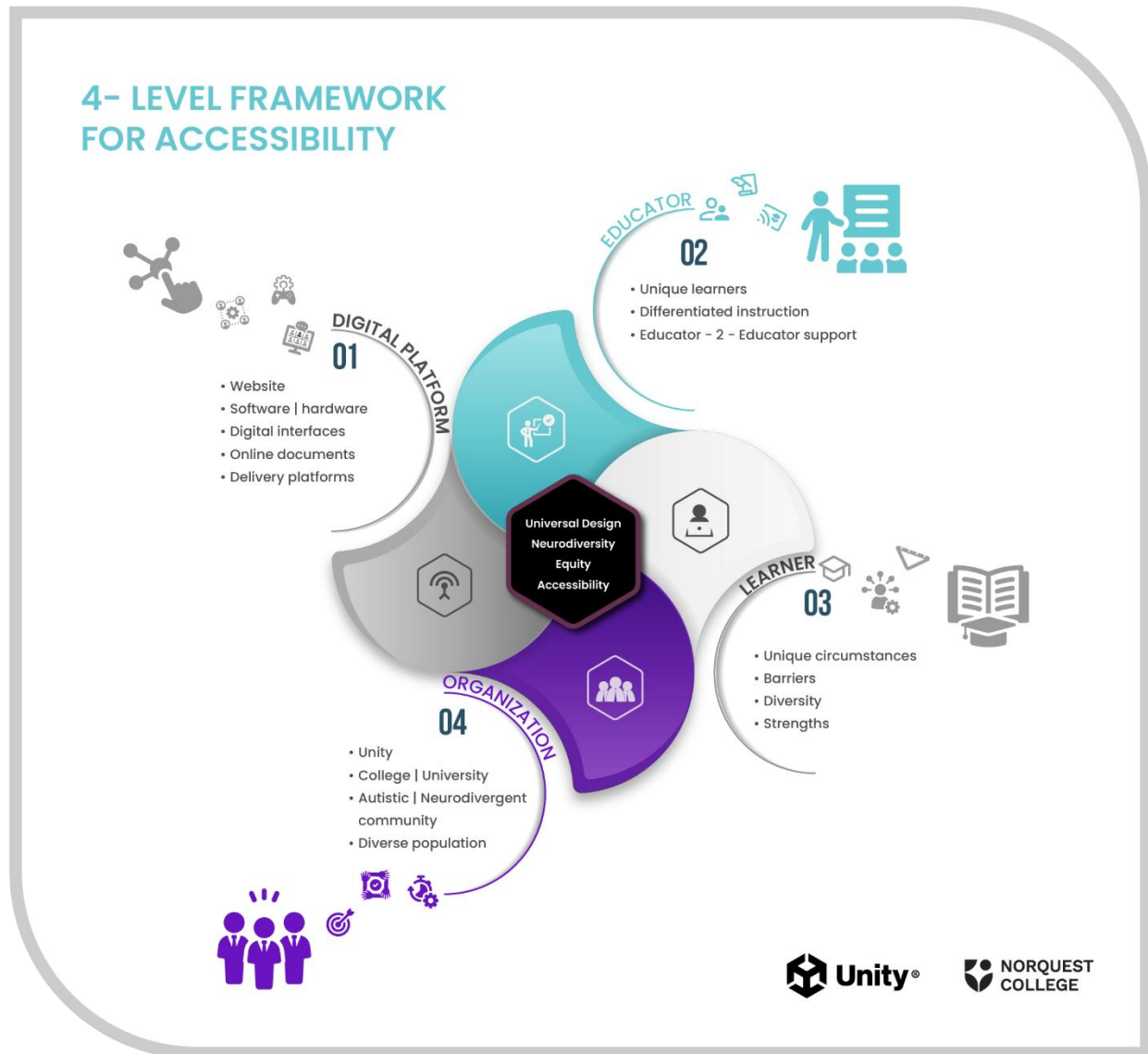




4-Level Framework for Accessibility

4-Level Framework for Accessibility



Alt Text: 4 image groupings representing the 4-level framework for accessibility. First image grouping represents digital platform which includes website, software and hardware, digital interfaces, online documents, and delivery platforms. Image 2 represents the educator and includes unique learners, differentiated instruction, and educator-to-educator supports. Image 3 represents the learner and includes unique circumstances, barriers, diversity, and strengths. Image 4 represents the organization and includes Unity, colleges or universities working with Unity products, the Autistic and neurodivergent communities, and diverse populations.

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Overview

NorQuest College received the Higher Ed XR Innovation Grant from Unity and Meta Immersive Learning in October 2022. The Higher Ed XR Innovation Grant is intended to empower colleges and universities to support learners in expanding their professional and income-earning opportunities through training in XR development with Unity.

Given that less than 33% of Autistics gain full-time meaningful employment, and less than 23% are employed directly in the gaming industry ², this particular grant was used to support NorQuest and Unity's shared goal of making training and workforce development accessible to Autistic learners. Furthermore, "It has been found that 41.4% of adolescents with autism spend the majority of their free time gaming, whereas only 18% of their neurotypical peers can say the same. ³" Such importance shines on the technology sector as a space readily used and enjoyed by Autistic people.

Under the guidance of NorQuest's Autism CanTech! a tailored, employment-focused program at NorQuest funded in part by the Government of Canada under the Youth Employment and Skills Strategy, the grant will create opportunities for Autistic learners to expand their professional and income-earning opportunities through training in XR development with Unity.

"Autism CanTech! demonstrates that when learning and opportunities to employment are made accessible, doors can be opened for those with Autism," said Carolyn Campbell, President, and CEO, NorQuest College. "The Higher Ed XR Innovation Grant will help autistic individuals fill industry gaps in tech, augmented reality, and virtual reality, and offer both sustainable and meaningful employment opportunities."

Objectives

The objectives of the project include:

- To build the foundation for an accessible stream of XR education for Autistic learners (who may also have added diverse identities which compound into a unique and singular lived experience through the intersecting of their identities) through an Accessibility Framework for XR training. By creating this foundation, Unity and post-



secondary or community organizations then have the opportunity to implement this model to reach this learner group in an inclusive and accessible way

- To improve Unity Essential Skills course completion rates for Autistic learners through increased awareness and support of the needs of the those in the autism community
- To increase knowledge of the barriers and challenges faced by the Autistic community seeking in-demand training in preparation of career entry
- To improve education and career opportunities for underrepresented groups which include marginalized and intersectional Autistics
- To provide easy-to-understand tips for making online learning environments more accessible.
- To offer a framework and supporting documents that are flexible and broadly applicable and allows room for personalization of the knowledge products to a particular environment.



Introduction

This framework was developed through a combination of a review of Unity products, a literature review, a best practice review, an advisory committee review, and our blend of expertise and lived experiences.

The framework was designed in iterations over several months and as a result, four components were deemed vital to creating an accessible experience for Autistic learners.

Drawing from our comprehensive approach, we recognized the importance of both access and accessibility when designing online courses for Autistic adults. "Access" pertains to the opportunity for Autistic individuals to engage in online courses, considering factors such as financial barriers, technology availability, and logistical considerations. Meanwhile, "accessibility" focuses on crafting courses that cater to the specific needs of Autistic learners, ensuring an inclusive and effective learning experience.

These four components include the digital platform, the educator, the learner, and the organization. The four components are further divided into contexts that intersect and inform those components in ways that can have an effect on the accessibility of Unity products. Understanding each component, its contexts, and the interplay between the four components is critical when ensuring support for the Autistic learner.

By addressing access and accessibility, we've established a framework that not only considers the technical aspects of online course design but also embraces the diverse learning requirements of Autistic individuals. Beyond the intended use of this framework for Unity and NorQuest, this framework can be modified for use with other products and in other contexts to ensure improvement of accessibility.

It is important to note that within the construct of this framework, access and accessibility are further considered through a cultural identity lens. We acknowledge that current discussions and actions associated with access and accessibility centre a Western-centric worldview. Though we discuss actions from a Western perspective, we encourage those utilizing these resources to consider their own cultural identity and norms and the cultural identities of learners when developing it for their own particular use.



Framework Overview

Digital Platform

Digital platforms are taken into consideration when ensuring Unity's curriculum is accessible for Autistic learners and to ensure they meet best practice guidelines for accessibility.

The digital contexts that are taken into consideration for this framework include determining how accessible websites and their web pages are for Autistic learners. Software programs and hardware such as VR, AR, oculus, google cardboard etc. were also examined for their effectiveness in creating accessibility.

Mobile apps, online documents, the ability to access augmentative and alternative communication etc. were considered for their ability to improve learning and communication outcomes for Autistic learners.

Best practice for accessibility across all digital platforms includes optimizing individual choice and autonomy for learners where possible and utilizing Autistic-affirming protocols in all digital products from design to roll-out.¹

Support through clear and explicit instructions and the breaking down of tasks and information into smaller pieces (chunking) can offer better accessibility for Autistic learners by giving information in relevant manageable sections that allows time for learners to process, retain, and integrate information.

Educator

This framework is a starting point for educators accessing Unity products through the Unity Academic Alliance (UAA). The intention of the framework for educators is to support them to meet the needs of their unique learner which is defined as those who are Autistic.

An understanding of the educator's context is considered in this framework. Educators could benefit from educator-to-educator (e-2-e) support so they may work together to innovate tools and resources that will benefit their learners.

Educators may require further education about autism to assist them to understand their unique learners and the contexts that impact their performance and outcomes.

Contexts that are considered in the educator portion of the framework include an understanding of the U-shaped curve. This curve represents a high proportion of learners who excel at a certain aspect of their learning while on the opposite end a high proportion of students struggle and in between them a smaller percentage of learners fall somewhere in the middle. An understanding of the U-shaped curve can give context to the kinds of resources and curriculum design needed to focus on the 2 extreme learner groups while supporting the middle group.

Lastly, educators can benefit greatly from attaining differentiated instructor skills to assist them to create an environment that is open, flexible, and inspiring for different types of learners. Differentiated instructor skills include those skills that value differences, uphold flexibility, and focus on student needs and content as the core of the learning process.



Auditing existing materials, policies, and processes and determining areas for improvement that allow for stronger use of differentiated instructor skills would be a good place to begin.

Learner

When determining who is the learner in this framework, considerations such as the unique circumstance of the individual learner is important. To this end, we consider every learner a unique learner. Some learners experience barriers that impact their ability to be successful in an educational setting. These challenges may include home and food insecurity, financial barriers, health and wellness complexities, past educational trauma, and a lack of access to support in their social and family systems to name a few.

Learners may also experience accessibility barriers such as a lack of access to a suitable computer for specific tasks, and out-of-date hardware or software. Some learners experience a lack of institutional support such as allowing their guardians or support workers to advocate for them in the learning process and including them in discussions about goals and outcomes as directed by the Autistic learner. If Autistic learners request an advocate but they experience a barrier to this accommodation, this can affect their ability to access education.

Lastly, it is important to acknowledge the challenges associated with some learner's experiences of educational trauma in the education system. Past trauma can impact a learner's current ability to manage their learning experience therefore trauma-informed practices are required to support the unique learner to experience better outcomes.

The Organization

When considering the organization in this framework, Unity is viewed as the primary organization and as such focus is centred on the ways in which Unity supports working relationships are nurtured with the Autistic and equity-seeking communities Unity serves.

The UAA represents the educational institutions, including colleges and universities that Unity supports to who make up the subset organizations in this framework and are considered under the theme of organization. These secondary organizations are viewed in terms of how they intersect with the primary organization, which is Unity.

This framework also takes into consideration how Unity, the primary organization, interacts with educators in the UAA.



Terminology

Accessibility – Designing policies, practices, and products to be usable to as many people interacting with them as possible.

Accessibility lens – Viewing actions, practices, and products through a lens that seeks the most usable solutions for as many people who interact with it as possible.

Augmentative and Alternative Communication (AAC) - relates to the multiple methods of communication that can be utilized to enhance, supplement, or accommodate those who experience temporary or permanent communication challenges relating to speech.

Autism/Autistic - Autistic refers to a condition known as autism spectrum disorder (ASD), which is a complex neurodevelopmental disorder that affects communication, social interaction, behavior, and cognitive functioning. It is characterized by a wide range of symptoms and abilities that can vary greatly from person to person. People with autism might experience challenges in areas such as:

1. Communication: Difficulties in using and understanding spoken language, nonverbal cues, and gestures. Some individuals with autism may have limited or repetitive speech patterns, while others might have advanced language skills
2. Social Interaction: Challenges in forming and maintaining social relationships, understanding social norms, and recognizing and responding to emotions in others. People with autism might have difficulty with empathy and understanding social nuances.
3. Repetitive Behaviors: Engaging in repetitive and stereotyped behaviors, such as repetitive movements, adherence to strict routines, and intense focus on specific interests or topics.
4. Sensory Sensitivities: Heightened or reduced sensitivity to sensory stimuli, such as light, sound, touch, taste, or smell. This can lead to sensory overload or avoidance behaviors.

It's important to note that autism is a spectrum disorder, meaning that individuals with autism can have a wide range of abilities and challenges. Some people with autism might require significant support in daily living, while others might live independently and excel in certain areas. The term "Autistic" is used both as an adjective to describe individuals with autism and as a way to emphasize their identity and experiences.

Much like the Deaf community capitalizes the 'D' in Deaf when referring to their Deaf culture, we choose to capitalize the 'A' in Autistic to indicate a proper adjective and honour our Autistic culture, our shared experiences, and the unique barriers we face as a community.

Chunk(ing) – Breaking down learning tasks into smaller more manageable steps that are presented in sequence.



Diversity – The richness in the variety of differences amongst humans including our language, cultures, ethnicities, foods, customs, norms, and values.

Equity⁴– The allocation or reallocation of opportunities and resources to work towards equitable access for all people.

JEDI – Justice, equity, diversity, inclusion.

Justice – The act of removing intended and un-intended barriers to opportunities, resources, and equitable access across many systems including education, healthcare, work, social, political and more.

Inclusion⁵– developing a sense of belonging across all community members and privileging voices from within those communities that experience greater barriers and less opportunities based on their identities or multiple identities.

Minoritized – a term used to describe those considered to be outside of the population who have assured access to structural and institutional power in society. The term acknowledges racial oppression and moves away from the misconception that those who are BIPOC (Black Indigenous people of colour) are fewer in quantity or less valuable than those whose Eurocentric sociopolitical worldviews informed societies that continue to privilege them.

Neurodivergent (ND)⁶– An individual with neurology considered by the medical system to be outside the spectrum of ‘normal’. This can include those who are Autistic, Blind, Deaf, schizophrenic, have Tourette Syndrome, ADHD, dyscalculia, dyspraxia, dyslexic, cerebral palsy, multiple sclerosis and more.

Neurodiversity⁶– The rich diversity of human brains and minds.

Neurodivergent-affirming⁶ – holding to the principle that neurodivergent people are valuable, whole, have strengths, and have equitable rights to society and its resources. Neurodivergent people’s experiences are valid and therefore they deserve to be supported by removing disabling barriers in society and supporting adaptations that allow them to live full lives and thrive in ways that are determined by them.

Neurodiversity/Equity lens – Privileging a neurodivergent and equity-seeking perspective.

Unique learner – Every learner is unique and comes to the Unity space with their own worldview, experiences, and circumstances. Unity accepts the learner where and how they are and works to provide a learning experience that is safe and promotes understanding.



Universal Design – A design method that has multiple applications including education. Universal Design (UD) in education creates accessibility for as many learners as possible by removing barriers to learning and supporting the learner to personalize their education in a way that creates an intrinsic motivation to learn which can lead to strong educational outcomes. When combined with policies and practices that allow for rapid modification and innovation, a UD focused teaching approach can be modified to meet each learner's needs in real-time.

Universal Design lens – Viewing actions, policies, practices, and products through a lens that seeks to remove barriers and build equity, and accessibility for as many people as possible who interact with them.

XR – denotes forms of extended reality include virtual reality (VR), augmented reality (AR), and mixed reality. It is intended to mirror the physical world as we know it into the digital realm and allow the user to interact with it.



Key

Bullet colours and icons in the written framework below represent the three lenses that we used to determine accessibility across all four groups.

The green bullet points privilege the Universal Design (UD) perspective of accessibility. ▲ Universal Design lens
The blue bullet points privilege the Autistic/equity lens of accessibility. ● Autistic/Equity lens
The purple bullet points privilege the accessibility lens. ■ Accessibility lens



Framework

Digital Platforms

Web Content Accessibility Guidelines (WCAG) were taken into consideration across Unity's digital platforms.

Unity takes an inclusive approach to our designs on our digital platforms by...

- ▲ Optimizing individual choice and autonomy for all learners by ensuring the technology can be tailored to fit the specific needs of the learner where possible. This includes the ability for learners to change font sizes and background colours on website pages. This is part of our best practice recommendations.
- ▲ Minimizing distractions. This includes the use of too many fonts, non-standardized font, too many colours, blinking bright light, loud sudden sounds etc.
- ▲ Using Autistic-affirming best practice in all materials and designs.
- ▲ Chunking information and offering it sequentially to the learner makes it more manageable for the learner to understand.
- Ensuring that navigation through our digital platforms is clear and explicit. For example, using concise language, avoiding ambiguous instructions, and where specialized language is required, explaining the terminology clearly
- Creating an easy-to-access map of where the learner is at any given moment on our website and where they have been or are going.
- Listing the average time, it takes to complete each step on our websites which provides clear and structured guidance and an understanding of expectations.
- Supporting Augmentative and Alternative Communication (AAC)¹ tools across our website pages to allow access to communication in a manner befitting the learner and facilitate effective communication with other learners.
- Ensuring our products offer ways of customizing the display of information online for AAC use.
- Establishing that our products offer alternatives to visual information.

¹ AAC refers to a wide range of methods and tools that individuals use to communicate when they have difficulty with speech or cannot rely solely on verbal language. AAC encompasses various techniques, strategies, and devices that supplement or replace spoken language, allowing individuals to express their thoughts, needs, and emotions. AAC is particularly useful for people with communication disorders, developmental disabilities, neurological conditions, or injuries that affect their ability to speak effectively.



- Making certain that our digital products offer alternatives to auditory information.
- Ensuring Autistic learners have a dedicated safe space to discuss their challenges and learning, and innovation ideas with other Autistics.

Unity supports all learners who interact with our digital platforms by...

- ▲ Fostering community through online learner-driven social spaces
- ▲ Nurturing safe spaces for Autistic learners by providing closed online groups for Autistics to meet and share their learning experiences.
- ▲ Being open to receiving feedback from learners and educators on our platforms to improve accessibility of our programs.
- ▲ Creating an online environment that supports learners to experience a sense of satisfaction, enjoyment, and motivation that inspires them to keep learning.
- ▲ Developing 'pit stops' to allow learners to reflect on their learning as they move through the process. Using guided questions, learners can explore their understanding of the tools being utilized, their personal motivation, and the development of their knowledge.
- Building on graduated levels of support to enhance the learner's education and performance by offering monitoring and adapting to the needs of the learner.



The Educator

Best practices for educators are examined to ensure accessibility of the Unity curriculum for Autistic learners. These practices include educators' access to training about accessibility and autism through Unity, understanding barriers to learning for different learners, supporting iterative innovation in the learning process as directed by the needs of the learner, utilizing a Universal Design, equity, and cultural lens to support Autistic learners.

Unity takes an inclusive approach by guiding educators towards an understanding of the unique learner by...

- Offering resources to teach educators about educational trauma and its potential impact on learning.
- Offering educators resources to deepen their understanding about justice, equity, (neuro)diversity specifically including autism, and inclusivity. Resources should also acknowledge and recognize the flaws in old ways of thinking.
- Nurturing space for educators to educate each other e-2-e by sharing their lived experiences which may include being Autistic.
- Offering resources to educators regarding using a cultural and intersectional lens to mitigate unconscious bias and stereotyping.
- Supporting educators to offer learners ND-friendly accommodations, which might include educators being open to collaborating with parents or caregivers, and empowering educators to direct learners to accommodations built into our products.
- Supporting educators to remove arbitrary barriers to accommodations where possible and accept the need for accommodations without the requirement of a formal diagnosis.

Unity encourages educators to learn about and support unique learners by...

- Ensuring our products acknowledge and include minoritized groups.
- Building an understanding of differences into the design of the educator's portal.



Unity encourages educators to proceed with an open mind to meet unique learners' needs in the following ways...

- Understanding that some educators are themselves neurodivergent and may not share their identity while other educators may themselves be undiagnosed neurodivergents. For example, we know that as many as 15%-20% of the population may be undiagnosed Autistic^{2/}. By encouraging educators to have an open mind about neurodivergence, it will offer room for compassion towards themselves and towards other **educators and learners.**

- ▲ Setting clear expectations of the educator at each stage and supporting their learning.

- ▲ Building fluency with graduated levels of support.

- Ensuring AAC use is fully supported for educators and learners.

Unity guides educators towards a deeper understanding of the unique learner by...

- ▲ Offering resources that teach and/or re-iterate an understanding of the U-shaped curve and the value of differentiated instruction.

- ▲ Understanding that educators' contexts is important. Some educators may need e-2-e support and shared resources from their colleagues, and they may need further education about autism, neurodivergence, marginalization, and educational trauma. Some educators may be willing to share their lived experiences to further the knowledge of others.

- ▲ Understanding, supporting, and educating educators, this framework be a starting point to ensure that educators are supported to meet the needs of as many diverse learners as possible including those who are Autistic, marginalized, and those whose contexts may impact their ability to be successful.

- ▲ Ensuring that we stimulate interest in educators who may or may not have previous experience with our Unity products to continue using our products and supporting their learners.

- ▲ Supporting educators throughout their engagement with our products.

- Promoting an understanding of differences through our products.

- Providing online e-2-e community hubs for educators to support each other and share resources.

² <https://dceg.cancer.gov/about/diversity-inclusion/inclusivity-minute/2022/neurodiversity>



- Supporting educators to gather feedback from their learners and giving them the ability to share the feedback with Unity.
- Supporting Autistic educators to have a safe space to share their lived experiences.



The Learner

Best practices for Unity learners are assessed to ensure Autistic learners are supported during their learning process. These practices include supporting different methods of learning, offering structured and predictable, offering individualized accommodations, providing clear and explicit communications, considering barriers to learning for marginalized communities, educating all learners about accessibility options in design, and working with diverse communities to ensure accurate and respectful representation both in the classroom and in future work of the learners.

Unity's learning opportunities support Autistic learners by ensuring that different methods of learning are taken into consideration in curriculum and training design. These methods include...

- Ensuring assumptions are not being made about the type of knowledge/experience a learner has before they arrive at Unity.
- Working to stimulate the interest of those learners who have no previous experience but want to learn.
- ▲ Building fluency with graduated levels of support.
- ▲ Building on strengths of the individual learner.

Unity training takes an inclusive approach to learning for Autistic learners through an open-minded approach to understanding learner needs. For example...

- ▲ Setting clear expectations for the learner throughout the learning process and ensuring they can access that information handily.
- ▲ Providing easy navigation pathways through the website and giving the learner a clear 'map' of where they are going and where they came from.
- ▲ Giving learners the ability to increase their mastery through feedback.
- ▲ Supporting parents or caregivers who support learners to access resources and information in a timely manner.

Consideration is given to the barriers faced by learners and how these may impact their learning experience

- Create user experiences that are accessible and Web Content Accessibility Guidelines (WCAG) compliant.
- Offer learners individualized supports including but not limited to AAC.
- Continually monitor feedback for unintended barriers all facets of learner-facing communication and structure.



- Working to ensure Autistic and equity-seeking learners gain improved educational and career opportunities as a result of our products.

Unity training ensures that accessibility becomes established in their educational products by...

- Collaborating with diverse communities to ensure accessibility, equitable representation, and an adherence to social justice and human rights priorities.
- Prioritizing creation of safe spaces for peer interactions of minoritized and disabled learners to socialize within their community's and seek support from each other learner-to-learner (l-2-l).
- ▲ Educating all learners about the importance of accessibility in their design.

Unity strives to ensure that the learning environment reflects accurate and respectful representation of diversity by engaging with diverse communities to...

- Ensure no unintentional barriers, biases, and stereotypes are created due to assumptions about learner's education level, experience, access to resources (computers/programs etc.).
- Structure our products to represent diverse communities including Autistic, minoritized, and multiply disabled individuals including in the use of imagery and in the inclusion of current respectful language.
- Make certain we are not inadvertently promoting biases and stereotypes.
- Promote an understanding of differences through course designs and materials.
- Collect data on completion rates of Autistic learners to inform Unity of possible barriers to learning.
- Collect feedback from Autistic learners to continuously improve our products, make them as accessible as possible, and promote better outcomes for our learners.



The Organization

Best practice methods are considered when ensuring that Unity as an organization and the UAA as tertiary organizations support Autistic learners through their actions and interactions on the platforms. These practices include the utilization of a social, cultural, intersectional, and disability model in all aspects of the organization including training, accessibility applications, policies, and practices. Working with a dedicated inclusivity expert, Autistics with lived experiences, and minoritized community members can ensure we are Autistic-affirming and culturally aware in decision-making and actions.

Unity is committed to inclusivity within our organization. Through our policies, governance, and practices, we strive to...

- ▲ Offer recurrent training about accessibility that includes learning about neurodivergence.
- ▲ Develop an inclusivity role to assess ND-affirming practices across all our work.
- ▲ Ensure that Autistic-affirming inclusive practices are integrated in organizational communication, interactions, and design.
- ▲ Develop a clear statement in our policies that highlight how we are committed to inclusivity and accessibility and our willingness to receive feedback and improve upon our practices.
- ▲ Ensure that inclusivity of Autistic needs is considered from the drafting of product ideas to roll-out for learners and educators.
- Make certain that our decision-making table reflects the greater community including those who are equity-seeking such as Autistics.
- Develop an advisory committee that includes intersectional and Autistic learners.
- Invite experts in the fields of intersectionality, neurodiversity, inclusivity, and accessibility to share their knowledge and lived experiences with our team.
- Request feedback about our products from intersectional and Autistic learners.

Unity supports the Unity Academic Alliance of tertiary colleges and universities to engage educators and learners who intersect with our products by...

- Encouraging UAA members to learn and share resources about justice, equity, (neuro)diversity, and inclusivity.



- Encouraging educational partners to learn about educational trauma and its potential impact on learning.
- Supporting educational partners to respect cultural lenses and mitigate unconscious bias and stereotyping.
- Being prepared to integrate feedback from educators and learners.
- Partnering with the UAA of tertiary organizations to ensure best practice and innovation in the field.

Unity is committed to working with and understanding the intersectional Autistic community by...

- Gathering data specifically from Autistic learners for the purpose of improving accessibility of the websites.
- ▲ Seeking community input regarding meaningful inclusion of Autistics across intersectional communities.
- ▲ Gather data to improve completion rates for Autistic and intersectional learners.
- ▲ Gathering data specifically from Autistic and intersectional learners for the purpose of improving accessibility of the websites.
- Developing tools and resources to improve completion rates for Autistic learners.
- Inviting intersectional Autistic speakers to train internal staff at regular intervals to improve understanding of the importance of recognizing barriers to learning and how to support Autistic learners.



Resources

This section interprets the framework into queries that can be used by those within the UAA, and those utilizing this framework as a resource to create their own framework. By posing these questions, those using this framework can determine their readiness to support autistic learners in their particular environment.

	UD lens	ND/Equity lens	Accessibility lens
Digital Platform	*Do our websites, digital platforms, and products that utilize digital interfaces optimize individual choice & autonomy including changing font size and background colours? *Do they minimize distractions? * Do they follow Autistic-affirming best practice in all material & design? *Do they chunk information & offer it sequentially to the learner? * Do they foster collaboration & community through online social spaces? *Do they allow for openness to feedback and improvement? *Do they utilize processes to optimize motivation? *Do they integrate 'pit stops' to allow learners to reflect on their learning?	*Is navigation through the websites and other digital platforms clear, and explicit? *Can learners quickly access a map of where they are in the learning process & where they have been/are going? *Are average times for each section included? *Is AAC supported for learners across all our products? *Are all aspects of the website and digital platforms AAC-friendly?	*Do our platforms offer ways of customizing the display of information online? *Do our platforms offer alternatives for visual & auditory information? *Do ND learners have a dedicated safe space to share their challenges, learning and innovation ideas? *Do our platforms build on graduated levels of support to enhance learner's learning & performance?



	UD lens	ND/Equity lens	Accessibility lens
Educator	*Are we setting clear expectations of the educator at each stage? *Are we building fluency with graduated levels of support? *Are we teaching/re-iterating an understanding of the U-Curve and differentiated instruction skills? *Are educators' contexts being considered? *Are we supporting educators to meet the needs of diverse learners and their contexts? *Are we stimulating the interest of those educators who have no previous experience but want to learn how to support their learners? *Are we supporting educators through their engagement with our products?	* Do educators receive training about educational trauma and how it can impact learners? *Are we offering educators resources on JEDI that includes neurodivergence and specifically autism? *Are we nurturing e-2-e collaboration where Autistic educators can share lived experiences? *Are we offering resources to educators re: cultural & intersectional lens? *Are we supporting educators to offer learners ND-friendly accommodations and directing them to accommodations in our products? *Does our work acknowledge/include minoritized groups some of whom are undiagnosed ND? *Are we building an understanding of differences through our products?	* Are our platforms AAC-friendly for all educators? *Are we providing online e-2-e hubs so educators can support each other? *Can educators gather feedback from their learners to share with Unity? *Are we providing a safe space for ND educators to share, learn, teach from lived experiences?



	UD lens	ND/Equity lens	Accessibility lens
Learner	*Are we building fluency with graduated levels of support? *Are we building on learner's strengths? *Are we setting clear expectations? *Can learners navigate through websites easily and determine where they are at any point in the process? *Are learners able to increase their mastery through feedback? *Are we building on the strengths of the individual learner? *Are we educating learners about the importance of accessibility in their designs?	*Are assumptions being made about the education level, experience, access to current computers/ programs etc. that inadvertently create barriers for some? * Are we stimulating the interest of those learners who have no previous experience but want to learn how to support their learners? *Are we working to ensure Autistic, ND & underrepresented learners have improved education and career opportunities because of our products? *Do our products represent diverse communities including minoritized/disabled even in the images/language? *Are we ensuring we are not inadvertently creating barriers, promoting biases & stereotypes about minoritized/disabled communities? *Are we promoting understanding of differences? *Are we collecting data on completion	Have we created user experiences that are accessible for Autistic learners? * Are we supporting learners with individualized accommodations? *Are we monitoring for unintended barriers? *Are we collaborating with diverse communities? *Are we prioritizing peer interactions to minoritized & disabled learners by giving them safe social spaces to seek l-2-l support?



		rates for Autistic learners? *Are we collecting feedback from ND learners to improve our products?	
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	UD lens	ND/Equity lens	Accessibility lens
Organization	*Do employees receive recurrent training about accessibility & neurodivergence? * Do we have a dedicated inclusivity role in our organization? * Are we using ND-affirming inclusive practices in organizational communication, interactions, and design? *Do we have a clear statement of inclusivity in our policies and are we open to improvements to our accessibility practices? * Are we seeking community input regarding meaningful inclusion of intersectional Autistics? * Are we ensuring ND needs are considered from drafting of product ideas to roll-out? *Are we gathering data specifically from Autistic & intersectional learners to improve completion rates? *Are we gathering data specifically from Autistic & intersectional learners to improve accessibility of websites?	*Does our decision-making table reflect the greater community including equity-seeking groups such as NDs? *Do we have an advisory committee that includes intersectional ND individuals? *Are we encouraging educational partners to learn/share resources regarding JEDI including NDs? *Are we encouraging educational partners to learn about educational trauma & impact on learning? *Are we supporting educational partners to respect cultural lenses & mitigate bias & stereotyping? *Are we prepared to integrate feedback? *How can we partner with colleges/universities to ensure best practice & innovation in the field? *Are we gathering data to improve accessibility to our websites? *Are we developing our tools & resources to improve completion rates for Autistic learners?	*Do we invite experts in the field to share their knowledge & lived experiences with our team? *Do we gather feedback from intersectional ND learners? *Do we invite intersectional Autistics to train internal staff at regular intervals to improve understanding & breakdown barriers?



Best Practice Recommendations

Below are our best practice recommendations listed as specific learning needs, technology-based learning tools, and teaching strategies and instructional approaches. These lists are presented with detail in the Best Practice document included in the full package of documents that make up the knowledge products for Unity.

Specific Learning Needs and Preferences of Autistic Adult Learners:

- Visual learning preferences
- Structured and predictable environments
- Individualized accommodations
- Clear and explicit communication
- Supportive work culture

Technology-Based Learning Tools and Platforms that Support Autistic Learners:

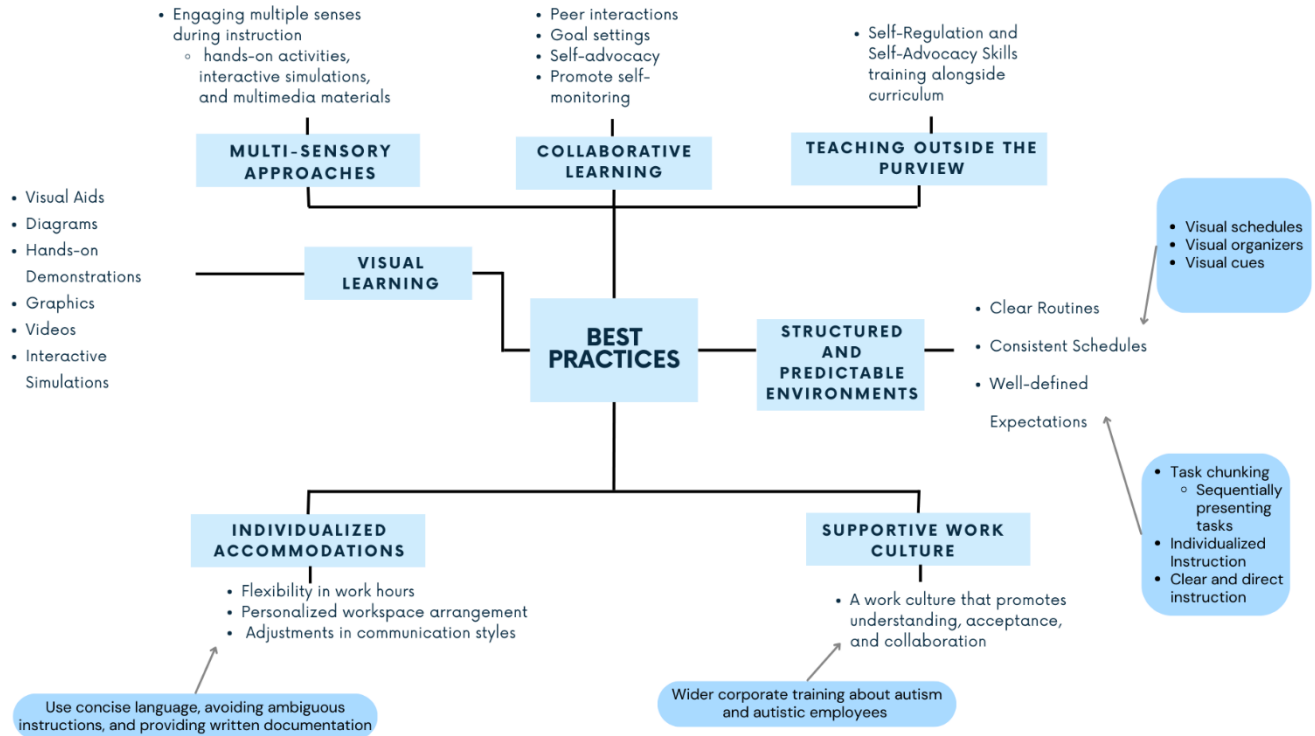
- Visual learning and multi-media

Teaching Strategies and Instructional Approaches that are Effective in Supporting the Learning of Autistic Adults:

- Structural and visual supports
- Task analysis and chunking
- Multi-sensory approaches
- Individualized instruction
- Explicit instruction
- Collaborative learning
- Self-regulation and self-advocacy skills



Best Practice Flow Chart



Alt-text: This flowchart illustrates best practices for supporting autistic learners. At the top left, we have 'Multi-sensory Approaches,' which encompass engaging multiple senses in instruction, hands-on activities, interactive simulations, and multimedia materials. In the top middle, 'Collaborative Learning' includes peer interactions, goal setting, self-advocacy, and promoting self-monitoring. In the top right, 'Teaching outside the purview' emphasizes self-regulation and self-advocacy skills training alongside the curriculum.

Moving to the middle section, labeled 'Best Practices,' all recommendations connect back to this central theme. In the middle left, 'Visual Learning' incorporates visual aids, diagrams, hands-on activities, demonstrations, graphics, videos, and interactive simulations. In the middle right, 'Structured and Predictable Environments' involve clear routines, consistent schedules, and well-defined expectations. Two offshoot bubbles are connected to this list, emphasizing visual schedules, organizers, cues, and task chunking, as well as individualized instruction with clear and direct guidance.

Transitioning to the bottom section, 'Individualized Accommodations' promote flexibility in work hours, personalized workspace arrangements, and adjustments in communication styles. An offshoot bubble connected to this list advises using concise language, avoiding ambiguous instructions, and providing written documentation. Lastly, at the bottom right, 'Supportive Work Culture' entails fostering a work environment that promotes understanding, acceptance, and collaboration. An offshoot bubble here suggests wider corporate training about autism and autistic employees.



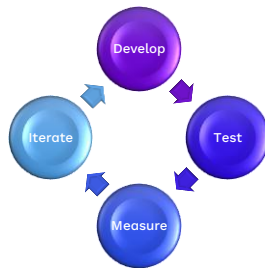
Recommendations for Alternative Use

When using this framework in other contexts, we recommend the following to provide clarity and context and enable other users to identify gaps that may be critical to the successful design of a bespoke framework:

- **Define your goals**
 - *Clarify your goals and create a manageable timeline*
- **Determine your team**
 - *Include intersectional Autistic voices on your team to ensure current best practice in accessibility, disability language, and disability justice across intersectional disability communities*
- **Define your process**
 - *Your process can directly impact your timeline so ensure they are synchronized*
- **Bring in a subject-matter-expert (SME)**
 - *If possible, bring in someone who is an intersectional Autistic with the instructional background you require*
- **Create an advisory committee that includes members of the communities you are hoping to uplift**
 - *Advisory committees can be crucial in ensuring your framework is applicable, respectful, and beneficial to your community of focus. If you cannot create an advisory committee given time or financial constraints, look within your organization to create an ad hoc advisory committee with representations from diverse areas of society including those who are racialized, marginalized, disabled, and intersectional*
- **Consider those systems, policies, processes, and practices that create inadvertent or blatant barriers**
 - *Unintended barriers in your organization's operations and barriers created by individual biases can have a large impact on the ability of some to access your products*
- **Conduct a literature review**
 - *A literature review allows your organization to understand what exists currently in terms of knowledge in your particular field. It also gives you context for your actions and gives you an understanding of any gaps in knowledge or practices relating to your focus*
- **Conduct a best practice review**
 - *A best practice review assists you to determine what is being done to enhance accessibility and understanding in your particular field and how you can use those practices, improve upon them, or create bespoke best practices for your particular implementation*
- **Determine the most important components to success**



- *By listing specific components to success, your organization can assess where you are currently in terms of improvements and what actions you need to take to meet your goals*
- **Determine the contexts that impact those components and inform outcomes**
 - *Try to determine the different contexts that can impact your ability to develop inclusive practices in your own particular contexts. This will allow you to develop protocols that can mitigate negative impacts to your goals. Sharing those contexts with your team and advisory committee can help you to determine if there are innovations you might develop to meet the challenges uncovered by these contexts*
- **Build phases into the framework**
 - *Creating a framework that allows room for expansion can give your team small manageable chunks to work on and build confidence through each successful phase*
- **Check the framework against the literature and best practices**
 - *By cross-checking the framework against current literature in your literature review and the best practice review, you can determine if you are on the right track, if you are innovating, or if you need more work to your framework*
- **Check the framework with the advisory committee**
 - *An important step before sharing or publishing your framework is to give it to your advisory committee for feedback*
- **Test the framework**
 - *If you have the opportunity, the best way to understand if your framework has value is to evaluate it with your community of focus and to seek feedback for improvements*
- **Measure success**
 - *Measure the success of your accessibility framework after roll-out through the gathering of feedback from your community of focus can assist you to improve the framework in the future*
- **Iterate**
 - *Once feedback is received, make iterative changes to your framework to further develop it as a tool to increase accessibility for your learners*



Conclusion

It is our hope that by developing these tools for Unity, they will make this framework and its resources available to other post-secondary institutions who are part of their Unity Academic Alliance so that these institutions will have the tools they need to make academic learning accessible to Autistic learners which in turn will make it more accessible for Autistic learners.



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