *32*(1), 45–52. https://doi.org/10.1177/10742956221145198

Leland, M. (2015). Mindfulness and student success. *Journal of Adult Education*, *44*(1). https://files.eric.ed.gov/fulltext/EJ1072925.pdf

Mahabbati, A., Prabawati, W., Syamsi, I., Purwanta, E., & Purwandari, P. (2022). School connectedness, school climate and emotional and behavior disorders in students: Examining relationships. *Cypriot Journal of Educational Sciences*, *17*(5), 1774–1790. https://doi.org/10.18844/cjes.v17i5.7304

Malboeuf-Hurtubise, C., Lacourse, E., Taylor, G., Joussemet, M., & Ben Amor, L. (2017). A mindfulness-based intervention pilot feasibility study for elementary school students with severe learning difficulties: Effects on internalized and externalized symptoms from an emotional regulation perspective. *Journal of Evidence-Based Complementary & Alternative Medicine*, *22*(3), 473–481. https://doi.org/10.1177/2156587216683886

McFall, A., & Jolivette, K. (2024). Mindful breathing: A low-intensity behavior strategy for students with behavioral challenges. *Preventing School Failure: Alternative Education for Children and Youth, 68*(1), 1–7. https://doi.org/10.1080/1045988X.2022.2132196

McKenzie-Mohr, S., & Lafrance, M. N. (2017). Narrative resistance in social work research and practice: Counter-storying in the pursuit of social justice. *Qualitative Social Work*, *16*(2), 189–205. https://doi.org/10.1177/1473325016657866

Morgan, H. (2020). Misunderstood and mistreated: Students of color in special education. *Voices of Reform, 3*(2), 71–81. https://doi.org/10.32623/3.10005

Nagy, G. A., Cuervo, C., Ramos Rodríguez, E. Y., Plumb Vilardaga, J., Zerubavel, N., West, J. L., Falick, M. C., & Parra, D. C. (2022). Building a more diverse and inclusive science: Mindfulness-based approaches for Latinx individuals. *Mindfulness*, *13*(4), 942–954. https://doi.org/10.1007/s12671-022-01846-2

National Center for Education Statistics. (2023). *Students with disabilities.* U.S. Department of Education, Institute of Education Sciences. https://nces.ed.gov/programs/coe/indicator/cgg/students-with-disabilities

Passy, B. (2014, May 1). *Shrugs: A pose for all reasons and seasons.* Yoga Chicago. https://yogachicago.com/2014/05/shrugs-a-pose-for-all-reasons-and-seasons/

Perzigian, A., & Braun, M. (2020). A comparison of school climate ratings in urban alternative and traditional high schools. *Journal of Educational Research and Practice*, *10*(1). https://doi.org/10.5590/JERAP.2020.10.1.22

Phan, M. L., & Renshaw, T. L. (2021). Guidelines for adapting mindfulness-based school interventions with youth who are marginalized. MindRxiv. https://doi.org/10.31231/osf.io/897gn

Ridderinkhof, A., de Bruin, E. I., van den Driesschen, S., & Bögels, S. M. (2020). Attention in children with autism spectrum disorder and the effects of a mindfulness-based program. *Journal of Attention Disorders*, *24*(5), 681–692. https://doi.org/10.1177/1087054718797428

Robert-McComb, J. J., Cisneros, A., Tacón, A., Panike, R., Norman,R., Qian, X. P., & McGlone, J. (2015). The effects of mindfulness-based movement on parameters of stress. *International Journal of Yoga Therapy, 25*(1), 79–88. https://doi.org/10.17761/1531-2054-25.1.79

Roeser, R. W., Galla, B., & Baelen, R. N. (2022). Mindfulness in schools: Evidence on the impacts of school-based mindfulness programs on student outcomes in P–12 educational settings. [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/ascpv

Sekhon, A. (2023). Mindfulness and its impact on mental health: A review. *Indian Journal of Positive Psychology, 14*(2), 252–255. https://www.proquest.com/docview/2842593298

Sibinga, E. M. S., Perry-Parrish, C., Chung, S., Johnson, S. B., Smith, M., & Ellen, J. M. (2013). School-based mindfulness instruction for urban male youth: A small randomized controlled trial. *Preventive Medicine*, *57*(6), 799–801. https://doi.org/10.1016/j.ypmed.2013.08.027

Simon, J. D., Boyd, R., & Subica, A. (2022). Refocusing intersectionality in social work education: Creating a brave space to discuss oppression and privilege. *Journal of Social Work Education*, *Winter*. https://doi.org/10.1080/10437797.2021.1883492

St. Mary, J., Calhoun, M., Tejada, J., & Jenson, J. M. (2018). Perceptions of academic achievement and educational opportunities among Black and African American youth. *Child and Adolescent Social Work Journal*, *35*(5), 499–509. https://doi.org/10.1007/s10560-018-0538-4

Stiefel, L., Fatima, S. S., Cimpian, J. R., & O'Hagan, K. (2022). The role of school context in explaining racial disproportionality in special education. *NYU Wagner Research Paper*. https://dx.doi.org/10.2139/ssrn.4318607

Ura, S. K., & d'Abreu, A. (2022). Racial bias, social–emotional competence, and teachers' evaluation of student behavior. *Children & Schools*, *44*(1), 17–26. https://doi.org/10.1093/cs/cdab028

van de Weijer-Bergsma, E., Formsma, A. R., de Bruin, E. I., & Bögels, S. M. (2012). The effectiveness of mindfulness training on behavioral problems and attentional functioning in adolescents with ADHD. *Journal of Child and Family Studies*, *21*(5), 775–787. https://doi.org/10.1007/s10826-011-9531-7

Viano, S., & Truong, N. (2022). Black, indigenous, people of color and feelings of safety in school: Decomposing variation and ecological assets. *AERA Open*, *8*, 23328584221138484. https://doi.org/10.1177/23328584221138484

Conference Proceedings

AI Innovations for Person-Centered Empowerment in Home and Community-based Services for Individuals with Intellectual and Developmental Disabilities

Syard G. Evans and Lindsey Parker

Arkansas Support Network

Author Note

Syard Evans https://orcid.org/0009-0005-2344-512X
Lindsey Parker https://orcid.org/0009-0005-5377-0134

Correspondence concerning this article should be addressed to Syard Evans at 6836 Isaac's Orchard Road; Springdale, AR 72762. Email: sevans@supports.org

Abstract

Support planning for people with intellectual and developmental disabilities receiving home and community-based services takes up considerable time and resources, often producing inadequate results and a shortage of quality resources for implementation. After decades of struggling with the challenges of developing empowering, person-centered support plans and wrestling with implementing those plans, Arkansas Support Network (ASN), in partnership with Awake Labs, developed a planning process that anchors the agency's values and support goals into all aspects of day-to-day services, creating a tool to ensure high-quality plans and practical plan implementation. Visioning an Empowered Life (VEL) overhauls traditional disability support and leverages artificial intelligence (AI) and collaborative planning to create a holistic, person-centered system. Initial feedback suggests VEL enhances service delivery, improves the quality of support plans, and provides more relevant guidance for direct support professionals (DSPs).

Keywords: person-centered planning, disability services, artificial intelligence, strengths-based approach, Visioning an Empowered Life (VEL)

AI Innovations for Person-Centered Empowerment in Home and Community-based Services for Individuals with Intellectual and Developmental Disabilities

The landscape of disability services has long been challenged by systemic issues that can inadvertently limit the autonomy and potential of individuals receiving support. Among these challenges are fragmented information trails that fail to capture a person's wholeness, including history and aspirations, a pervasive deficits-oriented focus that prioritizes limitations over strengths, and significant operational inefficiencies within provider organizations. Arkansas Support Network (ASN), a home and community-based Medicaid waiver service provider committed to person-centered support and rejecting traditional, segregated service models, has consistently sought innovative ways to overcome these barriers. The core philosophy of ASN is not just to be a quality support provider, but to actively empower people by understanding and addressing the systems of oppression that influence their lives.

This drive for better, more empowering support led to the conception of Visioning an Empowered Life (VEL), a system designed to fundamentally reshape the planning process. The aim was to create a platform that not only addresses systemic inefficiencies and fragmented information but also actively mandates a shift toward a strengths-based perspective. This article details the development, core components, functionalities, and initial impact of the VEL system.

The VEL System: Vision and Development

VEL is a planning and framing platform developed to operationalize ASN's commitment to person-centered, empowering support by incorporating established frameworks and leveraging technology. The vision for VEL was born out of the practical struggles and ethical imperatives faced by ASN in its daily work.

Core Components

The development and functionality of VEL are anchored in five core components:

- **true person-centeredness:** moving beyond superficial applications to genuine empowerment and choice for the individual.
- **equity and inclusion:** prioritizing social justice and accountability in all aspects of service delivery.
- **collaborative empowerment:** ensuring that the individual and everyone involved in their support network can contribute meaningfully.
- **professional excellence:** committing to high standards in service provision.
- **technology innovations:** embracing technological advancements to standardize and improve support services, especially given the challenges of a geographically dispersed and under-resourced workforce.

Core Functions

VEL was designed with three primary functions:

1. **Dynamic exploration:** We utilized tools in the Charting the Life Course, a dynamic, person-centered planning framework designed to empower and support all people to design, plan, and live good lives (LifeCourse Nexus, n.d.) to capture a holistic understanding of the individual receiving services, focusing on who they are as whole persons beyond diagnoses or limitations.
2. **Leveraging AI ethically:** We used AI to generate support strategies but critically trained the AI to counter societal biases often reflected in AI models. The AI is trained with specific doctrines to ensure outputs align with ASN's core values.

3. **Actionable outcomes:** We created clear, simple resources and materials to guide DSPs and other supporters in their daily work, enabling them to provide empowering support without extensive, complex philosophical training.

Development and Collaboration

The VEL project was funded by an innovations grant made available through the Arkansas Enabling Technology ARPA project. Awake Labs, a technology company with expertise in the disability sector and a philosophy of deep listening and collaboration, became the key technology partner. Awake Labs was instrumental in translating ASN's vision into technical requirements and building the AI component within a challenging timeframe of approximately five months.

A crucial aspect of VEL's AI is its training. The AI model was trained on a comprehensive set of values and frameworks, including:

- **Charting the Life Course** (LifeCourse Nexus, n.d.): for exploring a person's life and structuring information.
- **Council on Quality and Leadership (CQL) Basic Assurances** (CQL, n.d.-a): incorporating basic assurances and their personal outcome measures.
- **The 10 Principles of Disability Justice by Sins Invalid** (Sins Invalid, n.d.): ensuring all outputs align with these principles of social justice.
- **NADSP Code of Ethics** (National Alliance for Direct Support Professionals, n.d.-a) and **Core Competencies** (National Alliance for Direct Support Professionals, n.d.-b) guiding the creation of implementation materials for DSPs.

This training ensures the AI produces content that meets the test of these core doctrines, moving beyond generic or potentially biased outputs. The system was designed to be compliant with the Health Insurance Portability and Accountability Act (HIPAA), with safeguards to protect personal health information and ensure data privacy for everyone, while continuing to maximize access to large language model AI to inform support plans with local community resources and opportunities.

Support Planning Process

The VEl exploration and planning process unfolds in five distinct steps:

1. **Life course exploration:** This is conducted by trained VEL facilitators, who are often Charting the Life Course ambassadors (LifeCourse Nexus, n.d.). The phase focuses on gathering holistic information about the person, their strengths, goals, and vision for a good life. The system uses dynamic forms that can be adapted based on life stage, ensuring relevant questions are asked and offering a significant improvement over previous static assessment processes. Emphasis is placed on capturing celebrations, traditions, and personal preferences to enable meaningful support.
2. **Technology acceptability exploration:** Recognizing that the effective use of enabling technology is influenced more by acceptability than ability, VEL incorporates a survey to explore perceptions and beliefs about technology among the individual and their support network and uses this insight in the goal development process.
3. **Interests and priorities:** Facilitators work to solicit this information comprehensively. The information is then fed into the trained AI tool.

4. **VEL discovery and goal selection:** The AI generates potential goal areas based on the exploration. Crucially, the individual then chooses which goals they wish to focus on, ensuring and empowering their agency in the process.
5. **Developing actionable resources:** Once the goals are selected, standardized prompts are used to instruct the AI to break the goals down into SMART (specific, measurable, achievable, relevant, time-bound) goals and generate a variety of support and implementation materials.

Role of VEL Facilitators

VEL facilitators are critical to the success of the system. ASN shifted its training focus from attempting to instill a complex philosophy in its workforce to deeply investing in a smaller group of 40–50 facilitators. These individuals lead the exploration conversations, ensuring the capture of high-quality information and appropriate engagement with the system.

Outputs and Impact: The Case of "Sarah"

The output from VEL is comprehensive and practical. "Sarah" (a pseudonym for a person with cerebral palsy who uses assistive technology to communicate and has a college degree), had previous goals that were simplistic, insufficient, and limiting, including vague objectives like "build employment profile" and "drink more water." These goals did not reflect her capabilities or aspirations and offered little guidance to DSPs.

After going through the VEL process, Sarah selected goals focused on attending local art events and volunteering for community projects. From these selections, VEL generated:

- **SMART goals:** clearly defined and measurable objectives.
- **DSP support strategies:** summaries helping DSPs understand their role and how to provide support.

- **Technology recommendations:** based on Sarah's expressed interest in eye-gaze technology as she aged, VEL provided specific systems to investigate.
- **Community resources:** relevant local resources to support her goals.
- **Shift guides:** specific guidance for DSPs working different shifts, clarifying responsibilities and promoting teamwork.
- **Direct support affirmations:** scripted sentences for DSPs to frame their role positively (e.g., "I support Sarah in achieving her goals and dreams") and affirmations for Sarah herself.

Sarah's feedback was that VEL "strongly enhances ASN service delivery" by providing more personal goals and specific ways for DSPs to assist her, which was particularly helpful as she is "not necessarily a planner." VEL has also been used to create position summaries for DSP recruitment based on the interests and activities of the person being supported.

Discussion

The introduction of the Visioning an Empowered Life (VEL) system has generated positive feedback from various stakeholders within and outside Arkansas Support Network. Individuals receiving services, like Sarah, have highlighted the shift from generic, unhelpful goals to personalized, actionable plans that provide clear direction for their support teams. This underscores VEL's potential to enhance the quality of life and promote self-determination. Behavioral health clinicians at ASN have noted the significant improvement in the quality and comprehensiveness of referral information generated by VEL, contrasting it sharply with previous minimalist referrals. Person-centered planning specialists and life course ambassadors who participated in piloting VEL anticipate that VEL will free up valuable time previously spent on resource research, allowing them to focus more on the direct implementation of

supports. The DSP Advisory Council at ASN expressed the view that VEL provides what they have been asking for, particularly in helping new DSPs understand both the person they support and their role more effectively. Similarly, the ASN Advocate Advisory Council, composed of individuals receiving services, provided positive initial reactions, with one participant calling it a "really good idea."

The development of VEL, although rapid, was meticulously documented, creating a blueprint with the potential for scalability. The system's framework is adaptable; while ASN utilized Charting the Life Course (LifeCourse Nexus, n.d.), CQL Basic Assurances (CQL, n.d.-a), SINS Invalid principles (Sins Invalid, n.d.), and NADSP competencies (National Alliance for Direct Support Professionals, n.d.-b), the AI can be trained on different frameworks or state-mandated requirements, making it potentially applicable to other organizations, state systems, or managed care entities. The goal is to create a system that allows any support team to function as effectively as the very best, most aligned teams by embedding best practices and person-centered values into its core operations.

This project demonstrates that by thoughtfully combining human-led, values-driven exploration with ethically trained AI, it is possible to create planning tools that are not only efficient but also deeply empowering for individuals with disabilities and the professionals who support them. Future research will focus on publishing data on the outcomes and broader implementation of VEL.

References

CQL. The Council on Quality and Leadership. (n.d.-a). *Basic Assurances.* https://www.c-q-l.org/tools/basic-assurances/

CQL. The Council on Quality and Leadership. (n.d.-b). *Personal Outcome Measures.* https://www.c-q-l.org/tools/personal-outcome-measures/

LifeCourse Nexus. (n.d.). *LifeCourse Framework.* https://www.lifecoursetools.com/lifecourse-library/lifecourse-framework/

National Alliance for Direct Support Professionals. (n.d.-a). *The NADSP Code of Ethics*. https://nadsp.org/resources/the-nadsp-code-of-ethics/

National Alliance for Direct Support Professionals. (n.d.-b). *The NADSP Competency Areas*. https://nadsp.org/resources/the-nadsp-competency-areas/

Sins Invalid. (n.d.). *10 Principles of Disability Justice*. https://sinsinvalid.org/10-principles-of-disability-justice/

Conference Proceedings

Examining the Effects of a Multi-Sensory Class on Teachers' Classroom Practices

Rene Rotondo

Independent Researcher

Abstract

This research examined the impact of a graduate-level course, “Teaching All Students: A Multi-Sensory Approach to Learning,” on teachers' practices and student learning. The research results supported the hypothesis that the course would positively impact teachers and students.

Keywords: multi-sensory, occupational therapy, education

Examining the Effects of a Multi-Sensory Class on Teachers' Classroom Practices

The notion that learning through the senses—visual (sight), tactile (touch), gustatory (taste), olfactory (smell), and kinesthetic (movement)—aids in memory of the learned experience is well documented within the field of education. A multi-sensory approach is defined as any learning that combines two or more sensory strategies.

Numerous studies have supported the use of a multi-sensory approach for students who are neurotypical and neurodiverse. Neurotypical refers to individuals whose neurological development is within the typical range of functioning. Neurodiverse refers to variations within human brain development and may include, but is not limited to, individuals who have attention deficit disorder, autism, and learning differences.

Dev et al. (2002) used the Orton-Gillingham reading approach, which combines visual, auditory, and kinesthetic elements, with first-grade special education students. The study concluded that the students within the experimental group advanced their reading abilities and subsequently were able to exit from special education services. The students in the experimental group were evaluated after two years, and all the students maintained their skills. None of the students within the experimental group returned to special education.

Obaid (2013) examined the effect of a multi-sensory approach for teaching sixth graders with learning disabilities. The study found a statistically significant difference that favored the experimental group, supporting a multi-sensory approach as beneficial.

DeSimone et al. (2002) conducted a study of 207 teachers in 30 schools in five states over 3 years. The longitudinal study concluded that professional development, which provided educators with specific teaching practices, increased educators' use of the practices in their classrooms. Studies have found that professional development which included active learning

opportunities can have a substantial positive influence, not only on teachers' classroom practices but also on student achievement (Birman et al., 2000; Garet et al., 2001; Wilson & Lowenberg, 1991).

Balcı & Çayır (2017) found that a multi-sensory learning model increased phonological awareness, reading, and writing of fourth graders. Sinclair (2018) concluded that multi-sensory learning increases creativity within the practice of teaching. Rau et al. (2020) found that both teachers and students benefited from a multi-sensory approach, and the approach was highly efficient, reducing distraction.

Stoffers (2011) examined how multi-sensory learning can impact general education second graders. Stoffers found that a multi-sensory approach can have a positive impact on the school community, enhancing student motivation, aiding teachers in assessing students' needs, and enabling teachers to develop a positive learning environment.

A multi-sensory approach is one of the most effective teaching methods for student success in the classroom (Shams & Seitz, 2008; Balcı & Çayır, 2017). When teachers utilize a multi-sensory approach, students' learning is comprehensive, permanent, and meaningful (Huyck & Wright, 2013; Mehrabi et al., 2014). The multi-sensory learning model allows students to be active participants in the learning process (Hazoury et al., 2009). A multi-sensory approach promotes retention and memory of educational materials (Birsh, 2011; Nurjanah, 2017). A multi-sensory approach supports all learners (Gazioglu & Karakus, 2023).

Wild and Steeley (2018) examined the effect of movement breaks on students who displayed sensory processing difficulties. Results revealed that training for classroom teachers with students who have sensory processing differences was practical. The study noted that

despite research about the benefits of movement breaks and multi-sensory strategies in schools, these remain areas within the domain of occupational therapy practitioners.

Purpose

The purpose of this research is to understand and assess teachers' current teaching practices and to determine what impact the graduate-level course, "Teaching All Students: A Multi-Sensory Approach to Learning," had on teachers' classroom practices and subsequently on student learning outcomes.

With the findings of Wild and Steeley (2018) in mind, the graduate course was developed and taught by an occupational therapist to provide knowledge of a multi-sensory approach, which has historically been within the domain of occupational therapists, and disseminate the approach to classroom teachers. The focus of the study was on a graduate course specifically designed for early childhood and elementary school teachers. The teachers first experienced all the learning through their senses, with the intention that they would take what they learned into their classrooms and create immersive sensory learning environments for their students.

Method

Participants

The participants were 15 Massachusetts pre-kindergarten, elementary, and middle school teachers who enrolled and attended all the classes within a free graduate course titled "Teaching All Students: A Multi-Sensory Approach to Learning." The course took place over the summer. After the conclusion of the course, students had the opportunity to purchase graduate credits for the course. However, this was optional. Early childhood and elementary schools teachers who taught within the Five District Partnership composed the target audience.

The partnership is a collaboration of five urban districts with diverse student populations in Massachusetts. Any classroom teacher in Massachusetts could potentially enroll in the course. The teachers in the course taught early childhood through Grade 8.

Procedures

Teachers took part in the study voluntarily. On the first day of the graduate course, students were presented with a pre-survey to complete. Two months after the end of the summer course in September, students received an email with a link to the post-survey. All survey responses were anonymous.

Instruments

The pre-survey consisted of the following four questions:

1. What grade do you currently teach?
2. What is your primary teaching method? How do you present lessons?
3. What area would you like to incorporate more into your classroom?
4. What do you believe is the biggest barrier to incorporating one or more of the above areas into the classroom?

Question 1 had the following answer choices: PK-5, 6-8, 9-12.

Question 2 had the following answer choices: visual, auditory, tactile, kinesthetic, two of the above, three of the above, all of the above.

Question 3 had the following answer choices: visual, auditory, tactile, kinesthetic, two or more of the above.

Question 4 was an open-response question in which respondents typed their answers.

The post-survey consisted of the following five questions:

1. What grade do you teach?

2. Have you or do you plan to incorporate any strategies from the course into your teaching practice?
3. Which area have you or do you plan to incorporate more into your teaching practice?
4. What student outcomes (i.e., improved student attention) have you observed since this change in teaching practice?
5. Two months after the course, do you have any additional reflections since last we met?

Question 1 had the following answer choices: PK-5, 6-8, 9-12.

Question 2 had the following answer choices: yes or no.

Question 3 had the following answer choices: visual, auditory, tactile, kinesthetic, two or more of the above, none of the above.

Questions 4 and 5 were open-response questions, and respondents typed their answers.

Results

Pre-survey

A total of 14 respondents completed the pre-survey. When examining the results of the pre-survey from the participants who were enrolled in the graduate course, the results of question one showed that 92.9% of respondents taught pre-kindergarten to Grade 5; 7.1% taught sixth through eighth grade. No one taught grades nine through 12.

The results of question two, “What is your primary teaching method? How do you present lessons?” are shown below:

Auditory	7%
Visual	0%

Tactile 0%

Kinesthetic 0%

Auditory 0%

All of the above 36%

Three of the above 36%

Two of the above 21%

The results of question three, "What area would you like to incorporate more into your classroom?" are shown below:

Auditory 0%

Visual 0%

Tactile 0%

Kinesthetic 35.7%

Two or more of the above 64.3%

The results of question four, "What do you believe is the biggest barrier to incorporating one or more of the above areas into the classroom?", are shown below:

Time 64%

Space 21%

Lack of technology 14%

Other (i.e., lack of materials, Massachusetts Comprehensive Assessment System) 1%

Post-survey

Following the end of the course, eight participants completed the post-survey. In response to question 1, 100% of respondents reported teaching pre-kindergarten to Grade 5. In response to question 2, "Have you or do you plan to incorporate any strategies from the course

into your teaching practice?", 87.5% of respondents reported that they have or plan to incorporate strategies from the course into their teaching practice; 12.5% of respondents reported not incorporating strategies from the course into their practice.

In response to question 3, "Which area have you or do you plan to incorporate more into your teaching practice?", 75% of participants reported two or more of the areas (kinesthetic, tactile, visual, auditory), 12.5% reported kinesthetic, and 12.5% reported none of the areas.

The results of question 4, "What student outcomes (i.e., improved student attention) have you observed since this change in teaching practice?", showed that 71% of participants reported increased attention and 29% reported increased engagement.

In response to question 5, "Two months after the course, do you have any additional reflections since the last time we met?", one respondent reported that they were creating lists on how to best incorporate a multi-sensory approach into practice. Another participant reported that the course was beneficial and assisted in the implementation of strategies in the classroom.

Discussion and Conclusion

This study has implications in the fields of education and occupational therapy. It supports the notion that a multi-sensory pedagogy is beneficial for all students. The results show that both teachers and students benefit from a multi-sensory approach. Within the graduate course, teachers benefited from taking on the role of student. Teachers were subsequently able to utilize the new information they gained in the course to help their classrooms of students. A multi-sensory learning model was found to support improved student attention, focus, and engagement.

Course participants who completed the surveys identified time as the most substantial barrier to implementation of a multi-sensory approach. In addition, space, lack of technology and materials, as well as the standardized assessment in the state, the Massachusetts Comprehensive Assessment System, were also cited as barriers by course participants.

The study could act as a model that others may wish to replicate. Further research in the area, with a larger sample size, is needed. Future research may survey course participants over an extended period to see the effects of a multi-sensory approach through the lens of a longitudinal study.

Limitations

Factors that may have impacted the study's results included the course's summer timing, the restructured meeting schedule, the post-survey distribution in September when teachers were collecting baseline data, and the study's small sample size.

References

Balcı, E., & Çayır, A. (2017). Disleksi riski taşıyan 4. sınıf öğrencisinin fonolojik farkındalığının arttırılmasında çoklu duyusal öğrenme'nin etkisi. *Ana Dili Eğitimi Dergisi*, *5*(2), 201-216.

Birman, B., Desimone, L., Garet, M., & Porter, A. (2000). Designing professional development that works. Educational Leadership, 57(8), 28-33.

Birsh, J. R. (2011). *Multisensory teaching of basic language skills*. Brookes Publishing Company.

DeSimone, L., Porter, A., Garet, M., Yoon, K., & Birman, B. (2002). Effects of professional development on teachers' instruction: Results from a three-year longitudinal study. *Educational Evaluation and Policy Analysis, 24*(2), 81-112

Dev, P. C., Doyle, B. A., & Valente, B. (2002). Labels need not stick: "At-risk" first graders rescued with appropriate intervention. *Journal of Education for Students Placed at Risk, 7*(3), 327–332

Garet, M., Porter, A., Desimone, L., Birman, B., & Yoon, K. (2001). What makes professional development effective? Analysis of a national sample of teachers. *American Education Research Journal, 38*(4), 915-945.

Gazioğlu, M., & Karakuş, N. (2023). The impact of multisensory learning model-based tale-telling on listening skills and student opinions about it. *Frontiers in Education, 8,* 1137042. https://doi.org/10.3389/feduc.2023.1137042

Hazoury, K. H., Oweini, A. A., & Bahous, R. (2009). A multisensory approach to teach Arabic decoding to students with dyslexia. *Learning Disabilities: A Contemporary Journal*, *7*(1), 1-20.

Huyck, J. J., & Wright, B. A. (2013). Learning, worsening, and generalization in response to auditory perceptual training during adolescence. *The Journal of the Acoustical Society of America*, *134*(2), 1172-1182.

Mehrabi, A., Zarbakhsh, M. R., & Rahmani, M. A. (2014). Effect of multi-sensory teaching method using sina educational instrument on performance of reading and writing in learning disabled children in Tonekabon City. *Universal Journal of Management and Social Sciences*, *4*(7), 30-39.

Nurjanah, E. (2017). Metode multisensori terhadap kemampuan mengenal lambang bilangan 1-10 pada anak autis. *Jurnal Pendidikan Khusus*, *9*(2).

Obaid, M. A. S. (2013). The impact of using a multi-sensory approach for teaching students with learning disabilities. *Journal of International Education Research, 9*(1), 75–82.

Rau, P. L. P., Zheng, J., & Wei, Y. (2020). Distractive effect of multimodal information in multisensory learning. *Computers & Education*, *144*, 103699.

Shams, L., & Seitz, A. R. (2008). Benefits of multisensory learning. *Trends in Cognitive Sciences*, *12*(11), 411-417.

Sinclair, S. (2018). Creativity, criticality and engaging the senses in higher education: creating online opportunities for multisensory learning and assessment. In J. Baxter, G. Callaghan, & J. McAvoy (Eds.), Creativity and critique in online learning (pp. 103-122). Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-78298-0_6

Stoffers, M. (2011). Using a multi-sensory teaching approach to impact learning and community in a second-grade classroom. *Theses and Dissertations*. 110. https://rdw.rowan.edu/etd/110

Wild, G., & Steeley, S. (2018). A model for classroom-based intervention for children with sensory processing differences. *International Journal of Special Education*, *33*(3), 745–765

Wilson, S. M., & Lowenberg, D. (1991). Changing visions and changing practices: Patchworks in learning to teach mathematics for understanding. (Research Report 91-2). The National Center for Research on Teacher Education. https://files.eric.ed.gov/fulltext/ED341682.pdf

Conference Proceedings

Sports Cultures of Young People with Disabilities as Challenges to the Ideals of Ability

Susan Eriksson

South-Eastern Finland University of Applied Sciences

Abstract

This article provides a perspective on ableism in young people's sports hobbies and how it appears considering previous research. It focuses on the VALKKU and VAIKOS studies, which were carried out at the South-Eastern Finland University of Applied Sciences in a consortium with the University of Eastern Finland and the University of Helsinki. This article explored factors and meanings of ableism and how these construct the identities of young people with disabilities as sports enthusiasts.

Keywords: sports, disabilities, ableism, identity

Sports Cultures of Young People with Disabilities as Challenges to the Ideals of Ability

Physical activities of young people with disabilities have been studied in Finland from the perspective of the prevalence of such activities (Hakanen et al., 2019) and in the framework of youth culture and opportunities for physical activities (Eriksson et al., 2018; Eriksson & Saukkonen, 2022). The focus of the research has been on mapping the structures of opportunities that promote young people's physical activities and sports hobbies. Structural factors have been found to be mainly related to the resources available in sports and leisure services and disability services, in physical education in special education institutions, and at home.

The empirical contribution of the studies to the area of hobbies and sports cultures of young people with disabilities is significant, but they focus on the opportunities provided in the service system. The attitudes and social effects on the opportunities of persons with disabilities have not been examined to a sufficient extent. In addition, this field of study lacks theoretically and empirically grounded examination of the meanings that construct the identities of young people with sports hobbies.

The aim of this article is to provide a perspective on ableism in young people's sports hobbies and how it appears in the light of previous research. This examination focuses on the VALKKU and VAIKOS studies, which were carried out at the South-Eastern Finland University of Applied Sciences in a consortium with the University of Eastern Finland (VALKKU project in 2015–2018) and the University of Helsinki (VAIKOS project in 2019–2022). This article explored which factors and meanings of ableism, i.e., the dominance of ability, are attached to the empirical observations of the studies, and how the meanings of ableism construct the identities of young people with disabilities as sports enthusiasts.

Ableism as Hegemony and Discourses

Ableism refers to culturally determined factors based on notions of functional ability. These factors shape the processes used to measure and classify ability. Ableism assumes ideal bodily ability, based on which social relations are constituted (Campbell, 2009). For example, the educational system is fundamentally ableist as it classifies and measures abilities and skills, and places individuals in rankings and categories based on certain skill classifications. When standards and indicators of capability are thus created, attitudes related to human worth and dignity are also shaped, based on social and cultural power relations. In sports and exercise, ableism is unequivocally linked to the body's ideal performance. Competitive sports are a strong example of ableist practice as they are based on the measurement of physical abilities. The requirements for the body's optimal functional capacity that are built in ableist conceptions also affect the practices of young people in sports.

Ableism has been theoretically based on Bruno Latour's notions of the opposition between the natural and the unnatural, which has also been seen to constitute the relationship between the normal and the pathological. According to Latour (1993), social practices operate in two ways, since there is a constant mixing or hybridization between the natural and the unnatural, yet pure archetypes are formed in relation to them ("la purification" in French). These dual processes are also seen to work in the relationships between normal and pathology. A kind of "pure" archetypes position themselves to represent normal or natural and pathological or non-natural, and individuals are classified through these relationships for various governmental and other societal purposes (Campbell, 2009).

In particular, the classifications of illness and disability are based on the distinctions between normal and pathological. Illness or disability is conceptualized as an exception from

the norm, which means that normalizing measures, such as curing an illness or rehabilitating a body classified as disabled to functioning capacity, come into question and become actual. Fiona Kumari Campbell sees two social and cultural practices as producing similar ableist relationships. These practices are (a) the idea of normality, which produces a kind of individual "norm" or normative individual, and (b) the division between normal (human) and deviant (non-human), which produces and constructs social distinctions and power relations (Campbell, 2012).

Normalizing measures are influential in affecting the status of persons with disabilities in society, which has also been emphasized in research on physical activities and sports cultures of young people with disabilities. For example, physical rehabilitation often directly replaces sports hobbies (Eriksson & Saukkonen, 2021). Ableism produces the neoliberal assumptions that people should be productive, do useful things, and participate to add value. Thus, as a narcissistic projection, ableism includes the assumption of the individual's constant development and pursuit of perfection. The capabilities and dignity of persons with disabilities are mirrored against these assumptions of ableist normativity and the implicit standards created by them (Campbell, 2012.).

Ableist normativity refers to ableist concepts and practices that form the basis on which human life and individual needs are valued and categorized. It manifests itself as socially dominant dimensions. In sports cultures, for example, ideals based on physical ability are strong. Parasports rely equally on enhancing bodily performances and on ratings that measure it, but it is also essential to develop prosthetic and assistive device technology. Parasports also operate at the Olympic competition level, which is a field permeated by ableist capability norms. However, many people with intellectual disabilities mainly compete at the level of

Special Olympics, which is an activity sponsored by private financiers. Although the criteria for success in sports are looser in Special Olympics competitions, the meanings related to enhancing the bodily performance and the competitive ethos are also present in them.

Similar dimensions were found in the results of research projects on physical activities among young people with disabilities. Although the sports activities and hobbies of people with intellectual disabilities were largely characterized by social values, such as having fun together, the young people were not free from the impact of competition, for example, in developing within their own sport (Eriksson, 2018; Armila et al., 2017). These considerations influence young people's identities as sports enthusiasts. The sociological debate regarding identities focuses on the cultural affordances offered in social relations and practices and in the processes of appropriation of which identities are formed (Alasuutari, 2004; Hall et al., 1999). In addition, identities have been examined as situational positions that are constituted as social practice (Jokinen et al., 2016).

In the discursive dimension of social reality, many practices of definition become hegemonic or dominant when reality is made understandable (Fairclough, 1992). Ableist notions are also tied to hegemonic discursive practices, such as measures related to bodily ability. However, the need for support and assistance is recognized in the physical activities and sports of people with disabilities. This has created a requirement to approach, define, and conceptualize the physical activities of persons with disabilities through practices that take individual support into account in different ways. Sports policy and the practices of the service system actively use concepts and make use of meanings in which ableism and hegemonic assumptions about physical ability are questioned. Resistance in speeches and texts against the prevailing reality manifests itself as counter-discourses or meanings that are produced,

repeated, and adopted intentionally. These in turn can become established as practices in defining the reality (Jokinen et al., 2004).

This article's empirical examination focuses on the meanings given to physical activities in the data analyses and interpretations collected in two research projects, and especially in the interviews and ethnographic observations of young people with disabilities. Specifically, the ableist meanings related to the activities and the counter-meanings of ableism will be examined. The findings will be used to study the effects of ableism in the physical activities of young people with disabilities, consider ways to resist them, and create new paths of thinking.

Research Interpretations of Physical Activities Among Young People with Disabilities Under Review

This article analyzes the qualitative data from studies on physical activities among young people with disabilities who participated in the VALKKU study. The VALKKU study was funded by the Ministry of Education and Culture in Finland from the funding source for sports research in 2015–2018. Its purpose was to map the sports hobbies of young people with disabilities and to study their position in young people's sports cultures. Approximately 60–70 hours of multi-sited ethnographic data were collected from young people's sports facilities and hobby locations in different parts of Finland. Approximately 40 ethnographic and semi-structured interviews were also conducted with the young people and their sports coaches.

The VAIKOS study was implemented through the same funding instrument in 2019–2022. It aimed to map out the opportunities and participation of the young people with profound and multiple disabilities in sports hobbies. In the VAIKOS project, multi-sited ethnographic observation data was also collected in different parts of the country. In addition,

15 semi-structured interviews were conducted with people close to the young people, such as their family members and service system professionals, who are involved in their everyday lives.

The analytical approach of the studies was largely based on descriptions of ethnographic observation data and interview data. Relying on the surveys, it turned out that many young people with disabilities engage in physical activities if there are sufficient opportunities in their hometown and the young person receives support from their family and the sports facility. However, the variety of sports hobbies is very often related to adapted sports and the sports cultures formed within them. Many young people with disabilities do not have access to the leisure communities of peers who do not have disabilities. Problems with belonging to these communities, mainly related to negative attitudes toward disability, discourage them from seeking out youth communities.

According to the research data, the young people with profound and multiple disabilities or those in need of extensive and continuous support are tied to the practices of the service system, such as their housing units, activity centers, and family circle. Their opportunities for physical activities are mainly related to physical rehabilitation measures, for example, activities organized by disability services during which their participation is supported. A young person with a profound intellectual disability has even fewer opportunities to engage in hobbies with young people who do not have disabilities. The research data did not include or describe these few opportunities, except for times spent with siblings.

The importance of help and support in sports hobbies is significant based on the data of both projects. Many structural problems with engaging in physical activities were linked to the

lack of sufficient help and support. Problems with attitudes toward disability turned out to be another key factor limiting young people's opportunities to engage in physical activities.

As noted in Eriksson et al., 2018, young people's chances to engage in hobbies as young people are mainly stymied by the lack of social support, which is largely due to prejudice against disability and limited experience with and knowledge about disabilities.

The importance of help and support is also emphasized in the physical activities of the young people with profound intellectual and multiple disabilities. Opportunities for physical activities and other activities are created in various networks of support and social relationships. For example, in the winter sports event observed during the ethnographic fieldwork, the practice of supporting inclusion seemed to create opportunities for young people to engage in physical activities, and the initiator was often a person who supports the young person, such as a rehabilitation professional or an employee of a housing unit.

The young people included in the research mainly engaged in applied sports and traditional individual and team sports, such as cross-country skiing and snowboarding. Among adapted physical activities, the range of sports engaged by young people was wide. Adapted physical activities, previously referred to as special physical activities, refers to physical activities aimed at those with reduced functional capacity due to illness, injury, or age, for example, and whose physical activities require adaptation and professional expertise in the sports communities to organize the activities. The most important parties organizing adapted physical activities are municipal sports services, organizations and clubs, social and health care agencies, and educational institutions (LTS, n.d.). In adapted sports, the young people practiced judo and bowling. They also engaged in social circus, which is not classified as an adapted sport, but which contains many physical activities imitating those performed at a circus.

However, there is a lack of sports opportunities and necessary aids around the country suitable for young people with disabilities. The places where the activities take place, such as in organized training camps, may be located far away from the young person's home. It may also be necessary to rent and pick up physical aids but not all families are prepared for the required transportation. The structures that create obstacles to hobbies are largely related to the scarcity of supply and transportation.

These issues that impact the physical activity opportunities of young people with disabilities emerged as key research results in the VALKKU and VAIKOS studies. Even if a young person wants to exercise, there are not always opportunities to do so. The analytical chapters of the research article examine these factors in more detail from the perspective of ableism and consider its significance in the challenges and problems related to physical activities among young people. The subject of the analysis is the interpretations that most essentially described both young people's opportunities and obstacles for hobbies. In addition, the ethnographic and interview data collected in the projects will be analyzed from the point of view of the factors to which the meanings and counter-meanings of ableism are linked.

First, ableism is examined in terms of structural and social factors that have emerged in the interpretations of the research data, as they have a key impact on the opportunities for exercising. Secondly, ableism in identities related to physical activities is examined in the light of ethnographic and interview data. This is followed by an analysis of the meanings of resistance to ableism in young people's physical activities. Finally, the ableist and anti-ableist practices in young people's physical activities cultures and the nature of the physical activities they enable are scrutinized.

Structural Dimensions of Ableism: Sports Facilities and Practices

In the research results of both studies, special attention is paid to the separate status of adapted forms of exercise as sports cultures. Young people with disabilities engage in hobbies in their peer groups or within the scope of special services offered to them. Thus, friendships or other forms of community are hardly formed with young people who do not have disabilities (Eriksson et al., 2018). This was particularly evident in the case of the young people with profound and multiple disabilities, whose opportunities for physical activities mostly depend on the practices of the service system, and who have particularly few encounters with young people who do not have disabilities.

For example, social circus was seen as an activity for young people with disabilities. The young people are provided with ample support in their circus activities. The functional capacities of each person are considered, which determines what kind of activities are appropriate for them. In social circus, the level of technical requirements is lower than, for example, in youth circus. However, the activities are goal-oriented and long-term, which was evident at the time of the ethnographic observation when the young people were rehearsing for an upcoming public performance.

Spaces and places that are separate from other young people illustrate the realities of recreational opportunities for young people with disabilities. Most often, they engaged in adapted sports that have been developed specifically for those with limitations in their functional capacities. Young people with sports hobbies have access to aids and are coached using special methods. Young people were observed participating in adapted judo, which differs from regular judo mainly in terms of lower skill and level requirements, but which

looked professional to a layman. Judo training was described as a social situation marked by a certain playfulness and ease, which is typical, for example, in children's guided exercise.

Adapted sports are particularly characterized by the fact that their skill requirements are defined according to limited functional capacity. Separate exercise practices are largely based on the meanings of the body's performance or lack thereof. However, this does not apply to all adapted sports, as the data also included observations of playing goalball for the visually impaired, in which both young adults with and without visual impairments participated. The sport is physically demanding, as one must reach for a moving, heavy ball on the floor, relying solely on the sense of hearing. There are bells inside the ball that produce sound and thus indicate the direction of the ball's movement on the floor. The requirements of the sport are based on the physical strength of the players. The need for technical skills in the sport is increased by the requirement that one cannot use the sense of sight at all while playing—a black scarf is worn to cover the eyes.

Skill requirements are lower in sports that are aimed at those who often have limitations in their physical strength, such as people with intellectual disabilities. However, factors based on technical requirements, physical strength, and endurance do determine the field of sports in which the persons with disabilities can participate. This is mainly reflected in the assumption that adapted sports are the optimal area for them, and it is not very often that young people without disabilities participate in the field. These factors related to the skill and endurance requirements of sports show the ableist nature of the practices and have a significant impact on what kinds of hobbies and sports are provided to people with intellectual disabilities.

The VALKKU study also revealed that some young people without disabilities do not want to engage in hobbies in the same space and time with young people with intellectual

disabilities. The separation of hobby cultures is thus also affected by discrimination, which is why young people with disabilities are placed in their own separate shifts. In the case of children and young people, discrimination can most often be caused by fears and prejudices toward disability. For these reasons, it may be most natural for the owner of a sports venue to place young people with intellectual disabilities in their own shifts so that leisure activities are possible although the venue's clientele includes all enthusiasts. Thus, the arrangements of separate venues and facilities have been justified due to negative and discriminatory attitudes toward people with disabilities.

Discrimination and isolation of people with disabilities has a very long history based on prejudices about human differences. It has been argued that the ideal of humanity created in ancient Greece, based on the ability of the athletic body, still has an impact as a deeply ingrained cultural structure (Sandahl & Auslander, 2005). The ideals of humanity are constructed with the emphasis on able-bodiedness, creating social divisions and classifications through which the status of people with disabilities in various cultural and social practices are determined.

The ideal of a capable body is also based on generalized notions that people with profound and multiple disabilities have no ability to engage in physical activities. In the VAIKOS study, this became evident when researchers were seeking to collect data. In the first phone contacts with children's and young people's sports clubs, the researchers were questioned about the project and told it is obvious that a young person with a severe disability cannot have sports hobbies. However, as the project continued, it became apparent that physical capabilities vary greatly among people who are perceived as severely disabled. For example, even if snowboarding is not suitable as a sport for many young people with severe disabilities, the

range of sports and physical activities is very wide. They are made accessible by special methods and aids, making it possible for everyone to find physically activating hobbies.

It was particularly noticeable for young people with profound intellectual disabilities that many of their opportunities for physical activities are tied to the service system, such as the institutional practices of health care, special education institutions, housing units, and activity centers. Rehabilitation services are the most central of these. For some with disabilities, these services may be the only opportunities they have for physical activities.

The practice of rehabilitation has been examined in critical disability research as a project of normalization, as it is based on notions of a deviant and defective body that needs to be repaired to make it functional (e.g., Eriksson & Saukkonen, 2021). At the same time, the practice of rehabilitation is seen to produce a paradigmatic understanding of the measures applied to people with disabilities and the physical activities available to them. It is argued that the normativity of the practice of rehabilitation has even excluded people with disabilities from understanding leisure time as spontaneous, pleasurable activities (Aitchison, 2009).

Although considering the VAIKOS study, the physical activities of the young people with profound and multiple disabilities are very often related to the physical rehabilitation of the young person, it was also revealed in the study that the everyday practices of the service system can be diverse. For example, in special schools and educational institutions, rehabilitation is combined with play and fun whenever possible. Physical activities are diversified with many enjoyable activities so that they also function as efficient physical rehabilitation. These kinds of physical activities, which are based on imagination and the brainstorming of individual professionals, fit naturally into the everyday hustle and bustle of the service system, but is also promoted by the institutionalized system. For example, social

circus activities have been included in the curriculum of special education institutions because circus activities can develop a wide range of skills and qualities, such as cognition, imagination, and physical improvement.

However, the key research results of these two projects were largely related to the structural factors permeated by ableism and the resulting problems in the opportunities for young people with disabilities to engage in physical activities. For example, rehabilitation is too often considered sufficient for the young person's needs for physical activities, and no support is offered to seek out sport hobbies. This also includes an implicit, generalizing assumption that the young person does not have the ability to engage in sports, often leading to a disabled young person having fewer hobbies compared to their non-disabled peers. Additionally, the places and practices intended for sports have been designed and built based on the ideal of a capable body. This means accessibility, inclusivity, or adequate adaptations that would allow people with disabilities to participate in physical activities have not been considered.

Sports cultures are largely built on the ideals of physical abilities (e.g., Itkonen & Salmikangas, 2015). Structures and practices based on the body's ideal performance are also responsible for a lack of sufficient expertise or competence related to functional disabilities in sports coaching. When a sports facility or sports club does not have the necessary expertise and is unable to offer special support to people with disabilities, the young person will be unable to start a hobby.

Ableist Ideals and the Identity of the Athlete

Many young sports enthusiasts with disabilities draw meaning for their athletic identities from ideals related to physical performance. Competing and succeeding in prestigious

competitions, for example, are very important to many young people, and it raises their self-esteem and builds positive social identities, as shown in the following interview with a young competitive athlete (Eriksson, 2018, p. 88):

Interviewer: “Well, do you think you're good at alpine skiing?”

Jari: “Yes.”

Interviewer: “Yes, I saw you came from there pretty well.”

Jari: “I'm two thousand and five in Japan, I got two, two, two silvers.”

Interviewer: “Aha, pretty nice.”

Jari: “And then, after two thousand in America, I was fourth, and now I'm fourth, I'm disappointed.”

Interviewer: “Aha, one fourth place that you're a little disappointed with?”

Jari: “Yes, and in Japan a two-silver medalist and, in America two times fourth, and then that one gold.”

Interviewer: “Yes. Wow. Great, congratulations. You've been very successful in those competitions.”

The interviewer first asks the athlete's opinion on whether he is skilled in his sport, and the athlete's answer is an unequivocal "Yes." In the interviewer’s immediate statement— "Yes, I saw you came from there pretty well"—it is confirmed that the athlete is skilled. Immediately after the interviewer's statement, the athlete begins a story about his international success in competitive sports, through which he further justifies his skill. His disappointment in placing fourth place also speaks to the young person's competitive spirit and the fact that medals in prestigious competitions have been very important to him.

Success in competitions is of great importance for the positive identities of young athletes (Salasuo et al., 2016). In sports that require physical strength and technical skills, many young people with disabilities do not differ in this respect from young people in general. Proficiency in one's favorite sport and the competitive spirit as an athlete affect the desire to develop further in the sport. But so does the desire to beat other athletes, as the following observation notes indicate (Eriksson, 2018, p. 90):

> "Aija doesn't care much about people, she doesn't need support because she is skilled in all sports, develops a lot and is competitive, and wants to be the best. Because she is an autistic person, she doesn't care about having friends, doesn't need them but wants to be in a group, other people are extras, but she needs them to support her own performance."

Competitiveness is a key factor in forming and further strengthening the identity of an athlete, and skill in the sport is seen as a prerequisite for success in competitions. In the VALKKU research data, success in the sport, public popularity, and the reputation of a good athlete appeared to be key motivators for many young people to engage in physical activities.

However, for many, the most important element in sports is friends and, for a few, also being part of a wider international sports culture. In certain winter sports, such as snowboarding, some are also attracted by the feeling of danger, as the sport has a high risk of physical injury. In addition to the fact that mastery of difficult technique indicates excellence in personal performance, risk is related to several factors in young people's sports cultures, the collective values of the sport culture, and the competence to act in the culture. These social dimensions may be the most important motivating factors for practicing the sport.

Nevertheless, positive identities as exercise enthusiasts are often constructed by competence related to physical skills and strength, but it is not the only factor. Fun and being part of a larger group of young people and a wider youth culture form the most inspiration for many people to engage in sports. However, social competence related to sports cultures requires meeting the norms of that culture. This involves, for example, various factors related to risk management. In these dimensions, ableist meanings and practices become visible in the sports cultures of young people.

The sports that require physical strength and mastery of technical abilities include dimensions of ableism, all often significant for the young people constructing identities as athletes. Problems at the structural level, such as the lack of opportunities for sports and exercise as well as inadequate practices for help and support, are also based on the ableist understanding of the meanings of physical sports performance inherent in the culture. It is based on the ideal of physical ability, which is normative in the deep structural level of sports cultures, and the ableist normativity that profoundly limits these young people's opportunities to operate in the field of sports.

Carnivalesque of the Sport Culture as a Challenger to Ableism

Play, fun, togetherness, and joy largely reflect the sports cultures of young people with disabilities. For many, having fun and nurturing friendships is the most important component in all hobbies. This was demonstrated, for example, in the ethnography of the VALKKU study when adapted football was introduced in a national tournament. The team, consisting of young players with intellectual disabilities, was dressed for the match with face colors and colorful uniforms, and there were family members and friends of the players cheering them on. Their supporters formed a collective on the edge of the field, sitting on the grass in small groups,

listening to music, and eating snacks. Many families knew each other and groups planned future joint activities.

The players' scoring and good passes were cheered, and they rejoiced and gestured their success in ways that are typical in football matches. Brisk cheers echoed throughout the match. Family members, friends, and employees of housing units moved around the edge of the field with banners and maintained a boisterous atmosphere.

The official adapted football match was a very communal, even carnivalesque event. The carnival-like atmosphere was shown, for example, in the use of face paints, colorful clothing, and exaggerated movements and gestures when playing football. The relaxed presence of the audience and activities, separate from the context of the match, included a picnic and planning of future events, emphasizing the communal nature of the event.

In cultural studies theory, the significance of carnival has been understood as a rebellious but controlled event based on medieval Europe, in which the prevailing order of values was questioned by symbolically reversing it. At the carnival, individuals and groups of people from the lower social classes were allowed to appear in processions, for example, dressed as superiors, such as kings and popes (Bakhtin, 1981). People with disabilities were prominently featured during the carnival. Since bodies with disabilities were generally seen as defects, their presence at the carnival symbolized chaos and disorder.

According to cultural theorist Mikhail Bakhtin, carnivalizing the prevailing social order made its norms visible and strengthened them and, therefore, the action was approved by those in power. At the carnival, the lower classes were allowed to ridicule social order and those in power, which in turn prevented the emergence of genuine rebellions (Bakhtin, 1981). The public appearance of the body perceived as disabled and the emphasis on its characteristics

during this exceptional time made the prevailing power and value structures in society visible. Today, it is argued in cultural disability studies that the purpose of emphasizing physicality and exaggerating performances is to highlight disability in positive ways, and that it has an empowering impact (Kuppers, 2011).

Playing in the adapted football tournament with carnivalesque emphasis on the practices of a sport based on the idealization of technical prowess and bodily performance can be interpreted as a performance that turns rankings upside down and at the same time brings disability to the fore. The players were happy about exercise and their own bodies as they are, and they were also encouraged to go on. The carnivalization of football also made visible the prevailing sports cultural order, within which adapted sports are not valued to the same extent as, for example, typical men's football.

At the same time as the adapted football, the women played matches in the final series of the Finnish Championship on another grass field of the large sports area. During the ethnographic observations, a few young spectators of the women's matches stopped by to watch the young people with disabilities play. The adapted football appeared in this context as a freak circus, as the playing caused amusement for these young spectators. They took pictures and videos of the game with their phones and sent them to their friends, urging them to arrive there, too.

The meanings of ableist normativity arose here again to emphasize what is perceived as a "real" sport and what does not. In this context, too, ableism attaches with meanings as a deep-rooted cultural structure relying on the ideal of an athletic and skilled body, based on which the cultural rankings of sports are created. However, the carnivalization of football by the young people themselves strongly challenges ableist normativity and produces its opposite to the

conventional understanding of sports. As an anti-ableist practice, the carnival also re-articulates identities based on corporeality perceived as disabled or deviant into a positive and worthy celebration.

Institutional Anti-Ableism of Youth Physical Activities

In sports cultures, similar anti-ableist meanings are present, for example, in speech about moving through play. In sports youth cultures, young people conduct voluntary exercise not under the guidance of a sports club. This can be, for example, basketball with groups of friends on the court or skateboarding on the streets. In sports cultures of young people with disabilities, the joy of physical activities stems especially from practices that allow for imagination, creativity, and spontaneity. For example, in social circus, the physical nature of the workouts seemed to have a lot to do with the fact that the young people were allowed to do the things that they felt were meaningful and that their spontaneous ideas and impulses mattered. Exercise is even more meaningful and fun if it is linked to other, more creative activities. For example, the joint brainstorming of an audience performance in circus rehearsals seemed to inspire the young people because everyone was allowed to choose a program to participate in that included at least acting.

A sports instructor at a special education institution who followed the circus training said in an interview that because the circus is based on foolishness anyway, the failure to perform tricks is a good thing rather than a bad thing. That, in turn, provides a very free framework for young people's physical activities. In these circus exercises, the young person does not need to learn anything streamlined or technically perfect. The activities are referred to as creative exercise, which describes the physical activities typical of performing arts. For example, improvisation is of great importance for the performance (Eriksson, 2023). In the

performance arts of people with disabilities, the inclusion of creative exercise in the production of art itself has been interpreted as an anti-ableist practice based on the recognition of all kinds of bodily performances as competent forms of physical activities (Kuppers, 2011).

Because spontaneous physical revelry is accepted in so many social and institutional spheres, it has also laid the foundation for anti-ableist thinking. Physical activities can be possessed by people whose physical functional capacity does not allow for participation in traditional sports. When probing possibilities for young people with profound and multiple disabilities, anti-ableist practices such as physical activities supported by assistive devices strengthen inclusion precisely because they allow for the interpretation of activities in supported physical activities as physical ability.

In institutional sports contexts, such as physical education in a special education institution, the principle of recognizing the diversity of abilities is applied pedagogically. According to a sports instructor at an educational institution, a young person's individual skills are always considered in physical education lessons. For example, if a person can raise one hand, a common exercise is developed around the movement, and thus the inclusion of young people with severe disabilities is strengthened.

Many practices of the service system must be interpreted in a way that they seek to question the hegemony of superior physical performance when defining and organizing physical activities for people with disabilities. These questioning practices are based on the principles of equality and human rights, according to which opportunities for inclusion must be created for everyone. According to the Finland 2014 Equality Act, the principle of supporting inclusion must be followed up with services, considering person-centered approaches. Research

data show that young people with disabilities can experience improved everyday life with creative methods even while acknowledging diverse individual competencies.

Tyranny of Ableism and its Opposition in Physical Activities of Young People with Disabilities

This article analyzed the dimensions of ableism and the practices that impact the physical activities and sports of young people with disabilities. Through analysis, it concludes that ableism is deeply rooted in cultural structures on which the understanding of exercise is based and the ways in which physical activity is conceptualized. This is reflected in the opportunities offered to young people with disabilities to engage in hobbies and, at its most glaring, in the lack of practice, skills, and expertise for help and support. However, the analysis raises hope as it found that service support can strengthen young people's participation in physical activities in many imaginative and creative ways.

Anti-ableist meanings can be found in creative and spontaneous forms of physical activities incorporated into official, institutional definitions of physical activity benefits and public health. But ableism is also hidden in these elements as they include neoliberal meanings of self-development and the optimization of individual reproductive potential and productivity. In the debate on bio-governance, it is also argued that physical and health well-being has been harnessed as an object of social regulation by means of various administrative and controlling mechanisms (Foucault, 1975).

Forms and meanings of ableism are often implicit or hidden, and their effects and consequences cannot be examined without special theoretical tools. This article highlights a few dimensions that are related to both social structures and the lived reality of young people. Many young people in the research data express themselves through positive identities affected

by personal success, even if these are based on ableist notions of excellent physical and technical skills. In the discussion about ableism, the notion of internalized ableism was introduced, when one's own disability is ignored because one must strive toward everything that is considered normal (Campbell, 2009). Nevertheless, as identities are fluid and contextual and even situation-dependent, internalized ableism is only one dimension through which a young person can form their identity as an athlete or sports enthusiast. The practices in which disabilities are celebrated were also recognized in the research, and they are dimensions into which anti-ableism is interwoven. Some cultures of adapted physical activities thus present disability in a particularly positive light, promoting empowerment and a culture of disability advocacy that seeks to influence society. Ableism is challenged in these emancipatory efforts—and new youth cultures based on anti-ableist ideals are formed in them.

Within the social service system, universal principles related to human rights, such as the equal rights of children and young people to play, constitute professional ethics and can guide the expert services provided children and young people with disabilities. Through these principles, anti-ableist understanding should be part of everyday professionalism and can serve to challenge conventional value hierarchies. In services that support young people, the meanings of equality are increasingly becoming visible as actions and practices that recognize diversity emerge in terms of abilities, competences, and human dignity in general.

References

Aitchison, C. (2009). Exclusive discourses: Leisure studies and disability. *Leisure Studi*es, *28*(4), 375–386.

Alasuutari, P. (2004). *Social theory and human reality*. Sage.

Armila, P., Rannikko, A., & Torvinen, P. (2017). Young people with intellectual disabilities and sport as a leisure activity: Notions from the Finnish welfare society. *Leisure Studies*, *37*(3), 295–306. https://doi.org/10.1080/02614367.2017.1397184

Bakhtin, M. M. (1981). *The dialogic imagination: Four essays.* (M. Holquist, Ed., Trans., & C. Emerson, Trans.). University of Texas Press.

Campbell, F. K. (2009). *Contours of ableism: The production of disability and abledness.* Palgrave Macmillan.

Campbell, F. K. (2012). Stalking ableism: Using disability to expose "abled" narcissism. In D. Goodley, B. Hughes, & L. Davies (Eds.), *Disability and social theory: New developments and directions* (pp. 212–231. Palgrave Macmillan.

Eriksson, S. (2018): "Se on mulle tosi fiilisjuttu" – liikuntaharrastusten kulttuuriset ulottuvuudet" ["It's a real cool thing for me"—the cultural dimensions of physical activities]. In S. Eriksson, P. Armila, & A. Rannikko (Eds.), *Vammaiset nuoret ja liikunta* [Young people with disabilities and sports] (pp. 85–97). Publications on physical activities and public health 356. Jyväskylä: Finnish Foundation for the Promotion of Physical Activities and Public Health (LIKES).

Eriksson, S. (2023). Impact of art and sensory experiences in the physical activities of young people with profound intellectual and multiple disabilities. In S. Prideaux, M. Sheikh, &

A. Formby (Eds.), *Crime, criminality and injustice: An interdisciplinary collection of revelations* (pp. 135–50). Anthem Press.

Eriksson, S., Armila. P., & Rannikko, A. (2018). Vammaiset nuoret ja liikunta [Young people with disabilities and sports]. Publications on physical activities and public health 356. Jyväskylä: Finnish Foundation for the Promotion of Physical Activities and Public Health (LIKES).

Eriksson, S., & Saukkonen, E. (2021). Rehabilitation or leisure? Physical exercise in the practice of physiotherapy with young persons with profound and multiple disabilities. *Scandinavian Journal of Disability Research, 23*(1), 295–304. https://doi.org/10.16993/sjdr.795

Eriksson, S. & Saukkonen, E. (2022). Vaikeimmin vammaisten nuorten liikunnallinen osallisuus. [Young people with profound and multiple disabilities and participation in sports]. *Finnish Youth Research Society/Finnish Youth Research Network, Publications 241*. Finnish Youth Research Society.

Fairclough, N., (1992). *Discourse and social change*. Wiley-Blackwell.

Foucault, M., (1975). *The birth of the clinic. An archaeology of medical perception.* Vintage/Random House.

Hakanen, T., Myllyniemi, S., & Salasuo, M. (2019). Takuulla liikuntaa. Kyselytutkimus toimintarajoitteisten lasten ja nuorten vapaa-ajasta ja liikunnasta. [Physical activity guaranteed. Survey of participation in physical activity and sport and the leisure time of children and young people with disabilities.] Finnish Youth Research Society/Youth Research Network 142. Finnish Youth Research Society.

https://www.liikuntaneuvosto.fi/wp-content/uploads/2019/09/Takuulla_liikuntaa_Verkkojulkaisu_020619.pdf

Hall, S., Herkman, J., & Lehtonen, M. (1999). *Identiteetti / Stuart Hall;* transl. and eds. *Mikko Lehtonen and Juha Herkman.* Vastapaino. https://helka.helsinki.fi/permalink/358UOH_INST/1a9ac4k/alma9913570323506253

Itkonen, H., & Salmikangas, A.-K. (2015). The changing roles of public, civic and private sectors in Finnish sports culture. *Viesoji politika ir administravimas*, *14*(4), 545–556. https://doi.org/10.13165/VPA-15-14-4-04

Jokinen, A., Huttunen, L., & Kulmala, A. (2004). *Puhua vastaan ja vaieta. Neuvottelu kulttuurisista marginaaleista.* [To speak counter and be silenced. Negotiation of cultural margins]. Gaudeamus.

Jokinen, A., Juhila, K., & Suoninen, E. (2016). Diskurssianalyysi: Teoria, keskeiset käsitteet ja käyttö. [Discourse analysis: Theories, basic concepts and use.] Vastapaino.

Kuppers, P. (2011). *Disability culture and community performance. Find a strange and twisted shape*. Palgrave Macmillan.

Latour, B. (1993). *We have never been modern.* (C. Porter, Trans.). Harvard University Press. (Original work published 1991).

LTS: Applied physical education. (n.d.). Applied physical activities - Finnish Society of Sport Sciences.

Salasuo, M., Piispa, M., & Huhta, H. (2016). *Exceptional life-courses – elite athletes and successful artists in 2000s Finland. Finnish Youth Research Society's Publications 177, internet publications 97.* Finnish Youth Research Society.

https://nuorisotutkimus.fi/julkaisut/nuorisotutkimusseuran-julkaisut/exceptional-life-courses/

Sandahl, C. & Auslander, P. (2005). Introduction: Disability studies in commotion with performance studies. In C. Sandahl & P. Auslander (Eds.). *Bodies in commotion: Disability and performance* (pp. 1-11). University of Michigan Press.

Conference Proceedings

Risk as a Right: Supporting Dignity of Risk in Disability Services

Lindsay Piper

Harborview Abuse & Trauma Center, University of Washington Medicine

Abstract

People with disabilities have long faced over-protection from caregivers, guardians, and others in their lives who are tasked with supporting and caring for them. Due to this over-protection, disabled people are often robbed of their right to take risks and learn from the consequences of their behavior. In this article, a summary of a presentation at the 40th Annual Pacific Rim Conference on Disability held in Honolulu, Hawaii, USA, in April 2025, the author explores the balance between dignity of risk and duty of care, provides context for the importance of preserving people's right to take risks, and outlines some guidelines for care providers to facilitate dignity of risk for the people they support while still upholding their duty of care.

Keywords: dignity of risk, duty of care, disability, human rights, consequence

Risk as a Right: Supporting Dignity of Risk in Disability Services

To understand the importance of dignity of risk, we must first understand risk as a concept. So, what is risk? If you look up the word in the dictionary, you will find several definitions. The Cambridge Dictionary defines risk as "the possibility of something bad happening" and Merriam-Webster lists definitions of risk such as "possibility of loss or injury" and "someone or something that creates a hazard". There is another definition of risk however, that speaks to the potential of positive outcomes and offers a fresh perspective on a concept that has long been thought to be adverse. Encyclopedia.com defines risk as "…a person or thing regarded as likely to turn out well or badly…" This definition suggests that, although we may more readily associate the idea of risk with negative outcomes, the risk in and of itself is not the negative power we may have believed it to be. Instead, it suggests that the outcome of risk is what determines positive or negative impact. Venturing further into this idea, one could even conclude that all behavior is risk. That is to say, everything we do or say is in pursuit of a desired outcome. Whether that potential outcome has a positive or negative impact, we are taking a risk that the behavior we are engaging in will result in the outcome we are seeking. Risk, therefore, is neutral.

In disability services, service providers often over-protect the clients they are tasked with supporting and prevent them from taking reasonable risks in many areas of their lives. This may mean preventing them from making simple decisions, such as what to have for dinner or when to go to bed. It can also mean infringing on their privacy, preventing them from seeking interpersonal relationships unsupervised, or limiting their ability to participate in

preferred activities. This over-protection, rather than keeping people safe, often displays a paternalistic approach to services for disabled people (Mohler, 2020). Dignity of risk, a term coined in 1972 by Dr. Robert Perske, "implies respect for individuals' rights to make their own decisions, to participate in a broad range of desired activities, even if those activities have risk, and to expose themselves to potential consequences or learning opportunities" (Chicoine & Kirschner, 2022, p. 189). Care providers, however, may struggle with supporting the dignity of risk of those in their care as they possess a responsibility to keep their clients safe. This responsibility, often termed duty of care, is the responsibility of an organization and their staff to ensure they do no harm to the people they support (Interchange, 2020). While duty of care is a legal responsibility, it does not mean that an organization or staff is required to protect a person from themselves in all situations. Instead, duty of care outlines that care providers have a responsibility to step in on situations if there is a risk of death (including suicide), permanent or serious disability or injury, environmental or property damage, harm to another person, or lack of capacity (Interchange, 2020). Outside of those circumstances, a care provider is not legally required to intervene in the life of a person they are caring for. In fact, many advocates and self-advocates would argue that intervening outside of the parameters outlined in the legal responsibility of duty of care is over-protection and prevents people with disabilities from living fulfilling lives. Max Barrows, a self-advocate, is quoted as saying, "Life is about learning from the mistakes you make. I appreciate, and we appreciate, protection from people, but please don't protect us too much, or at all, from living our lives" (What is Dignity of Risk, 2023).

Callus, et al. (2019), in an article published in the journal Disability & Society, stated:

> "Overprotection is a disabling barrier...People with intellectual disability who experience overprotection live very structured lives. They cannot develop their skills, abilities, or potential. Furthermore, they cannot live their life on their own terms, but on terms determined by others. This creates a sustained dependence on others, especially the family." (p. 345).

Inherent in the idea of dignity of risk is the idea that life experiences come with an element of risk, which even the best planning and support cannot eliminate.

One important component to the necessity of risk in everyday life is learning due to consequences we experience. Consequences are the direct result of a behavior, usually with the goal or effect of teaching a lesson or encouraging positive alternative behavior choices (Levy, 2018). Consequences can be natural or imposed, and can be negative or positive (Cummings, 2018). See figure 1 for examples. Consequences help us to learn how to navigate our world and society and support us in forming important relationships with the people around us. If people with disabilities are not able to take risks due to over-protective caregivers, they may never experience the consequences of their behavior and therefore never learn the lessons those consequences can teach. For example, a person who does not learn appropriate social skills through trial and error in social settings may spend their life unable to form meaningful social relationships due to their lack of social skills.

Over-protection of people with disabilities can also lead to adverse outcomes. People who are over-protected may experience lowered self-esteem due to being told (either verbally or non-verbally) that they are incapable of completing simple tasks or making decisions for themselves. They may underachieve or lack a desire to try new things if they have consistently been shown or told that they will not be successful. They may display

Table 1

Examples of Consequences

	Natural	Imposed
Positive	If you take good care of your garden all year, you may have delicious tomatoes to enjoy in the summer.	If you work hard at your job, you may receive a good bonus at the end of the year.
Negative	If you run down a hill, you may fall and injure yourself.	If you do not complete your chores, you will not receive your weekly allowance.

Note: A table that lists examples of consequences that can be natural or imposed and can be negative or positive.

learned dependency, stemming from forced dependency throughout their lives. They may also experience a decreased ability for self-care if they have not been allowed to make personal care decisions or have been over-provided with personal care services (Waldman et al., 2019). Additionally, staff who regularly engage in over-protection of the clients they support are at greater risk of burnout due to over-vigilance and exhaustion. While staff may be operating from a mindset disguised as concern for the welfare of their clients, these attitudes and habits of over-protection have been labeled as “benevolent ableism” (Pandey, 2022). Benevolent ableism often stems from a misunderstanding of disability or a pity for disabled people. It can take the form of passiveness, such as when a person dismisses inappropriate behavior from a disabled person as being caused by their diagnosis. It can also look like an over-correction or idealizing of disability, such as labeling a diagnosis as a “superpower” or a “divine gift.” This attempt at

eliminating negative connotations of disability places people with disabilities on a pedestal, which in turn makes them unequal to their non-disabled counterparts. Ultimately, benevolent ableism results in the same outcomes as active discrimination—exclusion and marginalization of people with disabilities.

While care providers in disability services may be approaching their work with what they feel are the best intentions, avoiding over-protection can often be a difficult task. To assist care providers in promoting the dignity of risk of those they support, here are a few guidelines that can be used to determine the best course of action.

1. Decision Making: allow people with disabilities to make decisions about their own bodies, their time, and their activities. If a decision does not pose imminent risk of death, permanent or serious injury or disability, environmental or property damage, or harm to another person, caregivers' opinion of that decision should not be a factor.
2. Environment: care providers should facilitate an environment for the people they support that can reduce the risk of specific choices, without eliminating the ability for someone to make those choices. For example, when supporting a person with a disability in the community, a care provider may choose to implement tools such as social stories or other training and support to help their client to safely cross streets and walk through parking lots. What they must not do is prevent their client from ever crossing streets or going anywhere where they may need to walk through a parking lot as a means of preventing being hit by a car. People should be supported to learn skills to prevent harm while still being able to access everyday activities and relationships.
3. Context: care providers should provide their clients with context in the moment to help them understand the possible consequences of an action or choice they are

considering. For example, if someone would like to eat a large snack ten minutes before dinner will be ready, explaining that the snack may make them too full to eat dinner allows for the person to understand the consequences of their actions before deciding what to do. Then, once the care person has provided context and checked for understanding, they should step back and allow the person they support to make their own decision about their behavior. While this may seem like a simple or pedantic example, this concept can be applied to many decisions a person is faced with each day and can take a significant amount of stress off a care provider who will no longer need to constantly make small decisions for the people they work with.

4. Consequences: once a decision has been made, it is the responsibility of the care provider to support their client to deal with the consequences of that choice. This does not mean finding ways to reduce the consequence or eliminate the consequence to preserve the client's feelings but instead means supporting the client to understand why they are experiencing that consequence and how to avoid it next time. These are the lessons we all learn as we move through life that help us to make appropriate decisions. Explaining to someone why their lack of attention resulted in dropping and breaking their snow globe from their last vacation to a theme park, or how choosing to go home to watch movies instead of working their scheduled shift at the grocery store led to a write up in their personnel file, supports lessons of care for our belongings and responsibility to our employer. This approach also helps people to form an understanding of consequence, the direct impact our choices have on our experiences, and can provide information and training for decision making in the future.

Conclusion

Dignity of risk is not a concept that absolves a care provider of their duty of care, but it does highlight the human right to make mistakes and learn from consequences. People with disabilities, though they may need some support, have the right to bolster their success through taking risks, and disability services staff have a moral responsibility to facilitate and support that right.

References

Callus, A. M., Bonello, I., Mifsud, C., & French, R. (2019). Overprotection in the lives of people with intellectual disability in Malta: Knowing what is control and what is enabling support. *Disability & Society, 34*(3), pp. 345-367. https://doi.org/10.1080/09687599.2018.1547186

Cambridge Dictionary. (n.d.). Risk. In Cambridge.com dictionary. https://dictionary.cambridge.org/us/dictionary/english/risk

Chicoine, B., & Kirschner, K. L. (2022). Considering dignity of risk in the care of people with intellectual disabilities: a clinical perspective. *Perspectives in Biology & Medicine, 65*(2). pp. 189-198.

Cummings, W. R. (2018). The difference between a consequence and a punishment. *PsychCentral*. https://psychcentral.com/blog/childhood-behavioral/2018/09/the-difference-between-a-consequence-and-a-punishment#1

Encyclopedia.com. (n.d.). Risk. In Encyclopedia.com. https://www.encyclopedia.com/science-and-technology/computers-and-electrical-engineering/computers-and-computing/risk#:~:text=a%20person%20or%20thing%20regarded%20as%20likely,as%20likely%20to%20result%20in%20a%20specified

Interchange. (2020, April 28). *Duty of care and dignity of risk – what does it mean?* https://www.interchangewa.org.au/blog/duty-of-care-and-dignity-of-risk-what-does-it-mean/

Levy, T. (2018). *Consequences versus punishment.* Evergreen Psychotherapy Center. https://evergreenpsychotherapycenter.com/consequences-versus-punishment/

Merriam-Webster. (n.d.). Risk. In Merriam-Webster.com dictionary. https://www.merriam-webster.com/dictionary/risk

Mohler, E.C. (2020). Rethinking capacity: on preserving dignity of risk. *Federation for the Humanities and Social Sciences*. https://www.federationhss.ca/en/blog/rethinking-capacity-preserving-dignity-risk#:~:text=The%20term%20'dignity%20of%20risk,Marsh%20&%20Kelly%2C%202018).

Pandey, S. (2022). How overprotection harms disabled people. *Indiana development review*. https://idronline.org/article/diversity-inclusion/how-overprotection-harms-disabled-people/

Waldman, H. B., Seiver, J., & Perlman, S.P. (2019). Over-protection of children with disabilities. *Exceptional Parent Magazine, 49*(7), 16-18. https://reader/mediawiremobile.com/accessibility/issues/205012/articles/5d2ca15912db88018fdb0766/reader

What is Dignity of Risk? (April, 2023). *Mental Health Matters*. Retrieved from https://mental-health-matters.org/2023/04/24/what-is-dignity-of-risk-2/

Conference Proceedings

Opportunity in Action: Neurodiversity in a STEM Career

Jacquelyn A. Ruffner

Author Note

Jacquelyn A. Ruffner now works in industry and holds no university affiliation.

Correspondence concerning this article can be directed to: jacqueruffner@gmail.com.

Abstract

In this article, I utilize a reflexive ethnographic approach via lived experience as a gifted student with attention deficit hyperactivity disorder (ADHD). Regarded as "lazy in math," I describe my journey to a Doctor of Business Administration (DBA) labeled twice exceptional (2e) 27 years later due to undiagnosed math learning disability dyscalculia.

Keywords: neurodiversity, innovation, hireSTEM, ADHD, dyscalculia, dyslexia

Opportunity in Action: Neurodiversity in a STEM Career

I grew up in Pennsylvania (PA) as an only child. My dad was a machine operator at a local factory and my mom was a licensed practical nurse. I loved learning but hated school. I excelled verbally, but had issues with tying my shoes, reading an analog watch, and understanding basic math concepts. I loved reading, science, bike riding, martial arts, writing plays, short stories, books, and screenplays. When I was 11, in 1982, my parents received an envelope from Johns Hopkins University's Office of Talent Identification & Development (OTID) indicating I had an opportunity for early college. I scored extremely high on the Scholastic Aptitude Test (SAT) practice exams that were administered in seventh grade. As part of this college opportunity, I had to pass one last assessment administered by a psychologist.

My parents thought it would be a good idea for me to meet with the psychologist. After all, I scored in the top 1% on the Gates-MacGinitie Reading Test, reading on a college freshman level, and scoring "gifted" on the intelligence test. During the in-person assessment, I cussed the psychologist out on the math questions, which deemed me ineligible for college due to my emotional immaturity. The psychologist labeled me “gifted but lazy,” due to my math scores. For me, the only good that came out of the meeting with the psychologist was the ADHD diagnosis. ADHD is characterized by various behavioral symptoms such as inattention, hyperactivity, and impulsivity, which pretty much described me to a “T.”

In high school, I was in honors classes and tried to avoid math like the plague. However, I was a math tutor. I knew the answers to the math questions but could not show my work. Helping others helped me pass pre-calculus. Even though math tanked my grade point average (GPA), I still graduated with honors. I was still writing screenplays in high school. A

passionate *Buck Rogers in the 25th Century* fan, I wrote nearly everyone in Hollywood to get a "Buck Rogers" script made, including Donald Bellisario, producer of *Magnum PI*, *Quantum Leap*, and *NCIS*. Bellisario rejected my script but told me to set my sights on film school.

Following his advice, I went to film school. I was accepted to the University of Southern California's (USC) Filmic Writing Program. Ironically, Bellisario did write one of my recommendation letters. I was in the thematic option honors classes. I had an academic and three-year Army Reserve Officer Training Corps (ROTC) scholarship. In my junior year, I failed a core class in practical filmmaking with a D+. I needed to retake the class or quit. My junior year was a year of re-evaluation. I dropped out of thematic option. I also quit ROTC. I had a medical disqualification due to my vision and lost my scholarship. I then became a party major. I took a six-month break and did my work-study job as a projectionist.

I changed majors from filmic writing to social science and communications during my senior year. I could leverage my three years of film school, take one year of anthropology, and two classes at summer community college. Yes, one was algebra. The class was challenging, but I survived. It took me five years to graduate with a four-year degree but I did it.

My first job out of college was working for the late 80s action star Sho Kosugi of *The Master* series with Lee Van Cleef. Sho found I had an aptitude for budgets, finance, and accounting, so I got promoted to development. I also wrote his English dialogue for his Japanese movies and TV shows. However, a woman then could not write dialogue for a Japanese man, so I created the alter ego, "J.A. Steel." I got bored (of course) working for Kosugi, so I started my own production company, Warrior Entertainment. If I could help make his films, why not make my own? Unfortunately, having your own entertainment company and making money is more complicated than it seems.

I took up many odd jobs to make ends meet, including as a coffee shop barista. There I met Richard Mueller, a writer for a kids' cartoon called *Double Dragon*. He was impressed with my background in computers. I hadn't given any of my computer skills a thought until he loosely based the Megabyte character for the episode "Virtual Reality Bytes" on me. I had compelling experiences with computer "hacking" before the government passed hacking laws. I also served as a beta tester at the computer lab for fun during my time at USC. For me, computer language is just another language at which I excel. Seeing myself as the Megabyte cartoon character (Mueller, 1994) with my blonde hair, baseball cap backwards, glasses, and a long-sleeved collared shirt was the first time I realized computers were the way of the future.

I knew I could not keep up the odd jobs forever, so I applied as an office manager at the lighting company Sequoia Illumination. Sequoia Illumination was owned by Tom Stern, who provided much of the grip and electric services for Clint Eastwood's *Unforgiven* and other projects for Warner Bros., Disney, and Universal. Even though I applied as the office manager, I started as the bookkeeper and tracker of all the equipment. I created databases and spreadsheets to track the rentals. However, I wanted to train as a grip/electric worker and commercial truck driver. Stern eventually gave me the opportunity. However, three days before my final driving test, I got caught driving under the influence (DUI). No one would hire me to drive a truck with a DUI—so I had to pivot.

A friend of a friend had a friend who worked for an employment agency called Accountants on Call. I was hired as a temporary employee (contractor) for a startup that had just gone public, Leslie's Pool Supplies. I optimized their bank reconciliation system for dozens of stores using computer spreadsheets to hide my lack of math skills. After that, I went to work for Paul Orfalea’s Kinkos and did the same thing for their bank reconciliations and the credit

card reconciliations for all his stores. I then returned to Leslie's Pools to help with their JD Edwards AS400 software designs and implementation for their new production facility, point of sale (POS), and warehouse management system (WMS) barcoding.

Due to my time at Sequoia, I made a lot of studio connections. The studios also needed help optimizing their accounting and inventory processes. Suddenly, I had steady work and was highly sought after for my computer skills—something that I did not have a degree in or formal training in but was able to use for a very lucrative paycheck. As computer use became more of the norm in the mid-1990s, my paycheck grew with the increased market demand.

I got a call from Disney to head to Singapore and spearhead a new market opportunity. A traveling stage show, Disney Fest, failed in the United States (Matzer, 1997), but Disney wanted to reallocate the resources and test the Asian market. The time frame was tight, and execution was crucial. I picked up everything and left to join the Disney Fest tour, overseeing all the inventory and merchandise. I got there, got it done, and came home. I discovered I loved Asia and had taken up a new martial art called Muay Thai.

Back in the United States, I found myself bored and needing a career change, so I bought tickets to move to Thailand to kickbox and teach English for the rest of my life. However, Accountants on Call reached out with a big money opportunity. I had a working interview and would be paid biggish money. My flight wasn't for a few days, so why not? I walked into a seemingly unsolvable problem at Countrywide Securities, which I solved in fifteen minutes. I hung out to meet the Countrywide Securities team and was paid for the whole day. My boss asked me what I “needed” to stay as an employee. It was the first time someone did not ask me what I “wanted.” I gave him my list of what I needed and stayed. During my

tenure, I inadvertently designed a backup protocol for catastrophic systems failure in the banking industry.

By focusing on what I needed in a job, not what I wanted, I found a balance in consulting/contracting and resurrected Warrior Entertainment. Through consulting gigs, I could finance and make the movies with the stories I wanted to tell. Everything was going great, until I had a motorcycle accident that rendered me unable to drive and impaired the mobility in my left arm, so no more Muay Thai. I went from on top of the world to yet another pivot. My doctor suggested swimming to regain mobility. I then took up scuba diving, ultimately becoming a cave and technical diver.

California became boring after I had done most of the Los Angeles area AS400 to SAP computer systems transitions. So, I bailed for greener pastures in Utah. I felt societal pressure to settle down, so I did for a time, improved some more systems for companies that were not big enough for SAP, made a bunch more money, and found myself unsettled again. I headed back home to PA. I found myself part of a multi-million-dollar acquisition done by a local company, Kennametal. Ironically, Disney called and wanted me back, but I had to have a master's degree. Really? A degree, for my old job, that I already performed without a degree? While I was off having a secondary film career and traveling the world with Warrior Entertainment, I quickly found out that companies had changed culturally. To command the salary I once earned, I needed a master's degree.

Cue the move to North Carolina (NC), the land of opportunity and companies needing SAP systems transitions/fixes. NC also has some of the most affordable MBAs in the U.S. I ended up picking Fayetteville State University for school. Their admissions requirements were

a Graduate Management Admission Test (GMAT) or experience. I took the GMAT. My math score was 8%, but my verbal score put me above the minimum requirements.

During my MBA, I was one of the few students who did a thesis paper instead of a capstone project. I learned from one of my professors that I may have something called dyscalculia. My MBA thesis, on entrepreneurs with ADHD and dyslexia, had no mention of this “math-dyslexia." I filed this dyscalculia information under "good to know." I got an automotive job in supply chain, which hit all my "needs" (not my wants). Life was good. I thought I was going to settle down and make a movie here or there on the side—then COVID occurred.

COVID blew everything out of the water. Early in December 2019, I spent my 50th birthday in Singapore. I was J.A. Steel at a film conference and visited some of the pieces of Disney that were built on my original framework from 1997. I became deathly ill after Singapore, and members of my team got sick as well. We all recovered, but the world shut down, and I was furloughed, waiting to be recalled. I was recalled to my automotive job. However, extenuating circumstances arose and I quit.

The PIVOT—I was bored, so I decided to get my doctorate and expand on my master's thesis. Like I did with my GMAT, I decided to go through the steps for disability accommodations. Testing at the University of North Carolina (UNC) revealed a longitudinal diagnosis of ADHD, but also dyscalculia. The doctor who signed off on my forms had to inform me that my progress through the educational system was statistically improbable, due to my level of disability. Excuse me, my what? Apparently, I am gifted and disabled, which is called twice exceptional (Klingner, 2022; Koifman, 2024), “2E.” I also learned my ADHD symptoms had been mitigated all those years by my participation in martial arts and the

extreme sports of cave and technical diving. The most recent studies have shown mitigation of ADHD symptoms through extreme sports (Woodward, 2009; Verma & Bagchi, 2020).

I completed my dissertation entitled *An Examination of the Combined Relationship of Attention Deficit Hyperactivity Disorder and Dyslexia with Entrepreneurial Intention* (Ruffner, 2023). It was the culmination of self-discovery for the kid who was labeled lazy by a psychologist who went on to design computer systems for the world's biggest companies. As memories of the shutdowns fade in the past, I find myself back in supply chain for a manufacturing company in North Carolina. It has the appropriate amount of production and an ever-changing landscape.

Instead of focusing on money, like I did in my early years, I'm focused on the potential my experiences can have to improve the quality of life of the people around me. This last job started as an accounting contractor. I left to make some money as a finance director but returned to my current company. I wanted supply chain work, and my boss asked me what I needed. I also found a great team, who, if my ADHD starts to get the best of me, uses the code word “coffee”—indicating I may be getting a bit excitable.

Over the years I learned that I am not an office person, even though society would have me believe that. I needed to do what would make me happy. I did not learn anything in my advanced degrees, except to better communicate with the people who seek to make the world a more innovative and profitable place for all people, even if it is not all about the money.

Person-Environment Fit Theory

Here is where the concepts I learned from the books intersect with my reality. The most important theory I learned as a post-secondary student was the Person-Environment Fit Theory (PE). This is the relationship between a person and their environment. Complementary fit

provides something the other wants or needs, whereas supplemental fit happens when an employer hires persons with similar characteristics or accepts another into a team (De Cooman & Vleugels, 2022). During my review of Boston Consulting Group's (2020) innovative companies, I learned that most CEOs do not possess advanced degrees. This ties into DeAngelis and Dills (2020), noting that while degrees are becoming more prominent in business, innovation is declining.

Changes in Business and Education

The simple yet effective PE fit theory had a profound effect on me as I realized many things about my career choices and the "why" behind my own internal and external choices. In the current business landscape, Disney now requires an MBA for the same job that I had nearly 20 years earlier. An MBA degree is now needed to "fit in" with the ever-changing business environment, and master's degrees are now needed for job advancement into the ranks of more senior management. While I made more money earlier in my career, with a degree in screenwriting and anthropology, I did not have an accounting class until my MBA classes in 2017. This followed more than two decades in the workforce doing accounting and programming. I have yet to take a formal computer programming class.

Boston Consulting Group (2023) recognizes the need to hire diverse talent to gain the competitive market edge. However, early business disruptors highlighted the need to challenge the status quo, before we had MBAs for every discipline. A qualitative study of innovative CEOs without advanced degrees by Fisher and Koch (2008) became a book, *Born, not made: The entrepreneurial personality,* challenging the perception that innovation was a learned trait. The ADHD studies by Johann Wiklund and others (Wiklund et al., 2015, 2016, 2017, 2018) furthered how neurodiversity, specifically ADHD, may deter degrees, but may help innovation

by supporting "out of the box" neurodivergent thinking. People like my old Kinko's boss, Paul Orfalea (Orfalea & Marsh, 2007), made their way in the business world despite their neurodiversity.

Market Disruption and Neurodiversity Hiring

Early in my career at Disney, we had a deaf person in accounts payable, so I thought every company had deaf people in accounts payable. I only learned later that this was not the case. Working in manufacturing, I have had persons with autism completing repetitive tasks as noted in studies such as Costello et al. (2021). However, a Dutch study by Goldfarb et al. (2024) showed fewer persons with autism worked in industry than the general workforce. Persons with mobility issues (wheelchairs, walking aids, etc.) were also present where I worked. I could not find literature on utilizing blind persons in quality control, but I worked at a manufacturing company where we outsourced to a local company. The blind persons provided better quality control than computers, resulting in fewer quality claims for inferior products. Smit and Brand (2011) showed potential safety risks for deaf persons in loud processing environments. However, my experience has been different.

During my MBA and DBA classes, I learned that government contractors require 7% of the workforce to identify with disability (Monod, 2020). Early in my career, I was unaware of literature or governmental regulations to cite. Now, I proudly check the box—more so for my ADHD, because I'm still embarrassed that I can't add 2+2. I am now better able to communicate with more educated (book smart) rather than street smart managers than when I worked in the industry. Saying "studies have shown" can be much more effective than anecdotes.

In my experience with market disruption, hiring neurodiversity is more than a mission statement. It increases profitability. SAP is a good example. The company hires persons with autism and can train and retain them, resulting in less monetary loss because of turnover (Costello et al., 2021). Krzeminska & Hawse (2020) also noted that hiring neurodiverse individuals resulted in a sustainable workforce.

As part of the neurodiverse workforce, I always focus on my strengths. My inner dialogue always contains questions and answers:

Q1. What do I want?
A1. I want enough money to pay my bills and not be in debt.

Q2. What do I need to be happy?
A2. I need enough vacation to travel and see the world – or make a movie or two if I get bored.

Q3. Is my boss supportive?
A3. Am I open to the feedback he gives? Is he open to giving feedback? Is my team supportive? Do we complement each other's strengths and lift each other's weaknesses?

During my time as a consultant and hiring manager, I gathered some tips from a human resources perspective for market disruption:

- Rethink the interview process.
- Utilize practical examples of a real-life situation at the current employer.
- Understand the needs of the job seeker.
- Match the individual needs with the company's needs.
- Use agencies so both parties can do a "test drive."
- Offer internships.
- Conduct panel interviews/task interviews/individual interviews.
- Utilize outside resources to supplement the integration of people with disabilities.

In NC and PA, we had state support for persons and transportation. Utilizing all the support services available as both an employer and a job seeker can result in more profitable outcomes.

Tomorrow and Beyond

Through reading about my experiences today and some cool notes from the academic literature, I hope some insights have been gained into the opportunities my neurodiversity has afforded me. I often wonder if I had an earlier diagnosis of dyscalculia, would I have contributed to the world of technology like I did.

I would challenge those today with some encouragement:

- Don't be afraid to advocate for yourself and others.
- Ask, "Why not me?" not "Why me?"
- If the U.S. governmental policy calls for only a 7% disability hiring minimum for federal contractors, why not strive to have more?

I see my diversity as my "superpower"—my greatest weakness is also my greatest strength. I can leverage my uniquely creative ways of thinking to solve complex problems. Many companies today focus on people, planet, and profit initiatives—the Triple Bottom Line (Varghese & Chandramana, 2021). If you can present your case as a neurodiverse person or as an advocate in hiring, I can guarantee the rewards will be much more than monetary gain. Newer studies have shown significant productivity gains (and hence profit) in teams led by a manager with a disability (Cole et al., 2024), including that disabled members in work teams increases productivity (Narayanan & Terris, 2020).

Conclusion

Reflecting on a doctoral class, I did a poll on the Whova App for the members of the 40th Annual Pacific Rim International Conference on Disability, mirroring a class research question.

At a fictional company, a research and development (R&D) management position is available to persons with 20 years' experience. Your final decision is between two managerial candidates. Who do you hire?

Candidate A. Climbed the ladder at a Fortune 50 company

Candidate B. 7 jobs over 20 years in various countries

In my doctoral class, most of the respondents answered Candidate A. At the conference, most respondents would hire Candidate B. This polling demonstrates a gap in hiring perception, depending on the audience. While this question was not generated using a formal hypothesis, scientific method, or approach generalizable to a population, it does highlight a potential direction for future research. This gap suggests that more research into the area of STEM is needed, particularly in the areas of entrepreneurship and innovation needed in business today.

Insights and lessons can be learned from my reflections based on personal experiences as a twice-exceptional person in the STEM field and as a lifelong learner. As we collectively move forward into the future, our voices carry weight as we can help amplify others' research and experience to drive success for all in the STEM fields.

References

Boston Consulting Group. (2020). The most innovative companies 2020. The serial innovation imperative. https://web-assets.bcg.com/img-src/BCG-Most-Innovative-Companies-2020-Jun-2020-R-4_tcm9-251007.pdf

Boston Consulting Group. (2023). Advantages in innovation in uncertain times. https://www.bcg.com/publications/2023/advantages-through-innovation-in-uncertain-times

Cole, D., Narayanan, S., & Vickery, S. (2024). Does leader disability status influence the operational performance of teams with individuals with disabilities? An empirical study in the apparel industry. *Journal of Operations Management, 70*(3), 459–481. https://doi.org/10.1002/joom.1289

Costello, E., Kilbride, S., Milne, Z., Clarke, P., Yilmaz, M., & MacMahon, S. T. (2021). A professional career with autism: Findings from a literature review in the software engineering domain. Paper presented at the *Systems, Software and Services Process Improvement: 28th European Conference, EuroSPI 2021, Krems, Austria, September 1–3, 2021, Proceedings 28,* 349–360. https://doi.org/10.1007/978-3-030-85521-5_23

DeAngelis, C. A., & Dills, A. K. (2020). Does compulsory schooling affect innovation? Evidence from the United States. *Social Science Quarterly, 101*(5), 1728–1742. https://doi.org/10.1111/ssqu.12832

De Cooman, R., & Vleugels, W. (2022). Person–environment fit: Theoretical perspectives, conceptualizations, and outcomes. *Oxford Research Encyclopedias*. https://doi.org/10.1093/acrefore/9780190224851.013.377

Fisher, J. L., & Koch, J. V. (2008). *Born, not made: The entrepreneurial personality*. ABC-CLIO.

Goldfarb, Y., Assion, F., & Begeer, S. (2024). Where do autistic people work? The distribution and predictors of occupational sectors of autistic and general population employees. *Autism, 28*(11), 2779–2792. https://doi.org/10.1177/13623613241239388

Klingner, R. (2022). Twice-exceptional children and their challenges in dealing with normality. *Education Sciences, 12*(4), 268. https://doi.org/10.3390/educsci12040268

Koifman, J. (2024). Twice-exceptional students and their challenges. *Journal of Clinical Psychology and Mental Health, 3*(1), 1–6.

Krzeminska, A., & Hawse, S. (2020). Mainstreaming neurodiversity for an inclusive and sustainable future workforce: Autism-spectrum employees. *Industry and Higher Education: Case Studies for Sustainable Futures,* 229–261. https://doi.org/10.1007/978-981-15-0874-5_11

Matzer, M. (1997, August 28). It did not play in Puyallup, so Disney tries Singapore. *Los Angeles Times*. https://www.latimes.com/archives/la-xpm-1997-aug-28-fi-26586-story.html

Monod, E. (2020). Schedule A for all: A noncompetitive approach to disability affirmative action in federal contracting. *Public Contract Law Journal, 50*(1), 91–111.

Mueller, R. (1994). *Virtual reality bytes.* (Season 2, Episode 4) [TV series episode]. *Double Dragon*.

Narayanan, S., & Terris, E. (2020). Inclusive manufacturing: The impact of disability diversity on productivity in a work integration social enterprise. *Manufacturing & Service Operations Management, 22*(6), 1112–1130. https://doi.org/10.1287/msom.2020.0940

Orfalea, P., & Marsh, A. (2007). *Copy this!: Lessons from a hyperactive dyslexic who turned a bright idea into one of America's best companies*. Workman Publishing.

Ruffner, J. (2023). *An examination of the combined relationship of attention deficit hyperactivity disorder and dyslexia with entrepreneurial intention.* [Doctoral dissertation, Franklin University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=frank1686724207114677

Smit, M., & Brand, H. E. (2011). Managers' perspectives on accommodating deaf individuals within the automotive manufacturing industry. *South African Society of Occupational Medicine (SASOM),* 22–28.

Verma, A., & Bagchi, A. (2020). Attention deficit hyperactivity disorder (ADHD) and Sports—What causes ADHD and how does sport help deal with it? *Annals of Tropical Medicine and Public Health, 23*, 231–707.

Wiklund, J., Patzelt, H., & Dimov, D. (April 2015). Entrepreneurship and psychological disorders [Paper presentation]. 2014 Babson Conference. https://doi.org/10.13140/RG.2.1.2322.3843

Wiklund, J., Patzelt, H., & Dimov, D. (2016). Entrepreneurship and psychological disorders: How ADHD can be productively harnessed. *Journal of Business Venturing Insights, 6*, 14–20. https://doi.org/10.1016/j.jbvi.2016.07.001

Wiklund, J., Yu, W., & Patzelt, H. (2018). Impulsivity and entrepreneurial action. *Academy of Management Perspectives, 32*(3), 379–403. https://doi.org/10.5465/amp.2016.0177

Wiklund, J., Yu, W., Tucker, R., & Marino, L. D. (2017). ADHD, impulsivity and entrepreneurship. *Journal of Business Venturing, 32*(6), 627–656. https://doi.org/10.1016/j.jbusvent.2017.07.002

Woodward, T. W. (2009). A review of the effects of martial arts practice on health. *Wisconsin Medical Journal (WMJ), 108*(1), 40.

Conference Proceedings

Meanings of and Barriers to Work: Narratives of People with Mental Illnesses in the Late Productive Age Group in Japan

Yumi Yuzawa

Department of Advanced Interdisciplinary Studies, Graduate School of Engineering,

The University of Tokyo

Author Note

I would like to express my sincere gratitude to the staff of the University of Hawai‘i (host of the Pac Rim Conference) for their kindness and everyone who attended my presentation. Furthermore, I would like to express my sincere gratitude to Professor Takeo Kondo of the University of Tokyo for giving me the opportunity to participate in the conference. I would also like to thank Editage (www.editage.com) for the English language editing.

Abstract

In this study, I analyzed the narratives of people with mental illness who maintained their desire to work until the latter half of their working years but were hesitant to work, and described the meanings of work, what these people required to move forward, and the corresponding social barriers they faced.

Keywords: mental illness, social barriers, meanings of work

Meanings of and Barriers to Work: Narratives of People with Mental Illnesses in the Late Productive Age Group in Japan

Working at one's full potential is an important aspect of life (Šverko & Super, 1995). However, people with mental illnesses may be hesitant to work even though they wish to do so (Yuzawa & Yaeda, 2024). I often observed the following situations in day-care centers in psychiatric hospitals which provided return-to-work support. Certain patients stared at their job posts. However, when encouraged to start their job search, several of them refused. On another occasion, a patient stood at the side of the employment support program and listened attentively. However, when invited to participate in the program, he refused. Although certain patients finally start looking for jobs, moving forward is often difficult. Although several hold the hope of "working," many enter the latter half of their productive years without being able to realize it. This situation is likely caused by various social barriers. While such social barriers may prevent patients from working, they still maintain their desire to work. The hope that these people hold may encompass the fundamental meanings of work. This paper therefore focuses on these people and investigates the meanings of their continued desire to work throughout their lives and the corresponding barriers to their employment.

Methods

Sampling

I conducted semi-structured interviews with 45 individuals with mental illnesses who attended psychiatric day-care centers and agencies with work programs. The interviewer and participants had never met before the interview, which consisted of questions about images of

working and working life, feelings, and changes. In this study, I include interviews of the those aged at least 55 years. The average duration of the interviews was approximately 45 minutes.

Interview Guide

I followed an interview guide with each participant. The following are the initial questions asked in understanding the image of work, self-image, and the process of changing the image:

1. How do you feel about working in general?
2. What is your specific image of working?
3. How do you feel about working there?
4. What is your specific image of your working life?
5. How do you feel about living that working life?
6. How have these things changed?

I proceeded by adding appropriate questions to further explore the points of interest based on the participant's responses. Participants were assured that their responses to the interview would not affect the support they received, and open-ended questions were used to allow for free and honest responses.

Analysis

In this study, I qualitatively analyzed the narratives of seven participants aged at least 55 years to determine the meanings of their hope to work and the social barriers that prevented them from realizing these hopes. I based the analysis on the qualitative text analysis method of Kuckartz (2014). First, I transcribed the interview data, read the entire document, and verified important points. Next I inductively coded the text data for each semantic cohesion and classified the codes from the narratives into five themes as follows: "meanings of work," "work

image," "self-image," "things that bring about change," and "social barriers." In addition, I organized and conceptualized the codes for each theme. Finally, I counted the number of occurrences of these concepts for each participant to examine their commonalities and uniqueness. I analyzed and organized text data using MAXQDA 2022 and Microsoft Excel.

Research Ethics

This study was approved by the Research Ethics Committee of the University of Tokyo, Japan. I explained my research to all participants both in writing and verbally, including the purpose of the study, the right to freely consent and withdraw participation in the study, research methods and cooperation details, benefits and disadvantages, protection of privacy, access to the contents of the study, and publication of the study results in an academic setting. Participants signed a consent form before the interviews were conducted.

Results and Discussion

Summary of Participants

Six participants were males and one female. All participants had work experience. The stages of preparing for job-seeking activities ranged from those hesitant to work to those currently searching for jobs. One participant selected sheltered employment.

Table 1

Basic Attributes of the Participants

ID	Gender	Age	Diagnosis	Work Experience	Stage of preparing for job-seeking activities	Status
1	Male	59	Bipolar	Yes	On leave	hesitation
2	Male	56	Schizophrenia	Yes	If the conditions are right, I might consider working.	

3	Male	59	Alcohol-Related	Yes	Choosing sheltered employment	
4	Male	57	Alcohol-Related	Yes	Still thinking about finding a job. Have not started job hunting yet.	
5	Male	58	Schizophrenia	Yes	Still thinking about finding a job. Have not started job hunting yet.	
6	Female	62	Schizophrenia	Yes	Consulting with a supporter about job seeking.	
7	Male	61	Schizophrenia	Yes	Currently job searching.	activation

Results and Discussion of the Analysis for Each Theme

Meanings of Work

On the theme of the meanings of work, the participant who selected sheltered employment only mentioned the following concepts: “meaningful time,” “contribution to and development of the organization,” “life cycle,” and “to live, to get money.” This could be obtained through sheltered employment or supplementation by the welfare system. However, other participants who were hoping for competitive employment, also mentioned the following meanings: “freedom of self-determination,” “financially independent social life,” “relationships and roles as a worker,” “a normal way of life,” and “being saved by working itself.” These concepts were not observed in the participants who chose sheltered employment. Therefore, these points could potentially be the reasons why people choose competitive employment.

Work Image

On the theme of “work image,” the most common concepts from those who were hesitant in job-seeking were as follows: “being able to do the job is important” and “matching the job with oneself without any specifics.” In short, if patients feel they must perform the job

well but cannot envision the specific tasks of the job they believe they could do, they can't move forward.

Self-Image

On the theme of "self-image," the concept of "things I am not good at or cannot do" was a common topic among participants. "Somehow, things did not go well. I do not know why" was a comment from those with low levels of job-hunting activity. Verbalizing the reasons why things are not going well could be a starting point in moving forward with a positive attitude toward job hunting.

Things that Bring About Change

On the theme of "things that bring about change," the concept of "positive memories" was often cited by patients who were highly motivated to act. Overall, "trying, acting, experiencing" was the most mentioned. "Change, motivation, continuation, hope" was also raised by the participants. If the patients had positive memories of working, then acting based on their desire to work was easier for them. In addition, the participants thought that trying things out was important. Their beliefs seemed to be based on their experiences. The participants also wished for hope, motivation, and change for themselves.

Social Barriers

On the theme of "social barriers," patients mentioned delays in career development and gaps between the past and present. Other commonly mentioned concepts included "lack of alignment between work and the individual" and "anxiety about interpersonal relationships or communication." The concepts repeatedly mentioned by certain participants were "parent-child relationship problems," "physical strength or physical difficulties," being "judged by standard

uniform preparation and job-hunting criteria," "negative memories," "discrimination or sense of unfairness," and "customs and norms."

Summary of the Results and Discussion

"Freedom of self-determination," having a "financially independent social life," "relationships and roles as a worker," "a normal way of life," and "being saved by working itself" could be the very reasons why the patients desired competitive employment. However, those who believed that "being able to do the job is important" but who were in a state of "matching the job with oneself without any specifics" might not be able to move forward in their job search as they potentially felt that they could not perform the jobs. The lack of specific descriptions for their failure look for a job, such as "somehow, things did not go well; I do not know why," seemed to affect starting on their search.

The important points for patients wanting to change were "positive memories," "trying, acting, experiencing," and "change, motivation, continuation, hope." These patients were encouraged by positive memories, believed that they could learn from their experiences, and wanted hope, motivation, and change. Lack of work history, delays in career development, and gaps between past and present, "lack of alignment between work and the individual," and "anxiety about interpersonal relationships or communication" were common barriers. For certain individuals, "parent-child relationship problems," "physical strength or physical difficulties," being "judged by standard, uniform preparation and job-hunting criteria," "negative memories," "discrimination or sense of unfairness," and "customs and norms" were other social barriers to starting job-seeking.

Conclusions and Recommendations

Assistance in Starting a Job Search

While supporting people with mental illnesses who are starting a job search, we should promote a "try it and see" approach. Gelatt (1962) states that future decisions are continually modified through learning about oneself and one's environment, often based on the consequences of prior choices. To support career decisions by individuals, he proposed a framework in which decisions are made iteratively through a cycle of information gathering and choice-making, incorporating the theories of Cronbach and Gleser (1957). This iterative process could be effective in helping people with mental illness find a good job match while verbalizing their experiences. However, if the desired result is not achieved, such a process would not leave them with negative memories. For example, viewing the situation as a lesson learned, one can say: "If you do it this way, you can do it. These experiences will help you think about your next try."

Support Systems to Consider

First, the treatment and rehabilitation of mental illnesses should be carried out while avoiding any gaps in the professional career of the patient to the greatest degree possible. In addition, job-related customs can act as barriers to work. Rehabilitation should be carried out within the local community and various jobs that are not bound by conventions should be made available. Despite the need to minimize career gaps to help people with mental illnesses recover their professional lives, psychiatric treatment in Japan has long been centered on hospitalization. Although the medical system is gradually changing to enable patients to live in the community, the number of people hospitalized with mental illness was estimated to reach 213,100 in fiscal year 2023, with the group having a high rate of injury and disease. In addition,

the average length of stay of hospitalized patients with mental illness in FY 2023 was about 290 days, the longest among discharged patients, according to the Classification of Injury/Disease. The longer patients are hospitalized, the lower the percentage of those able to live at home after discharge (Ministry of Health, Labour and Welfare, 2024).

In Japan, many patients with mental illness live separate lives from their local communities. Rehabilitation for outpatients is conducted in day-care centers in hospitals and shared employment centers (called Type B Continued Employment Support for Employment Centers), which are separated from people in the community. Changing this situation would require creating places and opportunities for people with mental disabilities to live together with their communities and for rehabilitation to take place in the community. Furthermore, working in diverse jobs designed to make it easy to be employed would enable those with mental illness to recover their working lives.

Second, this study showed that “a normal way of life” was mentioned among the meanings of competitive employment. Some patients are unable to move forward because they think they need to maintain a full-time job to be normal and have an independent and free life. Sometimes they feel ashamed of receiving public assistance. They think that the only way to live a free life is to work full time. People with disabilities who work while receiving public assistance could be given a new status and respectful name.

Third, the aging of parents living with people with disabilities makes parent-child relationships more complex. The customs and systems that require parental support for people with disabilities need revising so that they can live independent lives from a young age separate from their parents.

Significance and Limitations

This study described the meanings of work for people in Japan with mental illnesses, what changes would be necessary so they can move forward, and the corresponding social barriers they face. These results might be applicable to various individuals; however, the number of participants was small. I aim to increase the number of participants in future research and publish the results.

References

Cronbach, L. J., & Gleser, G. C. (1957). *Psychological tests and personnel decisions*. University of Illinois Press.

Gelatt, H. B. (1962). Decision-making: A conceptual frame of reference for counseling. *Journal of Counseling Psychology, (9)*3, 240–245.

Kuckartz, U. (2014). *Qualitative text analysis*. SAGE.

Ministry of Health, Labour and Welfare. (2024). *2023 summary report of patient survey*. https://www.mhlw.go.jp/english/database/db-hss/sps_2023.html

Šverko, B., & Super D. E. (Eds.). (1995). *The findings of the work importance study. Life roles, values, and careers: International findings of the work importance study*. Jossey-Bass Publishers.

Yuzawa, Y., & Yaeda J. (2024). The process of cultivating autonomous working motivation in supported employment program users in psychiatry. *Journal of Psychosocial Rehabilitation and Mental Health, 11*(1), 55–66. https://doi.org/10.1007/s40737-022-00322-3

Conference Proceedings

Creating Inclusive Campuses: The Impact of Disability Student Advocacy Clubs

Amanda Patrick, Megan Theobald, and Kiriko Takahashi

Center on Disability Studies, University of Hawai'i at Mānoa

Author Note

Eddie Bernice Johnson INCLUDES Initiative: The Alliance of Students with Disabilities for Inclusion, Networking, and Transition Opportunities in Science, Technology, Engineering, and Mathematics (TAPDINTO-STEM) is supported by the National Science Foundation under NSF Award 2119902. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect those of the National Science Foundation.

Abstract

Disability student advocacy clubs play a significant role in promoting student retention by offering peer support, raising awareness, and advocating for more accessible and inclusive campuses. This literature review uses quantitative and qualitative research from various colleges and universities and a student survey on The Alliance of Students with Disabilities for Inclusion, Networking, and Transition Opportunities in STEM (TAPDINTO-STEM) program to present the benefits of such clubs. We found that student advocacy clubs improved academic outcomes, increased graduation rates, and enhanced social integration for students with disabilities (SWDs) in science, technology, engineering, and mathematics (STEM) fields.

Keywords: STEM inclusion, advocacy clubs, student well-being, students with disabilities

Inclusive Campuses: The Impact of Disability Student Advocacy Clubs

Including students with disabilities in higher education settings is crucial for fostering a diverse and supportive learning environment, especially for those going into STEM fields. Lee (2010) found that although students with disabilities (SWDs) are more likely to select STEM majors, they disenroll in these fields at a substantially higher rate than students without disabilities (Lee, 2010). STEM SWDs experience low graduation rates and face lower rates of employment in STEM careers than their peers (Schearer et al., 2022). Despite 19% of STEM students having a disability, disabled students make up only 7% of recent STEM graduates. (Schearer et al., 2022).

Educational barriers faced by SWDs in STEM include low expectations of instructors, accessibility barriers, lack of postsecondary education services, limited exposure to prerequisite courses, social/communication challenges, inconsistent accommodations, difficulty disclosing disability to faculty, and lack of disabled mentors (Dunn et. al., 2012; Powers et al., 2014; Thompson-Ebanks, 2014; Schearer et. al., 2022). In one study, students with learning disabilities lowered their STEM aspirations even after receiving virtual mentoring due to academic difficulties throughout their coursework (Gregg et. all, 2016).

Social barriers faced by SWDs in STEM include feelings of inadequacy, little sense of belonging, perceived lack of acceptance by families, teachers, and peers, and low expectations for college socialization (Hodges & Keller, 1999; Powers et al., 2014; Thompson-Ebanks, 2014). Other factors include difficulty integrating into university life due to social/pragmatic difficulty because of disability (Kaufman et al., 2024). In laboratory settings, SWDs experience

a lower sense of belonging than their non-disabled counterparts and struggle in areas such as confidence and participation (Batty & Reilly, 2023).

Career and systemic barriers faced by SWDs in STEM include limited internship and networking opportunities, non-inclusive university policies, employment discrimination, lack of role models/individualized supports, and financial constraints (Powers et al., 2014; Schearer et al., 2022; Thompson-Ebanks, 2014). The accessibility of off campus fieldwork and internships can also limit potential opportunities for students with physical disabilities (Schearer et al., 2022).

Unfortunately, SWDs in STEM are less likely to use their accommodations than those pursuing other disciplines (Pfeifer et al., 2020). Accommodation barriers include social stigma and shame due to fear of having to disclose their disability to instructors (Pfeifer et al., 2020). However, working to improve levels of self-advocacy among undergraduate SWDs in STEM can help increase their academic retention rates (Pfeifer et al., 2020).

One Solution: Advocacy Clubs

This study aimed to explore advocacy clubs as a vehicle to improve outcomes for SWDs in STEM at the postsecondary level. We asked the following question: How can advocacy clubs for SWDs in STEM in postsecondary education improve their well-being?

Student disability advocacy clubs are defined as a group of students, including SWDs and other allied students, who work together to promote inclusion, awareness, and support for students with disabilities on their campus and beyond (Web, 2025). Oftentimes, these advocacy clubs engage in activities related to peer support/inclusion, advocating for greater accessibility, and raising disability awareness on campus (Web, 2025).

Advocacy clubs have been shown to improve both academic and social outcomes for students with disabilities. Students' peer classroom connectedness has been found to increase feelings of belonging in their academic major and university (Huber et al., 2022). A similar effect could be achieved through disability advocacy clubs, as students would see peers with disabilities pursuing STEM. This may lead to greater STEM enrollment by underrepresented groups, as identification with subgroups was shown to be a factor in social integration for SWDs (Hodges & Keller, 1999).

This paper highlights research into the benefits of advocacy clubs, including promoting inclusion for STEM SWDs. Additionally, we explore how the peer support networks formed by student advocacy clubs lead to improved well-being and academic success for SWDS in STEM. Finally, we offer practical guidance for establishing and sustaining such clubs, including strategies for recruitment, funding, and partnering with other organizations.

Methods

The study was conducted in two parts: a literature review of advocacy clubs and an evaluation of a student advocacy group developed under an National Science Foundation (NSF)-funded project called TAPDINTO-STEM. An electronic search was conducted between December 10, 2024, and April 14, 2025, using the following databases: ResearchGate, the NSF Eddie Bernice Johnson Alliance, PubMed, Sage Publications, Wiley Online Library, and Sage Journals. Search terms included "advocacy clubs & STEM," "benefits of advocacy clubs & STEM students," and "students with disabilities & STEM & advocacy clubs." Articles that focused on the benefits of student or faculty-led advocacy clubs or mentoring programs for SWDs on campus in STEM were included in this review. Articles focusing on social integration strategies applicable to STEM for SWDs were also included as they can be used to

support students in STEM-specific programs. Articles not applicable to SWDs in STEM fields were excluded. There were no restrictions on the region of publication or its original language.

Literature Review Results

The literature review search yielded a total of 26 articles, of which 24 met the inclusion criteria. One article was excluded because it only focused on barriers for SWDs in physics, but did not include advocacy clubs, mentoring, or social integration strategies. The other article described disability representation in STEM, but did not include advocacy clubs, mentoring, or social integration strategies. The articles included sequential mixed methods studies, randomized controlled trials, and qualitative studies from various universities and student organizations. Studies were conducted in the United States. Key preliminary findings, as summarized below, indicate that SWDs who participate in advocacy clubs report higher levels of self-efficacy, greater satisfaction with their college experience, and a stronger sense of belonging. The following is a discussion on the benefits of student advocacy clubs for students with disabilities in STEM fields.

Discussion

TAPDINTO-STEM Program Outcomes

Confidence in skills and understanding has been shown to increase when students feel included, and connections with peers can increase opportunities for learning (Batty & Reilly, 2023). This study examines the effectiveness of a program called The Alliance of Students with Disabilities for Inclusion, Networking, and Transition Opportunities in STEM (TAPDINTO-STEM) helping college students with disabilities. Effectiveness of the program was measured using student survey data collected throughout the 2023-2024 school year. The program utilizes mentoring as a key intervention tool to help students graduate in STEM fields and enter a

STEM career. TAPDINTO-STEM program also encourages the development of student advocacy groups to change the campus climate surrounding disability (Thurston et al., 2024)

Participating students took online surveys about their experiences in both the fall 2023 and spring 2024 semesters. Figure 1 displays the results of "Students' Perceived Outcomes." Each item was rated on a 5-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). Figure 2 displays the survey results for "Students' Perceived Benefits from Program Engagement." The measure consisted of 20 statements (e.g., "I am more confident that I will complete my degree program"). Participants rated the extent to which each statement applied to them on a 5-point Likert-type scale (1 = not at all, 5 = to a great extent).

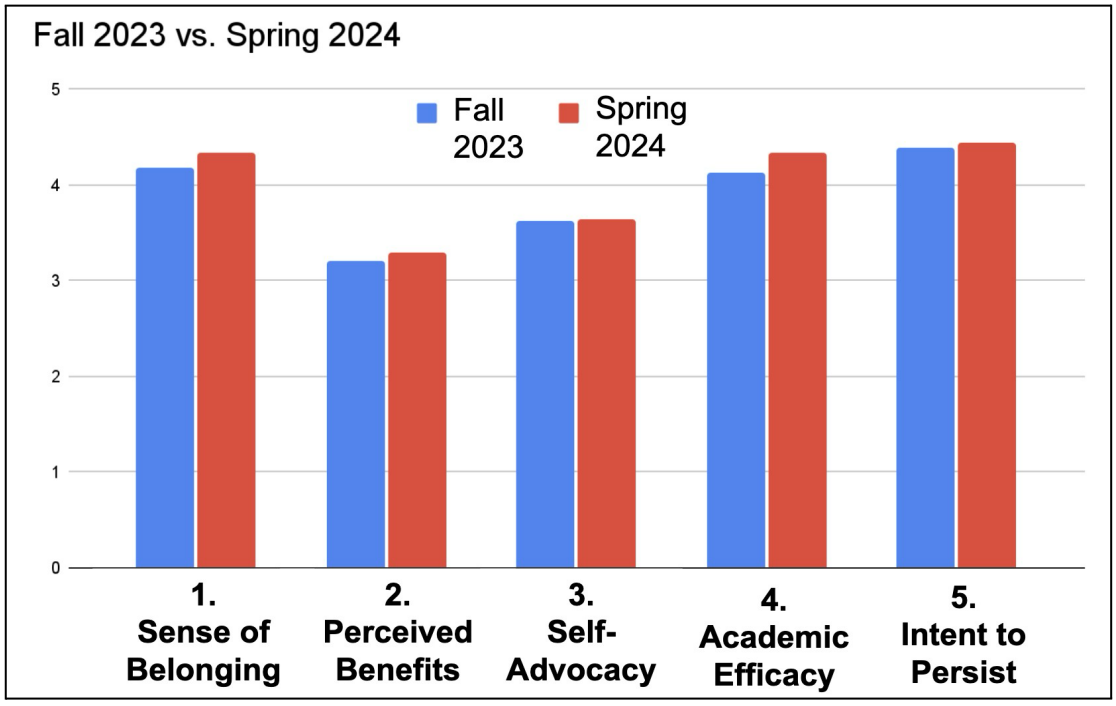
The survey was conducted electronically. Questions measured the following areas:

- Student-reported sense of belongingness
- Students' perceived benefits from program engagement
- Student responses to items on self-advocacy scale
- Student-reported academic efficacy
- Student-reported intent to persist

Results

Figure 1

Bar Graph of Students' Perceived Outcomes by Semester



Note. From "NSF Eddie Bernice Johnson Alliance INCLUDES TAPDINTO-STEM Alliance Year 4 Annual Evaluation Report," by L. P. Thurston, N. Johnson, L. Ashburn-Nardo, and Q. Zhi, 2024.

The study found important results regarding how students felt about their program and academic performance. Students in the NSF TAPDINTO-STEM program reported better outcomes in both the fall and spring semesters. They also reported a stronger sense of belonging in the program throughout the academic year. Additionally, by spring 2024, these students felt more confident in their academic abilities and were more likely to continue in their studies.

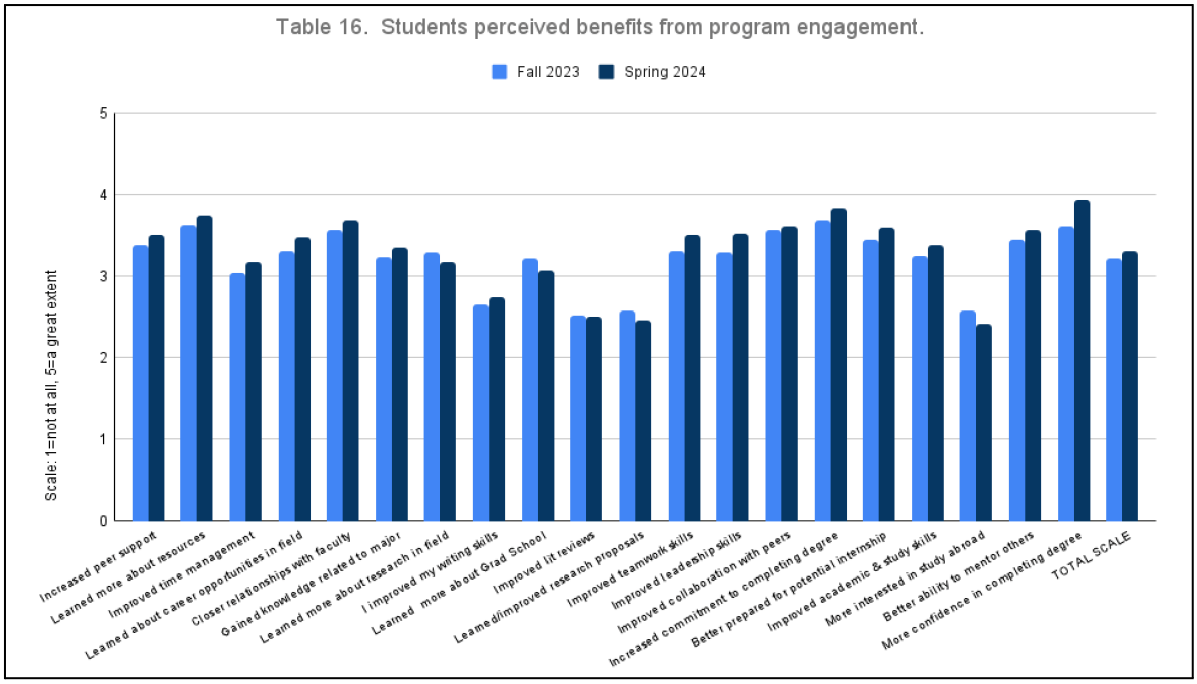
Promoting Inclusion

Other strategies for promoting inclusion through student advocacy groups include integrating disability-focused activities into broader campus activities on diversity. Framing disability as a matter of diversity and inclusion when partnering with campus administration also promotes greater inclusion on campus (Kreider et al., 2018).

Impact of peer support networks on well-being and academic success

Figure 2

Bar Graph of Students' Perceived Benefits from Program Engagement



Note. From "NSF Eddie Bernice Johnson Alliance INCLUDES TAPDINTO-STEM Alliance Year 4 Annual Evaluation Report," by L. P. Thurston, N. Johnson, L. Ashburn-Nardo, and Q. Zhi, 2024.

As seen in the graph above, students reported moderate gains in the following areas:

- increased peer support
- learned more about resources

- improved time management Learned about career opportunities in the field
- closer relationships with faculty
- gained knowledge related to the major
- learned more about research in the field
- I improved my writing skills
- learned more about Grad School opportunities
- improved literature reviews
- learned/improved research proposals
- improved teamwork skills
- improved leadership skills
- improved collaboration with peers
- increased commitment to completing the degree
- better prepared for a potential internship
- improved academic & study skills
- more interested in studying abroad
- better ability to mentor others
- more confidence in completing the degree program

In summary, the TAPDINTO-STEM program and similar studies show improvements in self-efficacy, campus connection, professional development, and self-advocacy (Kreider et al., 2018; NSF INCLUDES TAPDINTO-STEM, 2022.)

Advocacy clubs have a positive impact on students' social well-being as they are an important resource for fostering a sense of belonging among students with disabilities (Kaley et al., 2022). These clubs can promote community integration by providing opportunities to form

and meet new friendships (Kaley et al., 2022). Local self-advocacy/social groups can also improve student perceptions of the on-campus environment, leading to easier transition into a university for first-year students (Kaley et al., 2022; Shepler & Woolsey, 2012). First-year students with disabilities encounter the same challenges with college transition as other students. Therefore, it is important to provide college transition-related support to this population as well. Support can be especially effective through disability-focused advocacy groups (Shepler & Woolsey, 2012).

STEM mentoring programs also resulted in significantly higher levels of STEM-related knowledge, engagement, confidence, and general career planning confidence for students who had mentors with or without disabilities (Sowers et al., 2016). Participation in a peer mentoring program increased graduation rates for students in underrepresented groups (34% graduation rates for students with mentors compared to 12.7% for matched controls) (Boutakidis et al., 2024).

Increasing the social capital of students with disabilities through building connections with others may also increase their ability to self-advocate (Pfeifer et al., 2020). Past studies have shown that disabled STEM students who had participated in communities meant to build their social capital reported higher levels of self-advocacy skills (Pfeifer et al., 2020). Disabled university students who engage in self-advocacy report higher GPAs as well as a higher likelihood of graduating when compared to controls (Pfeifer et al., 2020). Effective mentoring may help students feel more comfortable disclosing their disability and engaging in additional self-advocacy (Powers et al., 2014).

Best Practices

Best practices for establishing and sustaining advocacy clubs for SWDs include strategic recruitment, funding, and partnerships with other organizations. The first step in determining the best approach for organizations should be to assess student needs. It is not a one-size-fits-all approach, and each advocacy group should be tailored to the student population (Center on Disability Studies, University of Hawai‘i at Mānoa, 2024).

Mentoring

Types of mentoring include formal mentoring, such as TAPDINTO-STEM, as well as informal mentoring, including UNITY (University of Hawai‘i’s United Network of Inclusivity for Disabilities). Other mentoring models include student to student (e.g., Bridge to Baccalaureate Peer-Mentoring Program through TAPDINTO-STEM), and faculty/professional to student (e.g., Bridge to Post-Baccalaureate Peer-Mentoring Program through TAPDINTO-STEM) (TAPDINTO-STEM Alliance, 2022).

Mentoring can be done in an individual, group, or virtual format. Mentoring can benefit SWDs by providing guidance on self-advocacy and accessing accommodations. Higher levels of support from faculty mentors, as well as more diverse mentor networks, promote integration into the STEM community through strengthening mentees’ professional identities and sense of belonging. Mentoring positively impacts the mentee’s career outcomes in STEM (Hernandez et. al., 2020). Mentoring also provides STEM students with role models, which is recommended for increasing representation in this field (Powers et al., 2014; Moon et al., 2012). Additionally, virtual mentoring had a significant impact on the academic persistence of STEM students with disabilities, with growth differences identified across types of disability and race/ethnicity populations (Gregg et al., 2016). The most significant improvements were in students’ perception of self-determination and self-advocacy (Gregg et al., 2016).

Mentor/mentee pairing is an important factor to consider in promoting successful mentoring relationships. Club leaders should consider students' preferences regarding what they are looking for in a mentor to ensure they have a good fit. Factors to consider include shared STEM interests, gender, common type of disability or other challenges, personality preferences of the mentees, and other interests (Powers et al., 2014). It is also important to consider the individual background of the student and the unique challenges they may face. For example, transfer students may need a different approach to mentoring as they benefited on a lesser scale compared to first-year students in a peer mentoring program (Boutakidis et al., 2024). Whether a mentor has a disability may also be a relevant factor when mentoring STEM students with disabilities. Studies show there are similar outcomes for STEM mentors with and without disabilities. However, STEM-related self-efficacy was higher when both mentor and mentee had disabilities (Powers et al., 2014).

Mentoring should focus on fostering positive attitude and self-determination as well as collaborative goal setting (Magill et al., 2013). This can be done by helping students identify their accommodation needs. SWDs tend to struggle with navigating the accommodation process once they reach college due to system differences from high school (Pfeifer et al., 2020). Student-led or faculty-led clubs can help students identify accommodations needed to meet their goals. Mentors can also provide career counseling through helping students find supportive educational programs or careers that meet their accommodation needs (Powers et al., 2014). Teaching various learning strategies and providing opportunities for real-world experience are also helpful to promote career exploration (Dunn, 2014).

Helping students identify their STEM interests and talents is also integral for effective mentoring. Workshops as well as bridging programs can be an effective solution for providing

inexperienced students with a better understanding of lab work (Batty & Reilly, 2023). Students with attention deficit hyperactivity disorder (ADHD) who took part in a summer engineering research program reported a greater interest in engineering research, higher interest in graduate school, and a greater sense of belonging within the profession (Schearer et al., 2022). These results (greater interest in research, higher interest in graduate school, and greater sense of belonging) were achieved through identifying students' strengths, which helped provide academic and psychosocial support (Kreider et al., 2018).

Events: Types & Purpose

Events play a crucial role in raising awareness about advocacy clubs for disabilities, promoting social integration, and highlighting various resources. Support and advocacy initiatives promote inclusion for SWDs and acceptance of neurodiversity (Center on Disability Studies, University of Hawai'i at Mānoa, 2024). These can include peer support groups, mentorship programs, and advocacy campaigns. Social events promote community building and a sense of connectedness among members (Center on Disability Studies, University of Hawai'i at Mānoa, 2024). Examples include the first-year students' welcome dinner, wellness/yoga events, and inclusive art workshops. Networking events promote networking between students and professionals. These may include game nights and accessibility awareness events for informal student-to-student networking. Career fairs and networking events with STEM professionals can help promote relevant resources.

Promote STEM-Specific Opportunities

STEM-specific opportunities can be promoted through creating an opportunities tracker spreadsheet, which helps students save various resources, such as relevant scholarships and internship opportunities, in a single document. Reviewing resumes with a mentor has also been

helpful to students, as it provides education on effectively tailoring their resumes according to the work setting. Developing a STEM course plan and shadowing postgraduate student/faculty mentors are also helpful activities for individual or group meetings (Powers et al., 2014).

Other Recommendations

To ensure the continuation of student-led advocacy clubs, student leaders should encourage leadership development within the group through mentoring of potential student leaders. Collaboration with the community may also provide volunteer opportunities and mentoring (Center on Disability Studies, University of Hawai‘i at Mānoa, 2024). To ensure advocacy clubs are meeting students’ changing needs, club leaders should also collect regular feedback from members through informal feedback or anonymous surveys (Center on Disability Studies, University of Hawai‘i at Mānoa, 2024). Collaboration with similar organizations on campus can also broaden the impact of advocacy clubs through increased resources and potential members (Center on Disability Studies, University of Hawai‘i at Mānoa, 2024). Finally, advocacy clubs can seek funding through grants, sponsorships, and fundraisers to support activities and events (Center on Disability Studies, University of Hawai‘i at Mānoa, 2024).

Student Testimonials

As part of our study on the benefits of student advocacy clubs for disabilities, we asked TAPDINTO-STEM fellows and UNITY members, “How have neurodiversity mentoring programs impacted you? Please tell us about your experience.” Student responses are recorded below:

1. When I transferred from community college, it was easy to feel disconnected in the larger environment. The mentoring program within

TAPDINTO-STEM provided a community that helped me feel less isolated. As someone with neurodiversity, it can be challenging when you do not pick things up as quickly as others. This program gave me a space to share my experiences and learn from others, which helped me develop useful skills and stay on track with my education.

2. It gave me a community I didn't know I was missing. I transferred from a community college, where everything felt tight knit, to a university where I suddenly felt like just another face in a crowd. I had to start from scratch, building a support system. And for someone like me—who really leans on people to get through tough classes and stay grounded—it felt really isolating at first.

   But when I joined the neurodiversity TADINTO-STEM group, things started to shift within my first semester. I realized my story wasn't unique—and that was comforting. I saw familiar faces, met new ones, and it felt refreshing to gather biweekly just to check in on life. Everyone was going through it, just in slightly different ways. It helped me keep going.

   One example of something we talked about was forming better habits and how to stay resilient when school isn't going well. Hearing others echo the same frustrations I had—and share how they made it through—

meant a lot. It reminded me I wasn't alone.

3. TAPDINTO-STEM has helped me in many ways, including offering a grant to conduct research, helping me write resumes, and providing encouragement at challenging times. I appreciate how friendly and supportive everyone is. Participating in this program has helped me significantly in my academic journey.

References

Batty, L., & Reilly, K. (2023). Understanding barriers to participation within undergraduate STEM laboratories: Towards development of an inclusive curriculum. *Journal of Biological Education, 57*(5), 1147–1169. https://doi.org/10.1080/00219266.2021.2012227MDPI+4

Boutakidis, I., Espinoza, G., Sevier, M., & Sadek, A. (2024). The impact of a peer mentoring program on undergraduate graduation rates: A matched control group design. *Journal of College Student Retention: Research, Theory & Practice*. Advance online publication. https://doi.org/10.1177/15210251241268852

Center on Disability Studies, University of Hawai‘i at Mānoa. (2024, November 13). *Creating an advocacy club for students with disabilities at your institution*. https://docs.google.com/document/d/1hX4O0CoPj6WQ2lI8VUXFdQlmPLlICWHmsUzg w7_z2SU/edit?usp=drive_link

Dunn, C., Rabren, K., Taylor, C., & Dotson, V. (2012). Assisting students with high-incidence disabilities to pursue careers in science, technology, engineering, and mathematics. *Intervention in School and Clinic, 48*(1), 47–54. https://doi.org/10.1177/1053451212443151

Dunn, C., Rabren, K., Taylor, C., & Dotson, V. (2014). *Transitioning and preparing learners with special needs into STEM careers*. https://www.researchgate.net/publication/297374885_Transitioning_and_preparing_learn ers_with_special_needs_into_STEM_careers

Gregg, N., Wolfe, G., Jones, S., Todd, R., & Moon, N. (2016). Virtual mentoring and persistence in STEM for students with disabilities. *Career Development and Transition*

for Exceptional Individuals, 40(4), 205–214. https://doi.org/10.1177/2165143416651717

Hernandez, P. R., Agocha, V. B., Carney, L. M., Estrada, M., Lee, S. Y., Loomis, D., Williams, M., & Park, C. L. (2020). Testing models of reciprocal relations between social influence and integration in STEM across the college years. *PLOS ONE, 15*(9), e0238250. https://doi.org/10.1371/journal.pone.0238250

Hodges, J. S., & Keller, M. J. (1999). Perceived influences on social integration by students with physical disabilities. *Journal of College Student Development*, *40*(6), 678–686. https://eric.ed.gov/?id=EJ614291

Huber, K. A., DeBacker, T. K., Klammer, C. C., & Gonzalez, L. R. (2022). Correlates of peer classroom connectedness among undergraduate women in STEM. *Journal of Research in Science Teaching, 60*(6). https://doi.org/10.1002/tea.21833

Kaley, A., Donnelly, J. P., Donnelly, L., Humphrey, S., Reilly, S., & Macpherson, H. (2022). Researching belonging with people with learning disabilities. *British Journal of Learning Disabilities, 50*(3), 307–320. https://doi.org/10.1111/bld.12394

Kaufman, T., Ziegler, L., Subramaniam, A., Hahn, R., & Mastin, H. (2024, September 30). *Autistic advocacy in higher education*. [Canva slides]. https://www.canva.com/design/DAFv2tIyg7s/Hg-vllbXa-0OqmgOIjYZww/edit

Kreider, C. M., Medina, S., & Slamka, M. R. (2018). Beyond academics: A model for simultaneously advancing campus-based supports for learning disabilities, STEM students' skills for self-regulation, and mentors' knowledge for co-regulating and guiding. *Frontiers in Psychology, 9*, 1466. https://doi.org/10.3389/fpsyg.2018.01466

Lee, A. (2010). A comparison of postsecondary science, technology, engineering, and mathematics (STEM) enrollment for students with and without disabilities. *Career Development for Exceptional Individuals, 34*(2), 72–82. https://doi.org/10.1177/0885728810386591

Lenz, B. (2019). *Opportunities in STEM! Opportunities tracker example* [Spreadsheet]. Google Docs. https://docs.google.com/spreadsheets/d/1yvP9qaNjX5O6rO6Of7aKv0o7HB63MNuo6aa kLuCqR10/edit?usp=sharing

Locke, S., Rodrigues, J., & Mirielli, L. G. (2024). STEM role models for students with disabilities: A systematic review highlighting recommendations for the classroom and future research. *School Science and Mathematics, 125*(1), 48–61. https://doi.org/10.1111/ssm.12643

Magill, L., Jenkins, A., Carter, E., Greiner, S., Bell, L., & Lynne, K. (2013). *Promoting self-determination among students with disabilities: A guide for Tennessee educators* (pp. 1–14). Vanderbilt University, Tennessee Department of Education. https://vkc.vumc.org/assets/files/resources/psiSelfdetermination.pdf

Moon, N. W., Todd, R. L., Morton, D. L., & Ivey, E. (2012). *Accommodating students with disabilities in science, technology, engineering, and mathematics (STEM): Findings from research and practice for middle grades through university education*. Center for Assistive Technology and Environmental Access. https://hourofcode.com/files/accommodating-students-with-disabilities.pdf

Pfeifer, M. A., Reiter, E. M., Hendrickson, M., & Stanton, J. D. (2020). Speaking up: A model of self-advocacy for STEM undergraduates with ADHD and/or specific learning

disabilities. *International Journal of STEM Education*, *7*(1). https://doi.org/10.1186/s40594-020-00233-4

Powers, L. E., Gil-Kashiwabara, E., Geenen, S. J., Powers, J., Balandran, J., & Palmer, S. (2014). Qualitative investigation of the influence of STEM mentors on youth with disabilities. *Career Development and Transition for Exceptional Individuals, 38*(1), 25–38. https://doi.org/10.1177/2165143413518234

Schearer, E., Reinthal, A., & Jackson, D. (2022). Physically disabled students in summer undergraduate research Environments. *IEEE Transactions on Education*, *65*(2), 156–166. https://doi.org./10.1109/TE.2021.3101401

Shepler, D. K., & Woosley, S. A. (2012). Understanding the early integration experiences of college students with disabilities. *Journal of Postsecondary Education and Disability, 25*(1), 37–50. https://files.eric.ed.gov/fulltext/EJ970018.pdf

Sowers, J.-A., Powers, L. E., Gil-Kashiwabara, E., Geenen, S., Palmer, S. B., & Swank, P. (2016). A randomized trial of a science, technology, engineering, and mathematics mentoring program. *Career Development and Transition for Exceptional Individuals, 40*(4), 196–204. https://doi.org/10.1177/2165143416633426

TAPDINTO-STEM Alliance. (2022). *Faculty Mentor Cluster Manual*. NSF INCLUDES Alliance. https://tapdintostem.org/faculty-mentor-cluster-manual/

Thompson-Ebanks, V. (2014). Personal factors that influence the voluntary withdrawal of undergraduates with disabilities. *Journal of Postsecondary Education and Disability, 27*(2), 195–207.

Thurston, L. P., Johnson, N., Ashburn-Nardo, L., Aguilar, C., & Zhi, Q. (2024). *NSF Eddie Bernice Johnson INCLUDES TAPDINTO-STEM Alliance: Year 4 annual evaluation report*. NSF INCLUDES TAPDINTO-STEM Alliance.

Web, C. (2025). *Student Advocacy*. Center for Student Support and Care. https://supportandcare.nd.edu/for-students/current-students/education-and-outreach-resources/student-advocacy/

Table 1: Criteria Inclusion: Creating Inclusive Campuses: The Impact of Disability Student Advocacy Clubs

Study	Focus on Advocacy Clubs, Mentoring, or Social Integration for SWDs	Focus on STEM, or applicable to STEM fields	Included	Notes *studies are included if they are applicable to either criteria
Batty & Reilly (2022)	Yes	Yes	Yes	Focused on identifying barriers in STEM labs for SWDs and promoting inclusive curriculum strategies; applicable to social integration in STEM.
Boutakidis et al. (2024)	No (applicable)	No (applicable)	Yes	Focused on peer mentoring in general undergraduate populations for underrepresented groups (applicable to SWDs), applicable to STEM fields
Donnelly et al. (2022)	Yes	No (applicable)	Yes	Focused on advocacy clubs and social integration strategies; applicable to STEM programs.
Dunn et al. (2012)	Yes	Yes	Yes	Focused on assisting SWDs with high-incidence disabilities to pursue STEM careers; includes mentoring and support strategies.
Dunn et al. (2014)	Yes	Yes	Yes	Focused on transition strategies and preparing SWDs for STEM careers; applicable as social integration support.

Resources

Club Startup Guide

Bridge Mentoring Handbook

Conference Proceedings

Building Disability Knowledge Through Community-Based Internships and Service-Learning Programs: A Panel Discussion

Kelle Murphy[1], A. Josephine Blagrave[2], Alex Stribing[3]

[1] University of Hawai‘i at Mānoa

[2] California State University, Chico

[3] Kean University, New Jersey

Abstract

The purpose of the panel discussion was to provide a forum for participants to engage in a thoughtful discussion on community-based physical activity programs being offered for disabled individuals in their communities. Representatives from California State University at Chico, Kean University, and University of Hawai'i at Mānoa shared their programs.

Keywords: Community-based, physical activity, internships, service-learning.

Building Disability Knowledge Through Community-Based Internships and Service- Learning Programs

Service-learning experiences and community-based Adapted Physical Education (APE) internships have long been considered critical to the learning experiences of teacher candidates in Physical Education Teacher Education (PETE) and APE in teacher licensure programs across higher education institutions. Typically, these experiences are the final requirements prior to successful program completion. The value of real-life experiences for teacher candidates is undeniable (Bragg Thompson, 2025) and disabled individuals share that this is a valuable experience for them as well (Bragg Thompson, 2025; SHAPE, 2016)

There is a distinction between service-learning and community-based programs. Service-learning programs integrate community service with structured learning experiences, allowing participants to apply their skills and knowledge to real-world issues while developing personally and professionally (Bragg Thompson, 2025). These programs emphasize reciprocal benefits, both for the participants and the communities they serve. Community-based APE programs are designed to provide physical education and recreational opportunities for disabled individuals in community settings, rather than just within schools (SHAPE, 2016). These programs aim to promote lifelong physical activity, social engagement, and independence by incorporating activities that individuals can access outside of school (SHAPE, 2016).

The purpose of the panel discussion was to provide an opportunity for audience members to learn about what service-learning experiences and community-based APE programs are being offered by the panel members at their institutions and to provide ideas for audience members to create programs in their geographical areas in addition to programs that are already being offered.

2025 Pacific Rim Conference

The 40th annual Pacific Rim International Conference on Disability was held on April 15th and 16th, 2025 at the Hawai'i Convention Center in Honolulu, HI. The conference is offered through the Center on Disability Studies at the University of Hawai'i at Mānoa. The theme of the conference was "By Us and For Us: Legacy and Future of Our Movement," in celebration of 40 years of hosting the Pac Rim conference. This panel discussion which took place April 16 was intended to present programs being offered in PETE and APE at three higher education institutions and have audience discussion on programs being offered in their geographical areas.

The panel learning outcomes included:

1. Understand how current university students could support current or potential programs
2. Identify potential regional needs for disabled individuals
3. Identify strategies for their organizations to partner with higher education institutions.

Initially, each representative from the three different higher education institutions: California State University at Chico; Kean University; and University of Hawai'i at Mānoa shared their community-based internships, community-based internships beyond student teaching; and service-learning experiences being offered to students at their respective

institutions.

California State University at Chico

Disabled students are historically underserved in rural areas, where resources are limited and families and disabled adults must travel greater distances to access programs and resources McCabe & Ruppar, 2023). Chico State has a long history of providing adapted sports and modified PA activities to the greater north state through a variety of programs serving a range of disabled stakeholders while simultaneously actively training future professionals and educators across a variety of disciplines including kinesiology, child development, special education, recreation, communication science and disorders, psychology, nursing and exercise physiology.

Chico State Autism Clinic

This program provides 1:1 motor skill acquisition practice for autistic children in a sensory rich environment. Rooted in a child centered approach, children attend one time a week for 50 minutes to work on individualized skills to help them be physically active for life. This program also provides 3 teen group programs for participants who would like to improve their social skills in group games and physical fitness settings. This program currently serves over 50 families from the community and provides internships for 20 students each semester.

BEWEL 1

Beyond Exercise Wellness Enhancement for Life 1 (BEWEL 1) provides support for modified physical activity experiences for adults with physical disabilities from the community. These participants, ranging in age from 30-87 are referred from local hospitals and outpatient programs to continue their rehabilitation in a supported environment. Students from kinesiology and various other health programs on campus support modified stretching, weight training, walking, cycling and yoga activities in a supervised and supportive environment two days a week for 50 minutes. This program currently serves 35 community members and provides service learning to 50 plus students.

BEWEL 2

Beyond Exercise Wellness Enhancement for Life 2 (BEWEL 2) provides modified sports activities for local high school students as well as adults in supported day programs who come to the university two times per week. This program provides both group and individualized activities centered around weekly themes including striking, movement patterns, throwing and catching, kicking and receiving, volleying and target games and sports. This program serves approximately 50 community members weekly and provides service-learning opportunities to 25 students weekly.

Chico State Adapted Sports Day

This is our program's largest event, providing a one-day event where students with low incidence disability from 15 rural counties participate in wheelchair basketball, wheelchair rugby, rock climbing, goal ball, track and field events, bowling, and soccer. There are also several sensory activities for participants to engage in. This program is a close partnership with local school districts, the Northern California Adapted Physical Education Consortium,

Corning High School, and Chico State, with the high school and university providing 1:1 of volunteers to participants for the duration of the event.

These programs are strengthened further by our partnerships both on and off campus. On campus, these partnerships include the College of Communication and Education, the Mechatronics Department, Department of Child Development, College of Behavioral and Social Sciences, the Accessibility Resource Center, the Neurodiversity and Disability Faculty and Staff Association and the Neurodiversity and Disability Student Club. Off campus and in the broader region, partnerships and support include Ability First Sports, Far Northern Regional Center, regional community colleges and high schools, and Butte County Office of Education.

Kean University

APE and Adapted Physical Activity programs are essential in creating inclusive opportunities for disabled youth. Participation in structured physical activity has been shown to improve not only physical health but also social, emotional, and cognitive development (Block, 2016; Lieberman & Houston-Wilson, 2018). Kean University has developed several innovative programs, including the Cougars Learning Important Motor Behaviors (C.L.I.M.B.) APE Program, Camp Abilities at the Toms River Field of Dreams, and Kean Unified Sports. These initiatives serve as exemplary models of how higher education institutions can foster community partnerships, promote inclusion, and prepare future professionals in the field.

Cougars Learning Important Motor Behaviors (C.L.I.M.B.) Adapted Physical Education Program

The Cougars C.L.I.M.B. APE Program is a seven-week program designed for disabled children and adolescents, ages 5–21. Since its inception in 2022, the program has served more

than 150 families in Union and Toms River, NJ. C.L.I.M.B. not only provides direct benefits for participating athletes but also prepares undergraduate and graduate students at Kean University for careers in physical education, APE, special education, and related fields. Students enrolled in APE coursework, internships, and teacher preparation programs gain practical experience working one-on-one with youth. Research demonstrates that service-learning in APE enhances preservice teachers' confidence, attitudes, and instructional skills (Kalyvas & Reid, 2003; Haegele & Zhu, 2017).

Key collaborations have strengthened the program, including partnerships with other Kean University departments, local school districts, and the Toms River Field of Dreams, a fully accessible recreational facility. These partnerships exemplify best practices in community-engaged scholarship.

Camp Abilities Kean University

Camp Abilities Kean University held at the RWJBarnabas Toms River Field of Dreams is an educational sports camp for blind and low vision youth, ages 7–21. The program has served more than 30 families and trained over 60 future professionals since its founding. Camp Abilities offers youth the chance to learn fundamental and advanced sport skills, fostering independence, confidence, and physical fitness (Lieberman, Lepore, & Haegele, 2020).

Volunteers and professionals from diverse fields, including physical education, APE, special education, occupational therapy, and physical therapy, contribute to the multidisciplinary support system at camp. Partnerships with Shore Orientation & Mobility, the NJ Commission for the Blind, the Toms River Field of Dreams, local food vendors, and Hammer Surf School provide campers with access to a wide range of adapted sporting experiences, including track and field, blind soccer, blind tennis, and surfing.

The importance of programs such as Camp Abilities is well documented: low vision children often face barriers to participation in physical activity, including limited access to programs, trained professionals, and accessible facilities (Haegele & Porretta, 2015). Camp Abilities directly addresses these disparities.

Kean Unified Sports

Kean Unified Sports is conducted in collaboration with Special Olympics New Jersey, providing opportunities for disabled and nondisabled athletes training and competing together. Current offerings include basketball in the spring and soccer in the fall, with past activities including volleyball, taekwondo, and esports. Participation typically involves 35–45 athletes and partners each season.

Unified Sports is grounded in the principle of social inclusion through shared sports experiences, fostering respect, friendship, and community integration (Special Olympics, 2021). By participating in Unified Sports, Kean students gain practical experience in coaching, inclusive instruction, and leadership while promoting campus and community engagement.

University of Hawai'i at Mānoa

Wellness is critical to overall well-being for all individuals and can be even more important for disabled individuals as it offers opportunities to not only engage in physical activities but also to socialize with peers that they may not have otherwise. Dr. Kelle Murphy who teaches in Disability Studies Program offered through the Center on Disability Studies at the University of Hawai'i at Mānoa created her Wellness Matters Programs to offer opportunities I/DD community, their caregivers and family members to spend quality time together enjoying physical activity and activities related to wellness. The Wellness Matters programs consist of three separate programs:

Inclusive First Aid/CPR/AED

About 65% of Americans receive CPR certification; however, only about 18% maintain the certification. The statistics are even less for certification for disabled individuals. Twenty-six percent of Americans are living with a disability. These statistics demonstrate the need for disabled individuals, caregivers, and family members to have the opportunity to become certified. This program was developed to address this need and is open to the I/DD community, caregivers, and family members. The ability to identify and respond to various health issues, provide proper First Aid and how to perform CPR/AED are integral components of health and wellness. Participants learn how to assess the scene for safety, appropriate CPR and First Aid based on the assessment, how to address choking, and other health-related, injury-related, and environmental- related situations. Classes offered each semester in evenings two days a week: Day 1- First Aid and Day 2- CPR/AED. Upon successful completion, participants receive American Heart Association certification. Modifications are made and a culturally relevant curriculum is presented. Since program inception in 2022, over 100 community members have completed the training and received AHA certification.

Swim Safe: ASD Program

Drowning is among the leading causes of death for Autistic individuals and accounts for 91% of the US total. Autistic individuals are attracted to water because it is calming and peaceful. Approximately 48% of Autistic people elope/wander. When they do this, they may wander towards a body of water and will want to jump in to feel the calming effects. This program was developed to address these alarming statistics and is open to Autistic people ages 4 to adult and their parents/guardians, family members, or relatives who serve as the instructor. Participants learn basic swimming skills and safety skills. Classes offered once a week for 10

weeks at two locations: University of Hawai'i at Mānoa and Salvation Army Kroc Center, Kapolei and are offered throughout the year. Three 30-min lessons are offered to 5 families per lesson. Since its inception in 2017, over 300 families have participated.

Wellness Matters Physical Activity Program

Less than 45% of individuals with a mobility disability engage in physical activity and approximately 40% of disabled individuals in the U.S. experience social isolation. This program was developed to provide opportunities to address these statistics and is open to the I/DD community ages 14 to adult, caregivers, family members, and coaches. Participants are offered the opportunity to engage in popular lifetime activities, Paralympic activities, and adapted physical activities. Classes are offered: Once a week for 10 weeks for 1 hour in the evenings. This is a newer program and to date, over 25 families have participated in various activities offered.

Small Group Discussions

After presenting each program, the audience was divided into three groups and each presenter led a small group discussion guided by the following questions:

1. What are the potential needs in your region for disabled individuals?
2. How can your university students support current or potential programs?
3. Support each other with brainstorming strategies for organizations to partner with higher education institutions.

Themes from Discussions

Capacity Building Challenges and Successes

During the small group discussions, several overarching themes emerged related to the needs of disabled individuals and the role higher education institutions could play in supporting community programs. A central theme was the challenge of capacity building, with many participants noting long waitlists for services and the pressing need for more programming opportunities. Staffing shortages were highlighted as one of the most significant barriers to expanding or sustaining services, with organizations struggling to recruit and retain qualified personnel. These challenges were compounded by difficulties in maintaining consistent volunteer engagement, particularly in regions with fewer available resources.

Service Cliff

Another major theme centered on the lack of adult and transition-age programming. Participants emphasized the "services cliff" that occurs once individuals exit school-based programs, leaving many families without adequate support for adulthood. This gap in the lifespan of services underscores the need for more intentional programming for adults and young adults with disabilities, as well as stronger continuity of care throughout different life stages. These comments are supported by current research highlighting the importance of policies having mechanisms and action plans in place to promote inclusivity and accessibility regarding education and health for disabled young adults and their families (Zukerman et al., 2024).

Lack of Resources and Time to Plan

Networking and collaboration were additional areas of concern. Participants described difficulties in connecting with other organizations and with universities due to time constraints and competing priorities. The development of coordinated referral systems, resource sharing, and regular networking opportunities were suggested as a way to improve collaboration and reduce duplication of efforts. The issue of funding and resources also emerged as a critical theme. Many organizations operate under tight budgets and rely heavily on grants or short-term funding cycles, which can threaten long-term sustainability. With the current administration in the United States, funded grants continue to be under scrutiny with funding dollars in jeopardy. Additionally, allocations continue to shrink, making an already strained system stretched beyond capacity. Participants expressed the need for creative funding strategies, shared resource models, and partnerships that could stretch limited dollars further but there did not seem to be solutions, only condolences that could be shared.

Rural vs Urban Programming

Finally, discussions highlighted the geographic inequities in service provision. Participants from rural areas described significant challenges related to program availability. In contrast, those in urban settings acknowledged that while more programs were available, demand was so high that lengthy waitlists remained a persistent barrier. For families, these wait times exacerbated stress and led to missed developmental windows for timely intervention. Such concerns also align with current research findings that point to both the shortage of rural services and the overburdening of urban systems (Lindsay et al., 2025). Taken together, these disparities reinforced the importance of tailoring solutions to local contexts—whether that

means expanding telehealth options for rural areas, investing in workforce development to reduce wait times in cities, or building more flexible hybrid service models that can adapt to community-specific needs.

Conclusion

In conclusion, the panel underscored the important role of service-learning and community-based APE programs in advancing both teacher preparation and opportunities for disabled individuals. Across the three universities represented, programs demonstrated the mutual benefits of experiential learning: teacher candidates gained confidence, competence, and professional readiness, while disabled individuals and their families accessed meaningful opportunities for physical activity, social connection, and wellness. Participant discussions revealed pressing challenges—such as capacity limitations, staffing shortages, funding instability, and the "service cliff" that leaves many transition-age youth and adults without adequate programming—while also highlighting the need for innovation and collaboration. Geographic inequities further complicate these challenges, with rural families facing accessibility barriers and urban families burdened by long waitlists, reinforcing that one-size-fits-all solutions are inadequate. Instead, sustainable progress depends on tailoring programs to local contexts, building strong partnerships across higher education, community organizations, and healthcare providers, and advocating for stable funding structures to support long-term impact. Moving forward, intentional efforts to expand capacity, strengthen partnerships, and address systemic inequities will be essential for ensuring that service-learning and community-based APE/physical activity programs continue to thrive and serve as models of inclusive, community-engaged practice.

References

Block, M. E. (2016). *A teacher's guide to adapted physical education: Including students with disabilities in sports and recreation* (4th ed.). Paul H. Brookes Publishing.

Bragg Thompson, C. (2025, February 10). The impact of Service Learning. ACTE FEATURES. https://www.acteonline.org/blog/2025/02/10/the-impact-of-service-learning/#:~:text=It%20fosters%20personal%20and%20academic%20growth%2C%20instills,a%20more%20engaged%20and%20socially%20responsible%20citizenry.

Haegele, J. A., & Porretta, D. L. (2015). Physical activity and school-age individuals with visual impairments: A literature review. *Adapted Physical Activity Quarterly, 32*(1), 68–82. https://doi.org/10.1123/apaq.2013-0110

Haegele, J. A., & Zhu, X. (2017). Experiences of adapted physical education teachers at the secondary level. *Physical Education and Sport Pedagogy, 22*(5), 490–505. https://doi.org/10.1080/17408989.2016.1241228

Kalyvas, V., & Reid, G. (2003). Sport adaptation, participation, and enjoyment of students with and without physical disabilities. *Adapted Physical Activity Quarterly, 20*(2), 182–199. https://doi.org/10.1123/apaq.20.2.182

Lieberman, L. J., & Houston-Wilson, C. (2018). *Strategies for inclusion: Physical education for everyone* (3rd ed.). Human Kinetics.

Lieberman, L. J., Lepore, M., & Haegele, J. A. (2020). *Physical education and sports for people with visual impairments and deafblindness: Foundations of instruction*. American Printing House for the Blind.

Lindsay, S., Abdeahad, N., Leo, S., & Phonepraseuth, J. (2025). Disability and rurality: a

systematic review of qualitative studies of experiences with disability among families with children and youth with disabilities. *Disability and Rehabilitation*, 1-24. https://doi.org/10.1080/09638288.2025.2525545

McCabe, K. M., & Ruppar, A. L. (2023). Rural Inclusive Education for Students with Disabilities in the United States: A Narrative Review of Research. *Rural Educator*, *44*(1), 40-55. https://doi.org/10.55533/2643-9662.1361

Society of Health and Physical Educators. (2016). Providing community-based physical education services for students with disabilities in special-education transition programs [Guidance document]. Reston, VA: Author.

Special Olympics. (2021). Unified sports. Special Olympics. https://www.specialolympics.org/our-work/unified-sports

Zukerman, N., Bottone, E., Low, M., & Ogourtsova, T. (2024). Resilience and adolescence-transition in youth with developmental disabilities and their families: a scoping review. *Frontiers in rehabilitation sciences*, *5*, 1341740. https://doi.org/10.3389/fresc.2024.1341740

Notes from the Field

Selected Posters and Recorded Sessions

Raphael Raphael,

Center on Disability Studies, University of Hawai‘i at Mānoa

Abstract

This notice provides select listings of posters and recorded sessions presented at the 40th Annual Pacific Rim International Conference on Disability and Diversity in Honolulu, Hawaii.

Keywords: disability, conference, posters, recorded sessions

Selected Posters and Recorded Sessions

The following listed selections represent some of the diversity of posters and recorded sessions shared at the 40th Annual Pacific Rim International Conference on Disability and Diversity in Spring 2025. (Note: not all fields available for all listings.)

Accessibility at Pearl Harbor National Park Using Wayfinding Tools and Audio Descriptions for Visitors with Visual Impairments

Type: Poster

Strand: Disaster Resilience & Built Environments

Name: Dr. Amy Parker

Affiliation: Portland State University

Other Contributors:

Dr. Brett Oppegaard, University of Hawaii, Manoa

Haruka Hopper, Hawaii Department of Education

Hazelle Magaoay-Baniaga, Portland State University

Kira Swearingen, Portland State University

Mary-Clare Cable, Portland State University

Leah Neumann, Portland State University

Abstract: Audio Description, tactile objects, and memorial sites are often studied separately for their communicative and emotive potential without consideration of potential multimodal connections existing among people, technologies, and solemn public places. This study's novel mixed-methods approach uses site tours, surveys, think-aloud protocol, semi-structured interviews, and observations to develop rich and holistic understandings of such site visits at Pearl Harbor National Memorial in Hawai'i by people who are DeafBlind, blind, or with low-vision.

Pearl Harbor National Memorial. Several themes emerged in the grounded empirical data gathered during the tour, afterward, and during an interview one month later, including findings that bridged emotions, inclusion, and place-based narratives.

Keywords: Audio description, memorial, orientation & mobility, tactile map, wayfinding tools

College and Career Readiness for Students with Disabilities

Type: Poster

Strand: Employment

Name: Melinda R. Pierson, Ph.D.

Affiliation: California State University, Fullerton

Other Contributors: N/A

Abstract: Students with disabilities may need additional support and encouragement when focusing on the future in applying for college or the career of their choice. The goal of many educators and parents is to support all students with their future goals and determine steps to support their journey toward self-sufficiency. This study focused on strengths-based training for preschool-12th grade students with disabilities using the Holland Code which designates the RIASEC as its basis for strength identification.

Allowing students to determine which three strengths they claim can further their pathway toward a positive career choice or college major where they would be most successful. The RIASEC letters allow the focus to be on a student's strengths, abilities, and interests regardless of their disability.

The RIASEC letters are:

Realistic – doer – trades like a mechanic, carpenter, or welder

Investigative – thinker – fields like technology, research, or science

Artistic – creator – jobs in design, music, or fine arts

Social – helper – jobs as a healthcare worker, teacher, or first responder

Enterprising – persuader – jobs in business, leadership, or sales

Conventional – organizer – jobs as a computer programmer, office coordinator, or accountant

The researcher supported students with disabilities in 8 schools in Orange County, California in the 2024-2025 schoolyear and worked with teachers to incorporate the RIASEC letters throughout their instruction in every subject. Students reported that they loved learning how to identify their strengths and how to be a strong self-advocate for realistic college and career options based on their skills and interests.

Keywords: college readiness, career readiness, self-advocacy, strengths-based instruction

Teacher Training in Haiti – Supporting Students with Disabilities in Developing Countries

Type: Poster

Strand: Disaster Resilience & Built Environments

Name: Melinda R. Pierson, Ph.D.

Affiliation: California State University, Fullerton

Other Contributors: N/A

Abstract: Teachers in Haiti and other developing countries have had extremely limited instruction on effective teaching practices and there is little research in the development of teacher training curriculum especially regarding supporting students with disabilities. This presentation will share one model of teacher training in a developing country focused on literacy, behavior, and overall classroom environment with teacher outcomes over a ten-year period highlighted.

A partnership with a university professor and orphanage schools will be discussed as well as practical ways to support teachers with a focus on challenges that are present when teaching in

such harsh conditions. More than 40 teacher candidates at a large university have joined their professor on multiple study abroad trips to Haiti to work in these orphanage schools. Recent trips to India, Kenya, and Mexico will also be compared to the long-term benefits of the work in Haiti.

Overall goals for professional development for the teachers in Haiti include the following: supporting teachers in developing countries in the areas of literacy, behavior, and overall classroom environment; collaborating with individuals to develop best practices and reflective practices around teaching in general; and learning how to support and strengthen the rights of children around the world to be educated and to develop programs that enable them to grow into productive citizens. The focus on students with disabilities is significant as there is a higher percentage of students with disabilities present in the schools; thus, teachers need specific strategies on how to work to support all students.

Keywords: developing countries, poverty, orphanage schools, disaster

Healthcare Engagement During the Perinatal Period Among New Mothers with Disabilities: A Secondary Data Analysis

Type: Poster

Strand: Health Justice and Equity

Name: Siobhan Coad, MSW

Affiliation: University of Hawaii at Manoa, Thompson School of Social Work & Public Health

Other Contributors: N/A

Abstract: This study examines the relationship between disability and healthcare engagement during the perinatal period among new mothers in the United States using data from the Pregnancy Risk Assessment Monitoring System (PRAMS). Disability was significantly associated

with delayed prenatal care initiation, and mothers with disabilities had a lower prevalence of attending postpartum visits. These findings highlight the need for disaggregated data analyses by disability type to capture the variety of experiences within the disability community. Tailored interventions are essential to ensure equitable access to perinatal care for all mothers.

Keywords: healthcare, perinatal, mothers with disabilities

Community integration interventions for individuals with intellectual and developmental disabilities: A systematic review

Type: Poster

Strand: Neurodiversity

Name: Mila Jimenez, OTR/L

Affiliation: New York University

Other Contributors: N/A

Abstract: Introduction: A scarcity of community support services for individuals with intellectual and developmental disabilities (I/DD) has been associated with decreased levels of community participation. Decreased participation gives rise to adverse effects on life-satisfaction and quality of life (QoL); thus community integration interventions are applied to foster efficacy in one's leisure, employment, or domestic endeavors. Objectives: The purpose of the systematic review is to examine the effectiveness of community integration interventions for increasing QoL for individuals with I/DD. Methods: A thorough search in Pubmed, Psychinfo, and CINAHL examined quantitative studies involving community integration interventions published between 2007 and 2023. The search identified 2,131 relevant studies and resulted in 12 studies that had sufficient methodological quality.

The 12 studies were critically appraised and evaluated to assess the level and strength of evidence of community integration interventions involving employment, leisure, and activities of daily living (ADL) management. Results: Studies' results demonstrated improvements in QoL outcomes, however, a moderate level of evidence was found for community integration interventions in employment and leisure-based settings, while a low level of evidence was found for ADL management interventions. Conclusion: Low to moderate levels of evidence were found to support community integration interventions for individuals with I/DD. Thus, current literature is limited, and further research is urgently warranted as more individuals with I/DD are ingrained into the community.

Keywords: neurodiversity, intellectual disability, community integration, occupational therapy

Collaborative Assistive Technology Services Using 3D Printing in a Developing Country

Type: Poster

Strand: Technology

Name: Takashi Watanabe

Affiliation: Nihon Fukushi University

Other Contributors: Sano Mitsuhiko, Kobe Gakuin University

Abstract: Assistive technology services (ATS) must be conducted as an outreach to the user's community as the situation demands. Occasionally, ATS depends on the various social resources of the regional community or the experience and knowledge of individuals. Hence, in developing countries that are geographically difficult to access or lack the ATS resources, the crucial processes of ATS are limited or unavailable. Some of the Pacific’s locales might have a similar situation. These problems could lead to a regional gap in well-being, owing to the loss of an opportunity to try out assistive devices.

To bridge the inter-regional gap in ATS and enable individuals with disabilities to obtain useful assistive devices, we are conducting a “3D Printing Project” with the Centre for the Rehabilitation of the Paralysed (CRP) in Bangladesh.

Two programs are currently conducted in collaboration with the Occupational Therapy Department and the Inclusive Education School in the CRP. One program conducts on-site workshops to learn the effective use of 3D printers, and online meetings for follow-ups and to exchange information regularly. Another program involves outreach activities to provide self-help devices for children with disabilities in the CRP school. We conduct consultations in the classrooms while observing their conditions on-site and attempt to implement the selection or design of suitable devices for individuals using 3D printing technology.

The next challenge is to tackle the issues of 3D printing arising from the local infrastructure and climate, and to build a sustainable system.

Keywords: assistive technology, rehabilitation, community welfare, special needs education, international collaboration

Collaborative Assistive Technology Services Using 3D Printing in a Developing Country

Type: Poster

Strand: Technology

Name: Takashi Watanabe

Affiliation: Nihon Fukushi University

Other Contributors: Mitsuhiko Sano, Kobe Gakuin University

Abstract: Assistive technology services (ATS) must be conducted as an outreach to the user's community as the situation demands. Occasionally, ATS depends on the various social resources of the regional community or the experience and knowledge of individuals. Hence, in developing countries that are geographically difficult to access or lack the ATS resources, the crucial processes of ATS are limited or unavailable. Some of the Pacific's locales might have a similar situation. These problems could lead to a regional gap in well-being, owing to the loss of an opportunity to try out assistive devices.

To bridge the inter-regional gap in ATS and enable individuals with disabilities to obtain useful assistive devices, we are conducting a "3D Printing Project" with the Centre for the Rehabilitation of the Paralysed (CRP) in Bangladesh.

Two programs are currently conducted in collaboration with the Occupational Therapy Department and the Inclusive Education School in the CRP. One program conducts on-site workshops to learn the effective use of 3D printers, and online meetings for follow-ups and to exchange information regularly. Another program involves outreach activities to provide self-help devices for children with disabilities in the CRP school. We conduct consultations in the classrooms while observing their conditions on-site and attempt to implement the selection or design of suitable devices for individuals using 3D printing technology.

The next challenge is to tackle the issues of 3D printing arising from the local infrastructure and climate, and to build a sustainable system.

Keywords: Assistive technology, rehabilitation, community welfare, special needs education, international collaboration

Thriving Together: Intentional Design and Well-Being in the Digital Age

Type: Recorded Presentation

Strand: Technology

Name: Naomi Rombaoa Tanaka

Affiliation: University of Hawaii at Manoa, Center on Disability Studies, Hawaii Positive Engagement Project

Other Contributors: N/A

Abstract: In today's rapidly evolving digital landscape, adult learners are seeking more than just information—they are striving for meaningful, well-being-centered learning experiences that empower them in both their personal and professional lives. This presentation, Thriving Together: Intentional Design and Well-Being in the Digital Age, explores how we can intentionally design online learning environments that foster not only engagement but also emotional and mental well-being. By leveraging openly available digital tools, we can create inclusive learning spaces that encourage adult learners to engage in learning content and thrive.

Drawing directly from the conference theme, By Us and For Us: Legacy and Future of Our Movement, this session delves into how we can build upon the legacy of inclusive adult education by adopting future-facing strategies. Through the lens of online well-being cohorts, we will share actionable approaches that empower adult learners to take control of their educational journeys, prioritize their mental health, and actively engage in digital learning communities.

This presentation directly aligns with the strand Empowering Inclusion: Tackling the Challenges and Promise of New Technologies. We will explore the key challenges of online learning and present solutions based on nearly a decade of hands-on experience. Our focus will be on three

critical lessons: 1) Adaptive work is essential for success, 2) High engagement is achievable in well-designed online retreats, and 3) A diverse blend of strategies is necessary to effectively enhance the online learning experience.

Keywords: intentional design, online professional development, wellbeing, online cohort

Recording URL: https://youtu.be/KX8URUxgSMc?si=idjAlaJ3YMA-h0KQ

Teaching AT, UD and Accessibility Toward Building a K20 STEM Pathway for Students with Disabilities: A Work in Progress Case Study

Type: Recorded Presentation

Strand: STEM Pathways

Name: Daniela Marghitu

Affiliation: Auburn University

Other Contributors: Maryam Bigonah, Sasikiran Reddy Nallapareddy, Vennela Akula , Nayanika Reddy RajolI, Aparana Pant, Sanjaya Poudel

Abstract: One of the goals of the Auburn University (AU) “Learning for Rural Alabama STEM Middle School Teachers in Machine Learning and Robotics” project is to develop a Professional Development Program for K12 middle school teachers focused on Assistive Technology (AT), Universal Design (UD) and Accessibility concepts and skills needed to design and develop accessible learning materials.

The current PDP pilot content is divided in five core modules. Its first pilot testing took place in AU RET Summer 2024 program and the iterative development and pilot testing will continue in

the 2024-2025 school year and AU RET Fall 2025 program:

A. Introduction to Disability
B. Introduction to Accessibility Legal and Technical Standards
C. Introduction to UD
D. Introduction to Computing and Software Engineering Built-in Accessibility
E. Introduction to Developing Accessible Documents

Inspired by the CRA workshop on "Accessible Technology for All," focused on framing the state of the art of AT, accessibility and UD, an "Assistive and Accessible Computing" course, for students from Computer Science and Software Engineering majors, focused on AT, UD and Accessibility concepts and skills needed to design and develop accessible and assistive computing systems, was developed with funds from SIGCSE Special Projects Grants. The course pilot content is divided into five core modules was pilot tested in Spring 2025 semester:

A. Introduction to Disability and Relevant Assistive Technology
B. Introduction to UD
C. Introduction to Accessibility in Computing and Software Engineering
D. Introduction to Accessible Web App Development
E. Semester Project Development

Keywords: disability studies, inclusive STEM education, accessibility

Recording URL: https://whova.com/portal/webapp/apric_202503/Agenda/4477263

Interprofessional Education on ASD and Intellectual Disabilities: Program Description and Evaluation of Project INTERACT

Type: Recorded Presentation

Strand: Low Incidence Disabilities

Name: Karena Cooper-Duffy, PhD.

Affiliation: Western Carolina University

Other Contributors: Johanna Price, PhD, CCC-SLP, Western Carolina University

Jon Campbell, PhD., Western Carolina University

Amy Rose, PhD, CCC-SLP, Western Carolina University

Billy Ogletree, PhD, CCC-SLP, Western Carolina University

Abstract: Project INTERprofessional Autism Collaborative Training (INTERACT) is an interprofessional education program designed to prepare graduate students in psychology, special education, and speech-language pathology to work with autistic individuals with intellectual disabilities and their families. The online coursework and team-based clinical experiences are described along with data. Sixty-six graduate students were prepared to assess, provide interventions, and implement interprofessional collaboration through five courses and clinical experiences with individuals with autism and their families. Each student was on a team that included a faculty advisor, a student from psychology, special education and speech and language pathology.

Content in the courses was shared with the students by the five Project INTERACT faculty with expertise in autism and moderate to severe intellectual disabilities, a panel of autistic adults, a panel of parents who have children with autism, and experts in the field of autism. Content was shared that addressed the inequalities related to identification of autistic individuals across cultures and gender. Strategies were explored to facilitate the effective assessment, instruction

and inclusion of autistic individuals in schools, employment and in the community. Students collaborated across disciplines to use strategies to enable autistic learners to develop effective communication skills, executive functioning with self-regulation learning, academic skills and daily living skills. Results included three rating scales completed at program entry, midpoint, and program exit. Participants developed knowledge and skills related to understanding, assessing, and supporting autistic children with intellectual disabilities and their families.

Keywords: Interprofessional collaboration, Autism, Intellectual Disabilities

Recording URL: https://youtu.be/3qfHEjRsJi0

Using the Teacher Rating and Assessment Instrument for Teachers of Students with Significant Disabilities (TRAIT-SD) to Facilitate Inclusion

Type: Recorded Presentation

Strand: Low Incidence Disabilities

Name: Karena Cooper-Duffy, PhD.

Affiliation: Western Carolina University

Other Contributors: David Westling, EdD. Western Carolina University, Professor Emeritus.

Abstract: The Teacher Rating and Assessment Instrument for Teachers of Students with Significant Disabilities (TRAIT-SD) is an evaluation instrument for teachers of students with significant disabilities based on 38 best practices in the field of special education. This instrument is a tool used to identify strengths and areas for development for teachers educating students with significant intellectual disabilities both in general education and special education classes. Historically teachers who educate students with extensive support needs have been evaluated with instruments that are used for general education teachers. The best practices that special education teachers need to implement correctly daily are not included in the general education evaluation instrument. As a result, they are rated on skills that they may not be using daily. Using

the incorrect instrument for special education teachers who educate students with extensive support needs can leave the teachers feeling ineffective and inefficient. During this time of significant teacher shortages in low incidence disabilities it is critical for us to support our teachers by identifying what they are doing well and acknowledging that as well as identifying what the teachers need to develop while also providing professional development. This instrument can give administrators and Exceptional Children directors a tool to provide special education teachers with effective feedback on their performance and support the teachers. Reliability and validity data are reported on this instrument.

Keywords: Teacher rating, severe disabilities, professional development

Recording URL: N/A

Do Speech Language Pathology Students have an Implicit Bias toward Person-First Language or Identify-First Language?

Type: Recorded Presentation

Strand: Health Justice and Equity

Name: Varun Uthappa A. G.

Affiliation: Eastern New Mexico University

Other Contributors: Priyanka Shailat, Eastern New Mexico University;

Rachel Lingnau, Eastern New Mexico University

Abstract: As part of culturally responsive service delivery, rehabilitation professionals must develop cultural humility and use appropriate disability language such that both person-first and identity-first language are acknowledged. Existing research based on self-reports shows explicit or conscious preference for person-first language among rehabilitation professionals. Explicit attitudes do not explain biases formed outside one's conscious awareness, referred to as implicit

bias. Extant research shows that service providers have implicit bias against disability as measured using the Implicit Association Test, but no test has examined implicit bias about disability language.

In this study, 22 speech language pathology graduate students took a customized Disability Language Implicit Association Test (DL IAT) for person-first and identity-first language associated with communication disabilities. They also completed a survey about lived experiences with disability and explicit preference for person-first or identity-first language. The DL-IAT results revealed a positive implicit attitude toward person-first language with a moderate effect size. Eighty-one percent of the participants preferred person-first language on the self-rating and 50% of them shared a strong preference for person-first language. Among 18 participants who preferred person-first language explicitly, 83% also showed a similar implicit bias. Three of the participants lived with disabilities. Two participants shared explicit and implicit biases toward person-first language, and one had no explicit preference but had an implicit bias toward identity-first language. The findings suggest that although person-first implicit and explicit preferences exist as a group, the role of individual factors are pertinent when considering attitudes toward disability language among rehabilitation service providers.

Keywords: implicit bias, person-first language, identity-first language, communication disabilities

Recording URL: https://liveenmu-my.sharepoint.com/:v:/g/personal/uthappav_ad_enet_enmu_edu/EfXp-jsYX25Du1IDV3OCvZUBYknuTDSQGGD0TKhAFIyfEw

Implicit Attitude toward Communication Disorders among Speech Language Pathology Graduate Students

Type: Recorded Presentation

Strand: Neurodiversity

Name: Varun Uthappa A. G.

Affiliation: Eastern New Mexico University

Other Contributors: Priyanka Shailat, Eastern New Mexico University;

Rachel Lingnau, Eastern New Mexico University

Abstract: Speech-language pathologists provide clinical services to individuals with communication disorders across the lifespan. In the clinical curriculum, speech-language pathology graduate students learn about cultural responsiveness pertaining to communication disorders which include identification and mitigation of biases toward communication disorders. While explicit or conscious preference toward communication disorders can be examined through self-reports, implicit or automatic biases are not easily determined. Stuttering research has shown a presence of negative implicit bias toward stuttering and its features in speech language pathologists, using an adaptation of the Implicit Association Test.

To learn about implicit attitudes associated with other communication disorders, a customized Communication Disorders Single Target Implicit Association Test (CDIS ST-IAT) was given to 21 speech language pathology graduate students. Twelve out of 21 participants exhibited a negative implicit bias toward communication disorders, however, there was no statistically significant bias in either direction as a group. The findings revealed varied implicit biases across participants. The participants also completed a survey about their lived experiences with disability and explicit belief toward communication disorders. Normalized scores on survey responses regarding explicit attitudes were compared with the CDIS ST-IAT scores revealing no relationship between explicit and implicit attitudes. Therefore, conscious and automatic biases toward communication

disorders may differ. Among three participants who lived with or identified as having a disability, two participants exhibited a minimal to moderate positive implicit bias. The study highlights the importance of recognizing implicit and explicit biases distinctly as well as considering individual lived experiences.

Keywords: implicit bias, communication disorders, speech language pathology, implicit association test

Recording URL: https://liveenmu-my.sharepoint.com/:v:/g/personal/uthappav_ad_enet_enmu_edu/EQfencg-e7ZKqHXUY0aEImIBgw7UYW59wPOGJGZeNch5Cg

Shaping Legacy and Futures: Addressing Social-Emotional Fatigue in Deaf and Hard of Hearing Students in Educational Contexts

Type: Recorded Presentation

Strand: Low Incidence Disabilities

Name: Natalia Rohatyn-Martin

Affiliation: MacEwan University

Other Contributors:

Denyse Hayward, University of Alberta;

Lynn McQuarrie, University of Alberta;

Sydney Dickner, University of Calgary;

Jerry Gan, University of Alberta;

Linda Cundy, University of Alberta;

Stephan Rohatyn, McLennan Community College

Abstract: Research on fatigue involving Deaf and Hard of Hearing (D/HH) students, has primarily focused on cognitive or physical fatigue dimensions. While researchers recognize the impact of fatigue on social-emotional well-being, it has often been overlooked as a distinct dimension of fatigue. Social-emotional fatigue refers to fatigue that arises from demanding social situations and emotional challenges. Distinguishing between various dimensions of fatigue—social-emotional, physical, and cognitive—helps to identify the specific challenges students face, thereby enabling better support for managing fatigue in educational settings.

In this presentation, we will discuss the findings of a thematic analysis of interviews conducted with D/HH post-secondary students, parents of D/HH students, and professionals working with D/HH students. Two major topics were used to structure the interviews to understand social-emotional fatigue in participants' experience: Fatigue Triggers and Fatigue Indicators. A series of semi-structured questions were posed to explore participants' understanding and experience of social-emotional fatigue. Parallel questions were asked in the parents, professionals, and students focus groups. A careful examination of interview transcripts was conducted, and multiple themes were identified.

Fatigue Triggers highlighted external and internal factors contributing to social-emotional fatigue, such as communication barriers and social isolation. Fatigue Indicators encompassed a range of emotional and behavioral indicators as well as a variety of coping mechanisms employed by D/HH individuals. Importantly, the interconnectedness of social and emotional factors in identifying and managing fatigue among D/HH learners was highlighted. By showcasing these findings, the presentation pursues inclusion in the areas of low incidence disabilities and advocates for a more inclusive approach to education, reflecting the conference's commitment to advancing the legacy

and future of movements for equity, diversity, and inclusion.

Keywords: Social-Emotional Fatigue, Deaf and Hard of Hearing, Indicators, Coping Strategies, Educational Support

Recording URL: https://drive.google.com/file/d/1JvEDDjbJ8-eCL4HooZPl7P401LTFvpuU/view

Dissertation & Abstracts v20i3

Sandra S. Oshiro

Center on Disability Studies, University of Hawai‘i at Mānoa

Abstract

The following is a selected list of recent dissertations and theses relevant to disability studies.

Keywords: disability, disability studies, dissertations

Almash, F. (2025). *The architecture of exclusion: Disability, race, and the history of New York City's 600 schools* [Doctoral dissertation, CUNY Graduate Center]. CUNY Academic Works. https://academicworks.cuny.edu/gc_etds/6461/

Harrison, D. A. (2025). *Deaf Black youth's narratives about identity and education* [Doctoral dissertation, The University of New Mexico]. UNM Digital Repository. https://digitalrepository.unm.edu/educ_llss_etds/178/

Murphy, Z. M. (2025). *Faculty attitudes toward online graduate students with disabilities* [Doctoral dissertation, National University]. ProQuest Dissertations & Theses Global. https://search.proquest.com/openview/951c04b98d6bb3989271ee259649bfd2/1?cbl=18750&diss=y&pq-origsite=gscholar

Nair, V. (2025). *Exploration for equivalent access to interactive digital media* [Doctoral dissertation, Columbia University]. Academic Commons. https://doi.org/10.7916/k8p4-v441

Rizvi, N. (2025). *Data-driven and participatory approaches toward neuro-inclusive AI* [Doctoral dissertation, University of California, San Diego]. eScholarship. https://escholarship.org/uc/item/60q8v898

Russell, S. M. (2025). *An assessment of the effects of indirect consultation in improving quality of life for adults with intellectual and developmental disabilities* (Doctoral dissertation, Coastal Carolina University). https://www.proquest.com/openview/78d0a4ba96cc7af262b72a3ac84f91d4/1?pq-origsite=gscholar&cbl=18750&diss=y

Vallah Gabaev, O. (2025). *(Dis)ability and the making of the early modern artist* [Doctoral dissertation, University of Washington]. ResearchWorks Archive. https://hdl.handle.net/1773/53290

Veitch, H. H. P. (2024). *Exploring the lived experiences of students with disabilities in South African higher education within the context of post-apartheid transformation* [Doctoral dissertation, Syracuse University]. SURFACE. https://surface.syr.edu/etd/2044/

Wang, P. (2025). *Accessibility of shared automated vehicles for visually impaired travelers* [Doctoral dissertation, University of California, Berkeley]. eScholarship. https://escholarship.org/uc/item/58w5v9x1

Compiled with help from ChatGPT 5 Thinking model (Oct. 29, 2025).