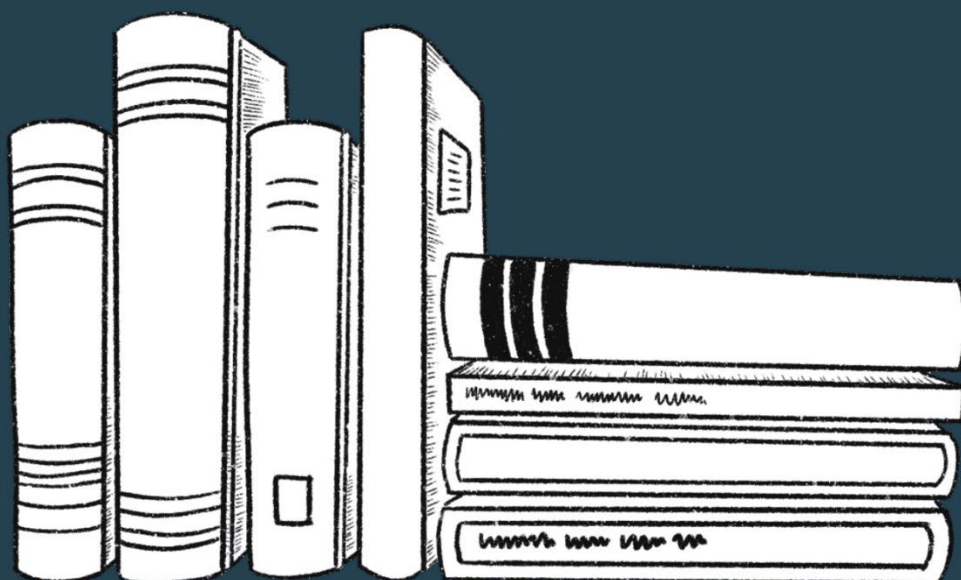


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HEQCO's Dialogues on Universal Design for Learning: Finding Common Ground and Key Recommendations from the Sector

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Executive Summary

Universal Design for Learning (UDL) is an evidence-based framework that aims to address and overcome learning barriers and differences (CAST, 2018b). Developed by the Centre for Applied Special Technology (CAST), UDL encourages educators to provide students with multiple options to engage with, comprehend and express their learning in ways that best suit their needs and preferences (CAST, 2018d). By embracing UDL, CAST asserts that K-12 and postsecondary educators can create more inclusive and accessible learning environments that meet students' diverse learning needs.

According to several studies, UDL can have a positive impact on students' learning outcomes and experiences (for example, see Al-Azawei et al., 2016). In Ontario, two government-organized committees focused on accessibility standards in education included UDL in their policy recommendations (Government of Ontario, 2022a; 2022b). Nearly all Ontario colleges and universities refer to the UDL framework on their websites; some have connected UDL with equity frameworks, such as anti-racism and Indigenous pedagogies (Benton Kearney, 2022; Paterson et al., 2022). Still, institution-wide implementation has been slow in postsecondary education (PSE) in Ontario, and more broadly across Canada and North America (Fovet, 2021; Moore et al., 2018).

The Higher Education Quality Council of Ontario (HEQCO) sought to address these gaps in UDL uptake — both in research to inform the institutionalization of UDL in PSE and in ways Ontario institutions might share knowledge on best practices and barriers. Between fall 2021 and spring 2022, we convened four virtual events to engage a diverse group of Ontario PSE stakeholders in discussion, with support from a steering committee that provided insight and recommendations to help inform our event planning. These events engaged a total of 103 participants in dialogue about definitions of UDL; strategies to scale up and evaluate UDL implementation; and approaches to support uptake among faculty.

Participants expressed several challenges that impede institution-wide uptake of UDL, including a lack of support from or commitment within institutions, as evidenced by a lack of clear communication, action and buy-in among senior administrators. As a result, implementation has largely been achieved through grassroots approaches led by individual faculty and staff. Without clear direction, participants observed that UDL initiatives become siloed at institutions, as staff with complementary roles or work related to UDL often do not collaborate. Participants also noted that structural constraints (e.g., a lack of time and resources), false assumptions (e.g., it jeopardizes academic integrity) and lack of awareness of UDL make it challenging for faculty to integrate it into their teaching practices.

Participants also proposed several strategies to increase institution-wide uptake. These included integrating UDL into existing academic or strategic plans and faculty onboarding processes, for example. Participants stressed the importance of increasing buy-in for UDL among senior administrators, who are among those in positions to communicate its value and help build support throughout the institution. Participants also indicated faculty would benefit from having time and space to build connections and share knowledge with one another. For example, communities of practice, peer support and mentorship opportunities can help faculty learn from their colleagues and help address institutional silos. Participants also felt that UDL uptake could be increased through training and professional development, which could address misconceptions or concerns and help faculty deepen their understanding of the framework.

Discussions at our events also underscored the importance of evaluating progress with institutionalization. Participants noted that data collected through evaluations can help demonstrate UDL's effectiveness and increase buy-in among faculty and senior administrators. Before conducting an evaluation, participants suggested institutions clearly define evaluation criteria to ensure those involved have a shared understanding of UDL and how best to measure the success of implementation. Metrics for success, participants noted, should include a combination of quantitative and qualitative measures (e.g., surveys and focus group discussions) to capture a holistic understanding. Participants were also clear that data collection methods used in evaluations should directly engage students and centre their voices.

Drawing from reflections on the literature and our event discussions, HEQCO offers three recommendations for Ontario's colleges and universities to institutionalize UDL. Full recommendations can be found on page 18.

- **Establish UDL as institutional policy.**
- **Facilitate opportunities for faculty and staff (including senior administrators) to connect and learn.**
- **Evaluate UDL uptake and outcomes to monitor institutionalization progress.**

Introduction

Ontario's postsecondary students bring a diversity of learning needs, identities and lived experiences to their programs — all of which affect their ability to engage with learning material. Educators can create learning environments that are accessible and inclusive by anticipating and planning for this diversity. Universal Design for Learning (UDL), an evidence-based framework that aims to address learning barriers and differences, empowers students to engage with and demonstrate their learning according to their needs, preferences and worldviews (CAST, 2018b; Fovet, 2020). As such, it is a helpful tool for educators¹ hoping to expand access and participation for all learners (CAST, 2018b).

However, most postsecondary education (PSE) institutions across North America, and Canada in particular, have so far struggled to implement UDL practices sustainably and institution-wide (Fovet, 2021; Moore et al., 2018). Unfortunately, there is limited PSE research available to help institutions scale up their UDL implementation (Fovet, 2021; Moore et al., 2018); few opportunities for Ontario institutions to learn from one another as they work to institutionalize UDL; and few events specific to an Ontario context that offer opportunities for dialogue and the exchange of knowledge.²

Building on our previous research, the Higher Education Quality Council of Ontario (HEQCO) organized four solution-oriented discussions focused on UDL. These dialogue-focused events — including virtual townhalls, panels and workshops — invited a diverse group of Ontario PSE representatives to consider key issues and collaborate on solutions. Specifically, we sought their expertise on how best to understand and define UDL in an Ontario-focused context; institutionalize, scale and create frameworks for its evaluation; and support faculty in implementing UDL at their institutions. The question of how best to scale UDL is a prime example of a complex issue where engaging the sector in dialogue can rapidly facilitate progress as well as reveal barriers and best practices for addressing them (Boyko et al., 2012).

This paper begins by outlining the theory and evidence arguing for UDL as best practice. It then shares lessons about institutionalizing UDL that emerged from the discussions across our four events. It summarizes the main challenges and opportunities that participants identified for scaling up and measuring progress with UDL implementation. Drawing from these lessons, we share our participants' strategies for advancing institution-wide uptake of UDL and ensuring its inclusivity and sustainability. We

¹ We are using 'educators' as an umbrella term to refer to a wide variety of roles, including researchers, course and curriculum designers, administrators, managers, instructors, tutors and beyond.

² For example, the Universal Design for Learning Implementation and Research Network (UDL-IRN) hosts international events and has organized special interest groups that enable stakeholders to connect and collaborate on a variety of UDL-related topics (UDL-IRN, n.d.).

contextualize these lessons and strategies within existing research that explores the framework's theoretical foundation and practical applications.

Literature Review

Developed by the Centre for Applied Special Technology (CAST),³ UDL is a framework that is intended to improve educational experiences and outcomes by removing learning barriers and addressing learner variability (CAST, 2018b). The goal of UDL is to develop “expert learners” who are “purposeful and motivated, resourceful and knowledgeable, and strategic and goal-driven” (CAST, 2018b). It is grounded in research from several fields, including neuroscience, learning sciences and cognitive psychology, about how people learn best (CAST, 2018c).

UDL Theory and Evidence

The UDL framework consists of three overarching principles: engagement (how to reach and motivate learners); representation (how learners perceive and comprehend information); and action and expression (how students navigate their learning environments and demonstrate their learning) (CAST, 2018d). UDL encourages educators to provide multiple means for students to engage with content, comprehend information and express understanding (CAST, 2018d); in these ways, educators help to remove learning barriers and position students to reach challenging course outcomes. Each principle includes guidelines and specific checkpoints that offer flexible suggestions for implementation (CAST, 2018b).

There is no one-size-fits-all approach; the guidelines are adaptable and can be applied across a variety of learning environments and disciplines to meet different goals and needs (CAST, 2018b). The guidelines emphasize embracing multiple approaches to teaching and learning, some of which align with practices that educators already commonly use. Courses that integrate multiple means of ‘engagement,’ for example, might offer opportunities for students to collaborate by completing activities or projects in pairs or groups (UDL On Campus, n.d.). Courses with various means of ‘representation’ might present course content in multiple formats, including text, videos or images (Mohawk College, n.d.). Courses that enable several means of ‘action and expression’ might encourage students to participate in class through raising their hand, using chat functions or writing private messages to their teacher (Benton Kearney, 2022). Table 1

³ Founded in 1984, CAST is an American non-profit organization that engages in research and development of strategies and offers professional learning opportunities aimed at improving learning for all learners (CAST, 2018a).

provides examples of how educators might incorporate each UDL principle in their courses.

Table 1

Examples of UDL Principles in Practice

Category and Principle	Example(s)
Multiple Means of Engagement i. Offer content and activities that are relevant to students' lives and interests.	<i>Example:</i> provide the option of choosing from a variety of assignment topics so students can select one they identify with
Multiple Means of Engagement ii. Provide mastery-oriented feedback that guides students towards long-term success.	<i>Example:</i> provide feedback that identifies patterns of errors and offers strategies for success
Multiple Means of Engagement iii. Provide opportunities for learners to reflect and monitor their progress.	<i>Examples:</i> offer checklists, time for personal reflection, templates or peer feedback activities
Multiple Means of Representation i. Present information in a variety of formats so students can engage with content in the ways that best meet their learning preferences and/or needs.	<i>Examples:</i> ensure PowerPoint presentations include alt text so the content is accessible to students using screen readers; provide content and multimedia in a variety of file formats and/or software
Multiple Means of Representation ii. Decode key vocabulary and discipline-specific language for students.	<i>Examples:</i> hyperlink when possible to definitions of key terms and/or illustrations that provide clarity; provide a course glossary of definition, key terms and/or acronyms
Multiple Means of Representation iii. Activate relevant prior knowledge.	<i>Example:</i> encourage students to co-create a "cheat sheet" of core concepts learned in previous, related courses
Multiple Means of Action and Expression i. Offer students options to demonstrate what they have learned in relation to course learning goals	<i>Examples:</i> provide the option of earning participation grades through oral contributions in class and/or written, audio or video contributions posted to a shared bulletin or blog; provide the option of completing course presentations synchronously in class, synchronously remotely or asynchronously via video file submission

Category and Principle	Example(s)
Multiple Means of Action and Expression ii. Incorporate technologies that facilitate articulation of course content.	<i>Examples: allow use of software such as text-to-speech, word prediction, dictionaries, translation tools and automated spellcheckers (unless the learning goal requires that students use other methods)</i>
Multiple Means of Action and Expression iii. Incorporate checkpoints in large course projects to encourage goal setting.	<i>Example: outline multiple, short-term deadlines at the outset of long-term assignments to help students manage their time</i>

Note: This table, adapted from multiple sources, lists practical examples of each UDL principle (Benton Kearney, 2022; CAST, 2018d; Kovac, 2021a, 2021b, 2021c; Mohawk College, n.d.; UDL On Campus, n.d.).

In PSE settings, there is a gap in research assessing UDL's impact based on commonly used metrics, such as retention, graduation rates and labour market outcomes. UDL's flexibility, while an asset, can complicate an evaluator's task of establishing clear and consistent criteria for measurement using quantitative methods (Cook & Rao, 2018). Its flexibility can also create challenges for replicating studies and evaluations of its effectiveness (Ok et al., 2017). For these reasons, there is limited standardized research consistently demonstrating its efficacy, which has resulted in some skepticism and uncertainty among some academics (Murphy, 2020).

Most research into UDL comes from the K-12 sector, where uptake began earlier and has received greater attention (Fovet, 2020). Multiple K-12 studies have found UDL-aligned course design and/or instruction positively affect student learning and experiences; can increase the accessibility of curricula; and promote engagement, satisfaction and self-efficacy among students (Al-Azawei et al., 2016; Davies et al., 2013; King-Sears et al., 2015; Ok et al., 2017; Smith, 2012).

In PSE contexts, studies show that UDL can promote engagement, satisfaction and opportunities for students with disabilities to succeed (Al-Azawei et al., 2016; Beck & Fovet, 2014; Black et al., 2015; Seok et al., 2018). HEQCO reports have drawn similar conclusions, pointing to UDL as a tool for reducing learning barriers faced by PSE students with disabilities and supporting improved labour market outcomes (Chatoor, 2021). Other HEQCO publications noted UDL's flexibility could be important from a COVID-19 recovery standpoint (Pichette et al., 2020) and to support academic success among students transitioning to PSE during the pandemic (Napierala et al., 2022).

UDL Policy and Connection to Equity, Diversity and Inclusion

HEQCO's scan of institutional websites found strong support for UDL among Ontario's colleges and universities;⁴ nearly all institutional websites refer to UDL. Our scan also revealed that Centres for Teaching and Learning (CTLs) or similar departments are most likely to allude to or provide resources related to UDL and seem to be leading this work on campuses. Other jurisdictions have integrated UDL in both K-12 and higher education policy. In the United States, both the *Every Student Succeeds Act* and the *Higher Education Opportunity Act* of 2008 (HEOA) define and promote the use of UDL (CAST, 2018e). Ontario appears to be taking similar steps toward incorporating UDL into legislation, particularly in the *Accessibility for Ontarians with Disabilities Act, 2005* (AODA). In 2017, the Ontario government established and tasked two committees with developing and recommending new accessibility standards in education: one focused on K-12 and one on PSE. The Kindergarten to Grade 12 (K-12) Education Standards Development Committee recommended mandatory UDL training for all educators, including senior and school administration, teachers and support staff (Government of Ontario, 2022a).

The Postsecondary Education Standards Development Committee, composed of people with disabilities, disability organizations and sector experts from colleges and universities, developed recommendations to help remove accessibility barriers in Ontario's PSE institutions (Government of Ontario, 2022b). The committee used several principles to guide its work, including that accessibility should be approached in a proactive, intersectional and collaborative way (Government of Ontario, 2022b). In 2022, the committee released its final recommendations, some of which cite UDL as a resource for creating accessibility standards for teaching and learning and ensuring accessibility of digital tools (Government of Ontario, 2022b).⁵ The committee also recommended institutions "address silos within their structures" and that both institutions and government collaborate to ensure the successful, long-term implementation of the standards (Government of Ontario, 2022b).

CAST's guidelines have a particular emphasis on improving outcomes for students with disabilities and other accessibility needs (Davies et al., 2013; Rose, 2022). But learning barriers also emerge when students' identities are not reflected in curricula. Current UDL

⁴ HEQCO searched institutional websites to understand the presence of UDL at Ontario's colleges and universities based on publicly available information. We considered the extent to which institutions referred to UDL and in what contexts (e.g., resources, guides, training, etc.) to gauge their support for and/or uptake of UDL.

⁵ The committee has reviewed all comments, finalized their recommendations and submitted them to the Minister for Seniors and Accessibility for consideration. As outlined in the AODA, the Minister shall decide whether to recommend to the Lieutenant Governor in Council that the proposed standard be adopted by regulation in whole, in part or with modifications.

guidelines have not been specifically designed to address institutional or systemic barriers with respect to racial, ethnic or gender identities (Rose, 2022). CAST acknowledged this gap in October 2020 and announced plans to revise the guidelines to better support all learners (CAST, 2020; Rose, 2022).

While CAST revises its guidelines, the PSE sector is already connecting UDL with education equity frameworks, including anti-racism, anti-oppression and Indigenous pedagogies, demonstrating UDL's potential to support all learners (Benton Kearney, 2022; Paterson et al., 2022). For instance, five Ontario postsecondary institutions collaborated with eCampusOntario to develop a professional development certificate (*Universal Design for Learning: Inspiring Equity and Inclusion in Higher Education*) that reflects the intersectionality of frameworks like UDL and anti-racism. eCampusOntario also offers a guide — *Universal Design for Learning (UDL) for Inclusion, Diversity, Equity, and Accessibility (IDEA)* — that illustrates how educators can use UDL to incorporate equity, diversity and inclusion (EDI) and Indigenous pedagogies in their courses, such as by offering options for students to complete assessments through storytelling (Benton Kearney, 2022).

Challenges and Opportunities with Institutionalization

Institution-wide uptake of UDL is slow and uneven in North America, and particularly in Canada (Fovet, 2021; Moore et al., 2018). In some cases, faculty have a limited or inconsistent awareness of UDL, which can lead to incorrect understandings or implementation of UDL principles (Hills et al., 2022). This lack of clarity also makes it challenging to define and measure UDL, resulting in a lack of quantitative evidence to drive uptake in higher education (Fornauf & Erickson, 2020; Rao et al., 2014).

Faculty and staff who are resistant to UDL and/or have competing priorities (e.g., teaching and research activities) also hinder institutionalization progress (Fovet, 2021; Moore et al., 2018). This resistance often stems from concerns or misconceptions about UDL adding to workload, requiring extensive technological expertise and/or jeopardizing academic integrity (Fovet, 2021; Hills et al., 2022; Moore et al., 2018). Time and resource constraints are an additional barrier, as faculty may have difficulty engaging with UDL while balancing their workload and lack access to sufficient support from staff and through learning materials (Hills et al., 2022). This combination of factors has led UDL implementation to be “mostly an individual choice for instructors and departments” rather than an institution-wide effort (Fovet, 2021, p. 27).

Fortunately, research highlights several opportunities for developing faculty and staff awareness and understanding of UDL. For example, UDL champions can help promote and encourage its use across the institution (Hills et al., 2022). Engaging faculty in professional development (PD), such as seminars or active learning opportunities, can also

increase their likelihood of implementing UDL in their courses (see Langley-Turnbaugh et al., 2013; Schelly et al., 2011; Tobin, 2018). PD that is particularly interactive, collaborative and practical can motivate educators to change their practices (Matherson & Windle, 2017), and in the case of UDL, lead to increased implementation among faculty (Langley-Turnbaugh et al., 2013). In K-12 settings, researchers also find that modelling curriculum change in PD through videos, demonstration lessons or sample student work can help educators see what these changes look like in practice (Darling-Hammond et al., 2017). PD can also be implemented gradually; engaging a small group of faculty members and measuring their implementation efforts can provide data that can help communicate UDL's effectiveness to senior PSE administration and increase buy-in for UDL training (Tobin, 2018).

Overall, opportunities to institutionalize UDL discussed in the literature represent a combination of top-down and bottom-up approaches. Top-down approaches are strategies that embed UDL principles and practices in the institution's structure and culture; these include identifying and supporting faculty champions, offering teaching awards related to UDL implementation and organizing UDL committees (Hills et al., 2022). Bottom-up approaches help build awareness and understanding of UDL through faculty's voluntary participation; these include learning opportunities, UDL teaching resources and opportunities for faculty to share practices (Hills et al., 2022). Each approach plays a role in supporting UDL uptake; researchers argue that both are necessary to encourage and sustain greater UDL implementation at institutions (Hills et al., 2022).

HEQCO's Dialogues: Format, Participants and Questions

HEQCO turned to our sector colleagues to build an evidence base, facilitate knowledge-sharing and inform UDL institutionalization strategies. We convened four solution-oriented discussions designed to address the following questions, drawn from common challenges associated with UDL identified through our research:

- 1) How can institutions facilitate institution-wide uptake of UDL? Can institutions do this in a way that helps to advance EDI?
- 2) How can institutions evaluate progress in scaling up UDL? What are the appropriate metrics for measuring success?
- 3) What factors influence UDL uptake among PSE faculty?

We invited PSE stakeholders with a wide range of roles across the sector to share their ideas and perspectives and participate in both our steering committee and events; these experts included faculty and staff with access- and equity-focused portfolios. Our

approach ensured we captured perspectives from individuals who might share different viewpoints about UDL or encounter it in different ways based on their positions.

Steering Committee

At the outset of this project, we established a steering committee to inform our event planning. Its purpose was to provide feedback and recommendations on a range of event considerations, including timelines, audience, format, agendas, accessibility and outcomes. The committee included seven individuals who work in areas related to UDL and EDI from colleges and universities across the province as well as one HEQCO staff member (see Appendix A for a list of members). This ensured the committee reflected diverse perspectives, institutions and regions of Ontario.

Events

HEQCO held four virtual events over Zoom between fall 2021 and spring 2022. Each event addressed one of our questions through a combination of presentations and small group discussions. The event format varied depending on our intended scale and goals for each discussion.⁶ Appendix B provides an overview of HEQCO's four UDL events.

The first event was an invitational dialogue, focused on how stakeholders in Ontario's PSE sector define UDL; this led to the creation of a primer circulated to participants recording these definitions. The second and third events featured panels and small group discussions on approaches to scaling UDL and evaluating implementation progress. The fourth event was a faculty-focused design thinking workshop, which encouraged participants to brainstorm ways institutions can support faculty in implementing UDL; this final event was preceded by a primer that described design thinking and its connection to UDL (see Appendix C and D to review these documents).

HEQCO's organizing team led virtual breakout room discussions and recorded detailed notes. All events operated under Chatham House Rule, which states that information shared in meetings or gatherings can only be shared without identifying the speaker's name or affiliations (Chatham House, n.d.). This helped create an environment where participants could speak freely in discussions without having their comments attributed to them (and for this reason, we have omitted details about participants' roles and

⁶ We designed the four events based on one of three formats: dialogue, townhall and workshop. While all three formats allow for conversation among participants, a dialogue includes fewer participants than a townhall, and a workshop is more interactive than both a dialogue and townhall.

affiliations to ensure their identities remain confidential). After completing all four events, members of HEQCO's research team used NVivo to code and analyze notes.⁷

A total of 103 individuals attended at least one of the four events. Participants included representatives from colleges, universities, an Indigenous Institute, government, government agencies and a non-profit organization. Participants also held a wide range of roles, including faculty, administration and senior administration, with several holding multiple positions. Across these roles, participants worked in various fields, such as UDL, EDI, anti-racism, internationalization, accessibility and institutional research. Table 2 provides a breakdown of participants who attended the events by their institutional or organizational affiliation and role.

Table 22

Event Participants by Institution/Organization and Role

Institution/Organization/Role	Number of Participants
<i>College</i>	44
<i>University</i>	52
<i>Indigenous Institute</i>	1
<i>Government, Government Agency, Non-profit Organization</i>	6
<i>Staff (e.g., educational developers, instructional designers)</i>	33
<i>Administration (e.g., directors, managers, chairs)</i>	28
<i>Senior Administration (e.g., presidents, vice-presidents, deans)</i>	9
<i>Faculty</i>	12
<i>Staff/Faculty</i>	10
<i>Administration/Faculty</i>	5
<i>Other (e.g., roles in government, government agencies and non-profit organizations)</i>	6

Note: This table provides a numerical breakdown of UDL event attendees by institutional/organizational affiliation and by role or job title. Staff/Faculty and Administration/Faculty refer to attendees who hold both types of roles.

⁷ We analyzed notes across all four events instead of conducting a separate analysis for each event. Given the interrelated nature of the guiding questions, participants often discussed topics beyond the scope of an event but connected to themes of our other meetings. We coded based on our guiding questions across all event notes to ensure we captured all ideas relevant to a given question, even if they were shared outside of the event that was most closely aligned with the question.

Lessons from Ontario's PSE Sector

We have organized participant perspectives relating to the implementation and evaluation of UDL into challenges; opportunities and successes; and evaluation considerations. While some institutions are further along with implementing UDL, others are just beginning. This meant some participants shared challenges they encountered and strategies that have been successful, while others proposed theoretical approaches for implementing and evaluating UDL based on experience with other related initiatives.

Challenges

A lack of support for or commitment to UDL within institutions arose frequently as a challenge for increasing uptake. Participants expressed a need for clearer communication and prioritization of UDL from senior administrators. Despite institutions' acknowledgment of UDL's importance (as evidenced by HEQCO's scan), participants sensed little is being done to translate strategic goals or policies into institution-wide action. They expressed their institutions' policies "lack teeth"; there are no measures in place to follow up on or hold departments accountable to UDL commitments. In cases where senior administration has not embraced UDL or provided clear direction for implementation, participants noted that faculty and staff have adopted grassroots or bottom-up approaches to implementation. While these are important for building momentum, research suggests a combination of both bottom-up and top-down strategies is necessary (Hills et al., 2022).

Participants also noted that an absence of clear direction from senior administrators is leading to siloed initiatives, which stalls progress. Staff with complementary roles (e.g., those responsible for supporting UDL or EDI) do not often connect. Participants observed that this results in fragmented and duplicative efforts, with individuals in one department being unaware of complementary work underway in different areas of the institution. These siloed operations prevent collaboration, which is essential to expanding and sustaining the success of UDL and accessibility standards (Government of Ontario, 2022b).

Participants expressed that without buy-in from institutional leadership (i.e., senior administrators), the task of advancing UDL tends to fall on the shoulders of individual faculty members and staff — and these individuals often feel overwhelmed, especially given the extra demands introduced by COVID-19. They observed that many faculty, already tasked with considering factors like AODA requirements, tend to view UDL initially as "one more thing" to incorporate in their courses. These comments align with previous research, which finds faculty often lack sufficient time to work on their teaching and improve their courses (Hills et al., 2022). Participants also noted that structural constraints, such as lack of time allocation for contract faculty to implement UDL or participate in

training, make it difficult for faculty to adjust their teaching practices. This finding reflects research citing time and workload constraints as challenges to UDL implementation (Hills et al., 2022), though it also alludes to potential differences between the implementation experiences of contract and permanent faculty.

Participants also noted faculty sometimes hold concerns or assumptions about UDL that prevent its implementation. These include believing UDL requires more time and effort and/or compromises academic integrity.⁸ We also heard that faculty are uncertain about UDL and its benefits or about their role in its implementation. For instance, participants noted faculty may not understand what UDL is, and as a result, may not view UDL implementation as their responsibility. This confusion over responsibility adds an additional layer to the ambiguity surrounding UDL's meaning and use in higher education (Fornauf & Erickson, 2020; Rao et al., 2014).

Opportunities and Successes

Participants proposed ideas for integrating UDL into existing structures or processes to strengthen institutional support. Suggestions included incorporating UDL in the institution's academic and/or strategic plans, onboarding programs for new faculty and program approval and/or review processes. College representatives also recommended allocating time for UDL in the Standard Workload Formula⁹ for their institutions. Researchers have highlighted similar examples of formally integrating UDL into institutional practices or policies as being helpful; these strategies can help embed UDL "within the structure and culture of the institution" and make it "central, not superfluous, to its day-to-day workings" by ensuring it spans the work of many individuals across the institution (Hills et al., 2022, p. 12). This can help establish UDL as a collective responsibility and address the workload constraints faculty face in implementation. Participants were clear, however, that implementation approaches should reflect the input and needs of key stakeholders, including faculty and students.

Participants highlighted that greater buy-in among senior administrators (e.g., vice-presidents and deans) can signal support for UDL and generate buy-in at the faculty level. They explained that having senior administrators model UDL at meetings or in training, for instance, can help communicate its value and allow faculty to experience it themselves.

⁸ For example, faculty using UDL might provide students with additional time for tests or allow students to complete assessments through storytelling or videos instead of essays (Benton Kearney, 2022). Some faculty may believe this flexibility of UDL "lowers educational standards" or expectations for students and makes learning less challenging (Hills et al., 2022, p. 5). In actuality, UDL serves to support students in meeting challenging course expectations by providing multiple means for students to learn (Paterson et al., 2022).

⁹ The Standard Workload Formula is a contract between Ontario colleges and full-time teaching faculty that is used to determine each faculty member's workload over a certain period (Ontario Public Service Employees Union, n.d.). University collective agreements may include similar allocations.

Participants also mentioned that UDL champions can spread awareness and help others understand its importance. Alongside faculty champions (Hills et al., 2022), UDL champions within senior administration can encourage and engage faculty in implementation. This may also help alleviate concerns about workload by clarifying that UDL is a shared responsibility.

Participants cautioned, however, that top-down strategies, such as policies or compliance checklists, may not be effective on their own. They argued that sustained cultural change can only be achieved when instructors meaningfully engage in UDL and reflect on their practices, though others believed that a combination of top-down and bottom-up approaches would be most effective, as discussed in the literature (Hills et al., 2022).

Participants often highlighted the importance of building connections, both within and between institutions, to share knowledge and tools. They indicated faculty would benefit from feeling connected and having time and space to engage with colleagues (such as UDL administrators or CTL staff) about their experiences. For example, participants mentioned they would benefit from an ongoing community of practice to share challenges and solutions within their institution and across other institutions. This can help break down silos by supporting stakeholders across the institution (e.g., those working in CTLs and Accessibility and/or Student Services) to collaborate in institutionalization efforts. Participants also suggested peer support or mentorship opportunities can help faculty learn from colleagues who have experience implementing UDL. These examples align with research suggesting institutions create learning groups or other opportunities where faculty can share their experiences (Hills et al., 2022).

Participants also discussed training and learning opportunities as approaches that can help encourage UDL implementation. They expressed that PD could help faculty feel more knowledgeable about UDL and confident in applying it in practice. Examples included workshops, courses and reflective conversations between faculty and staff. Participants noted these opportunities could help instructors develop a growth mindset and become more open to implementing UDL; this connects to previous research suggesting PD can lead to increased implementation (Langley-Turnbaugh et al., 2013; Schelly et al., 2011; Tobin, 2018). Learning opportunities can also help address challenges related to faculty's perceptions about UDL (e.g., that UDL requires more time and work) and ensure greater consistency in faculty's understanding and application of the framework (Hills et al., 2022).

Evaluation Considerations

Given the gap in research on measuring UDL's effectiveness in PSE, it was important for our participants to discuss how best to evaluate progress with institutionalization (Cook & Rao, 2018; Murphy, 2020; Rao et al., 2014). They noted that evaluations can demonstrate

UDL’s effectiveness, and in turn, increase buy-in among faculty and senior administration — an idea that is echoed in existing research (Tobin, 2018).

Before beginning an evaluation, participants suggested institutions should clearly define evaluation criteria. They discussed how individuals in different roles at institutions might understand and measure criteria, such as “success,” in different ways. To address this challenge, participants proposed that individuals involved in evaluations define “success” in their contexts so they can decide on appropriate measures for determining the effectiveness of UDL implementation efforts. Participants also defined UDL in various ways, including as a tool for accessibility, in connection with equity frameworks, or as a mindset rather than a checklist. The suggestions we heard from participants build on prior research, which focuses on establishing clear definitions of UDL and UDL interventions (Cook & Rao, 2018; Ok et al., 2017; Rao et al., 2014) by highlighting the importance of defining other relevant criteria and evaluation metrics.

Participants noted that, with clear criteria, institutions will be better positioned to select appropriate metrics, which do not necessarily or exclusively have to include quantitative measures. They explained that metrics often used to measure success in PSE, such as student grades, retention or graduation, are useful but insufficient when used alone; they cannot capture a holistic understanding of how UDL is working. To help address this issue, participants suggested that a balance of quantitative and qualitative methods and data should be used to evaluate the effects of UDL on students and implementation progress. For example, participants recommended institutions conduct surveys as well as focus group discussions or directly engage with faculty about their experiences using UDL in their courses. Although previous research calls for more rigorous quantitative research on UDL (Murphy, 2020), our discussions suggest qualitative methods should be used to complement quantitative measures of UDL.

Participants also believed data collection methods used in evaluations should specifically engage students and centre their voices and experiences. Examples included student surveys or focus groups as well as directly involving students in co-designing data collection instruments. This suggests faculty and students should not only be involved in implementation efforts, as participants discussed, but also in evaluations of UDL implementation.

Recommended Strategies for Institutionalization

Based on our event discussions — drawing from direct testimony from our dialogue participants — we present the following 10 strategies for Ontario’s colleges and universities to more effectively institutionalize UDL. Our participants’ recommendations

balance strategies that help embed UDL in the institution and support faculty to grow their understanding.

Establish UDL as Institutional Policy

Senior administrators at Ontario PSE institutions should:

- Incorporate UDL into institutional policy frameworks to demonstrate clear support and commitment.
- Embed UDL in existing processes, including onboarding and course approval or review.
- Model UDL in meetings, for example, to help build buy-in among faculty and staff and provide practical examples of implementation.
- Identify and support UDL champions who can help raise awareness and communicate UDL's benefits.

Facilitate Opportunities for Faculty and Staff to Connect and Learn

Ontario PSE institutions should facilitate opportunities for stakeholders to communicate and collaborate in UDL implementation, such as through cross-departmental or institution-wide working groups, committees or dialogues (such as those facilitated through our events). In doing so, institutions should:

- Ensure multiple perspectives and representation across institutional areas, as well as stakeholders in different roles, including faculty, administration and students.
- Help connect staff and faculty to PD opportunities or supports within and beyond the institution. For example, institutions can connect faculty and staff with Indigenous centres or local knowledge-holders (Benton Kearney, 2022). This would allow faculty and staff to ask for permission and learn how to incorporate Indigenous knowledge and pedagogies in courses, which can help ensure content is relevant and meaningful to students (Benton Kearney, 2022). Institutions can also connect faculty and staff with external educational opportunities, such as free UDL resources available through eCampusOntario (e.g., the certificate, [*Universal Design for Learning: Inspiring Equity and Inclusion in Higher Education*](#), and guide, *Universal Design for Learning (UDL) for Inclusion, Diversity, Equity, and Accessibility*).
- Create time and space for faculty and staff to share practices, learn and support one another.

Evaluate UDL Uptake and Outcomes

Ontario PSE institutions should set clear goals for UDL implementation (aligned with institutional policy) and regularly assess UDL uptake and impact to monitor their

implementation progress through evaluations that are based on their unique institutional needs. Evaluations should:

- Identify possible metrics and measure outcomes of UDL to address the gap in quantitative evidence and alleviate doubts about its effectiveness in PSE (Cook & Rao, 2018; Murphy, 2020).
- Use a combination of quantitative and qualitative data collection methods that engage multiple stakeholders, including students and faculty, to ensure criteria and measures reflect the various perspectives, experiences and needs of those involved in implementation.
- Engage students directly, such as through student surveys or focus groups, to understand their experience with UDL. This may begin with communicating to students what UDL is and what it looks like in practice so that they can determine if and how they have experienced it in their classes, labs, workshops and placements.

Conclusions

To ensure all students can benefit from an inclusive and accessible learning environment, our event participants — those working with UDL at institutions and in government — believe that Ontario’s PSE institutions should adopt UDL as an institutional policy, support individual growth and collaboration among faculty and staff, and evaluate implementation progress. By connecting UDL to EDI and understanding UDL as a collective responsibility, our correspondents believe that institutions can better support all PSE learners in Ontario. This begins, however, with a recognition that UDL requires a broader institutional effort and a commitment to developing a coordinated approach to implementation.

HEQCO’s events provided an avenue for Ontario’s PSE sector to engage in dialogue, share ideas and discuss experiences with implementing and evaluating UDL. We invited participants with various roles, areas of expertise and experiences to lend their voices. Many participants at our events held staff or administrative roles; future research should engage a greater number of participants in senior administration and faculty positions to ensure a wider range of perspectives and to draw distinctions between stakeholders’ views. Research should also engage both contract and permanent faculty to investigate the potential differences in their needs, experiences and the types of supports that would benefit these groups.

Our discussions highlighted the need for further research evaluating UDL and its implementation. As institutions adopt the recommendations made by dialogue participants, we encourage UDL leaders across all roles and institutions to share the results of their work. Expanding the research base for UDL is crucial to increasing support for its use and encouraging uptake.

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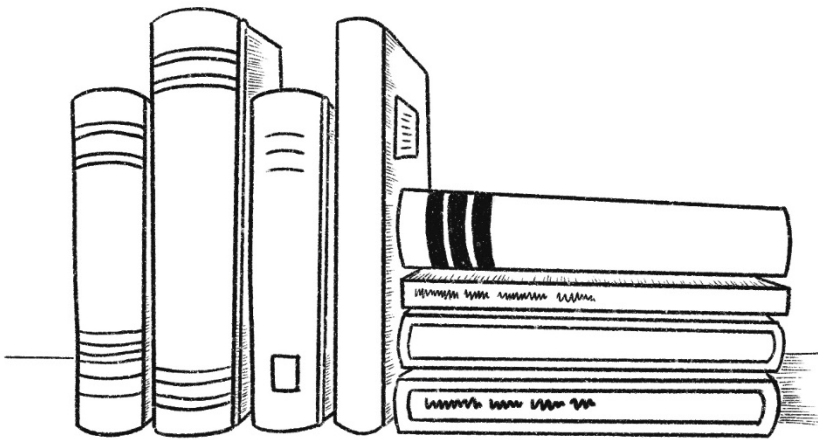
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HEQCO's Dialogues on Universal Design for Learning: Finding Common Ground and Key Recommendations from the Sector

Appendices

Appendix A: Steering Committee Members

The steering committee included eight members who brought expertise in UDL, EDI and curriculum development. It also included one HEQCO staff member to ensure the agency could feasibly implement the steering committee's ideas. The eight members were:

- Darla Benton Kearney, Teaching and Learning Consultant – Universal Design for Learning at Mohawk College
- Jackie Pichette, Director of Research, Policy and Partnerships at HEQCO
- Jane Ngobia, Vice President, Inclusive Communities at Sheridan College
- Jerri-Lynn Orr, Indigenous Curriculum Specialist at Lakehead University
- Ravinder Brar, Manager and UDL Integration Lead at George Brown College
- Teresa Lee, Accessibility and UDL Lead at Centennial College
- William Hennessy, Professor and Curriculum Consultant at Algonquin College
- Yunyi Chen, Educational Developer, Program and Curriculum Globalization at Queen's University

Appendix B: HEQCO's UDL Events

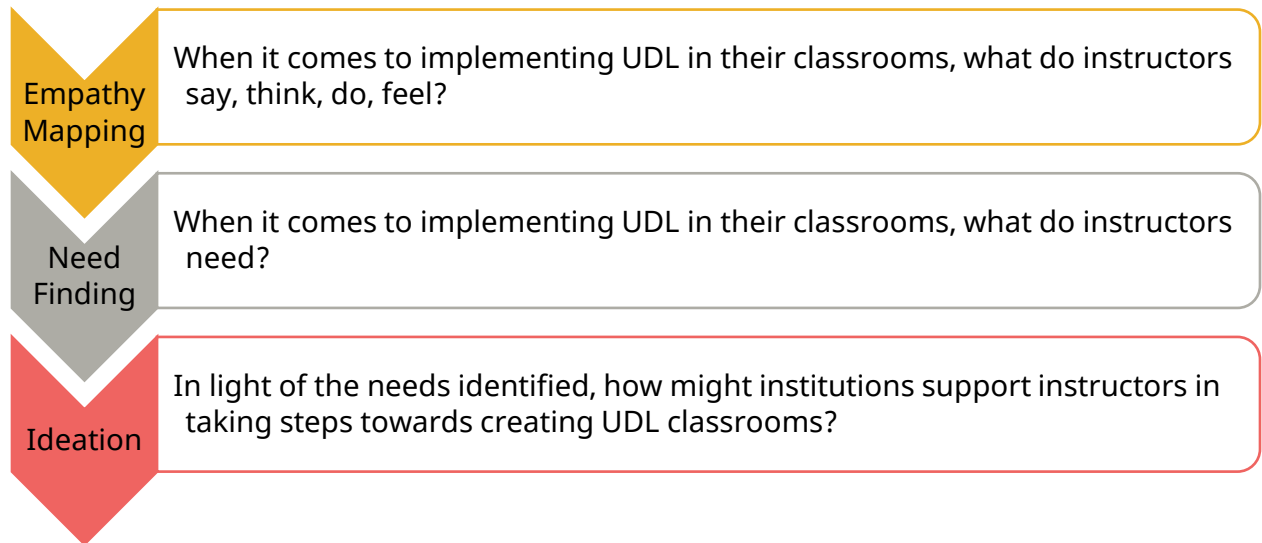
Our events were titled as follows: 1) Defining UDL; 2) Approaches to Institutionalizing Universal Design for Learning; 3) Measuring Success with Universal Design for Learning Implementation; and 4) Re-thinking Universal Design for Learning Implementation. With UDL in mind and support from our steering committee, HEQCO's project team ensured each event modeled UDL by including multiple options for participation. Participants could contribute to the conversation by virtually raising their hand to speak aloud, typing in the chat, adding to a Padlet or emailing the organizing team after the event.

- 1) The first event, Defining UDL, was a dialogue-driven event aimed at addressing the ambiguity and confusion resulting from UDL's various interpretations and applications. We invited 21 sector stakeholders to share their understanding of how UDL is defined in the context of Ontario PSE. Recommended by a steering committee member, we used a Circle Conversation format, based on Indigenous cultures and worldviews, to structure breakout room discussions ("Talking Circles," n.d.). Participants could only speak when they held a virtual feather; this created space for each person to share their thoughts and be heard equally and facilitated respectful dialogue among participants. At the advice of our steering committee, this event served as the foundation for subsequent events focused on scaling up UDL. Discussions at this event also informed the development of a primer document that HEQCO circulated to participants at subsequent events (see Appendix C). The primer outlined HEQCO's interest in this work and various definitions of UDL that emerged from the discussion.
- 2) The second event, Approaches to Institutionalizing Universal Design for Learning, was in a townhall format with a total of 46 participants; it began with presentations by two speakers, followed by breakout room discussions. The first presenter, Jodie Black, is a Teaching and Learning Specialist at Fleming College. Black presented on principles for supporting UDL growth within PSE institutions as well as challenges to those principles. The second presenter, Nadia Richards, is the Manager, Anti-Racism Integration, at George Brown College. Richards spoke about anti-racism initiatives at postsecondary institutions and how UDL can be used as a tool to support anti-racism practices. This presentation revealed the intersection between UDL and equity frameworks, such as anti-racism, and how other institutionalization efforts can offer lessons for implementing UDL. Using the Circle Conversation format, the discussion that followed both presentations invited participants to reflect on the presentations, share their own perspectives and respectfully listen to those of others.

- 3) The third event, Measuring Success with Universal Design for Learning Implementation, was also a townhall with a total of 50 participants; the event featured panel presentations by four steering committee members, followed by breakout room discussions. Presenters Darla Benton Kearney, Jane Ngobia, Ravinder Brar and Teresa Lee focused on identifying ways to evaluate progress with institutionalizing UDL and shared evaluation work underway at their institutions. Following the presentations, we invited participants (who included individuals with specific expertise in measurement, evaluation and institutional research) to share additional ideas and strategies for evaluating large-scale initiatives like institutionalizing UDL. Recognizing some participants may have been less comfortable speaking about evaluation methods than others, we used a variation of a popcorn-style discussion where participants volunteered to contribute ideas (Smart, n.d.).
- 4) The fourth and final event, Re-Thinking Universal Design for Learning Implementation, was a design thinking workshop with 42 participants. Julia Allworth, design thinking expert and Manager, Innovation Projects at the University of Toronto's Innovation Hub, led this workshop. Design thinking is a method for developing solutions to complex or "wicked" problems by empathizing with the needs of people facing those problems (Allworth et al., 2021). Both the HEQCO project team and steering committee considered this approach appropriate, given the complexity of scaling UDL's flexible (and sometimes ambiguous) framework at large, diverse Ontario PSE institutions. HEQCO invited college, Indigenous Institute and university senior administration, faculty and UDL experts to participate in this event. We asked participants to consider the needs of a key stakeholder group implicated in the institutionalization of UDL: faculty. Participants used Miro, an interactive design thinking tool, to brainstorm faculty needs and institutional approaches to meeting these needs. Figure B1 provides an overview of the activities and discussion questions that participants engaged in at the workshop. Given the fast pace of this event, we again opted for a similar popcorn-style discussion in breakout rooms (Smart, n.d.). Prior to this event, HEQCO circulated a design thinking primer document to provide participants with an overview of design thinking and its connection to UDL (see Appendix D).

Figure A1

Design Thinking Workshop Activities and Discussion Questions



Note: This figure lists the activities included in HEQCO's fourth event, the design thinking workshop. Each activity reflected principles of design thinking and included a question to help guide breakout room discussions.

Appendix C: UDL Primer Document

Universal Design for Learning in Ontario: A Primer for HEQCO-Facilitated Discussions

Fall 2021 – Spring 2022

What is HEQCO?

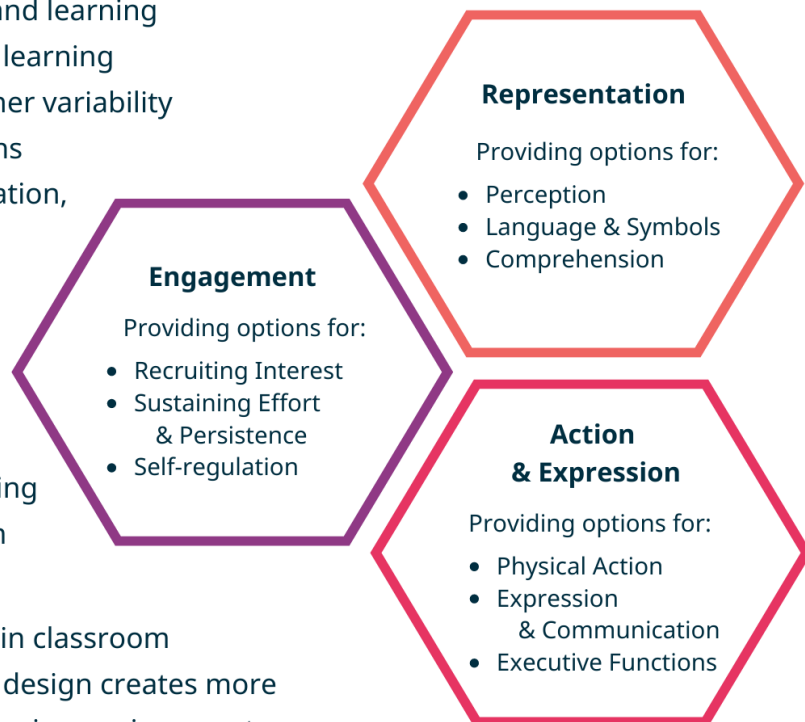
The Higher Education Quality Council of Ontario (HEQCO) is an agency of the Government of Ontario that brings evidence-based research to the continued improvement of the province's postsecondary education system. HEQCO's research explores issues related to access, quality, sustainability and system design.

What is Universal Design for Learning?

Universal Design for Learning (UDL) is an evidence-based framework that aims to improve teaching and learning for everyone. UDL reduces learning barriers and supports learner variability by providing multiple means of engagement, representation, and action and expression.

The UDL guidelines are currently being updated to strengthen their role in addressing systemic barriers to learning, including racism, sexism and ableism among others.

Integrating UDL principles in classroom instruction and curriculum design creates more inclusive and accessible learning environments that can better meet students' diverse needs.



Why is HEQCO doing this work?

HEQCO recommends Ontario colleges and universities embrace UDL to improve the accessibility of higher education. Our research highlights the importance of UDL for embracing learner variability and increasing success for all students. Aligning with HEQCO's focus on improving access and learning outcomes, we are conducting this work to share knowledge and inform the uptake of UDL across Ontario postsecondary institutions. HEQCO also hopes that this work will help lay the groundwork for a UDL community of practice.

While many Ontario postsecondary institutions recognize and promote the benefits of UDL, its integration in the classroom "remains mostly an individual choice for instructors and departments." With an interest in scaling-up these efforts to improve the quality and accessibility of education across the province, HEQCO is convening a series of solution-oriented discussions about the institutionalization of UDL. We plan to report on the lessons from these discussions in a publication.

Discussion questions to consider ...

- ➔ What successes and challenges has your institution experienced in institutionalizing UDL and evaluating its implementation?
- ➔ How do equity, diversity, inclusion and decolonization (EDID) shape your (or your institution's) approach to implementing UDL and evaluating its uptake?
- ➔ What do stakeholders at your institution need to implement and evaluate approaches to institutionalizing UDL effectively?

How do stakeholders define UDL?

HEQCO engaged in conversations with stakeholders from Ontario postsecondary institutions to understand how they define UDL. We learned that UDL is ...

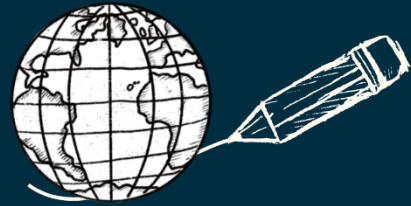


Contact

For any inquiries related to this project, please contact **Ken Chatoor** (kchatoor@heqco.ca) or **Jackie Pichette** (jpichette@heqco.ca). To learn more about HEQCO, please visit heqco.ca.

Appendix D: Design Thinking and UDL Primer Document

Design Thinking and Universal Design for Learning (UDL)



by Julia Allworth | info@juliaallworth.com

Design Thinking Overview

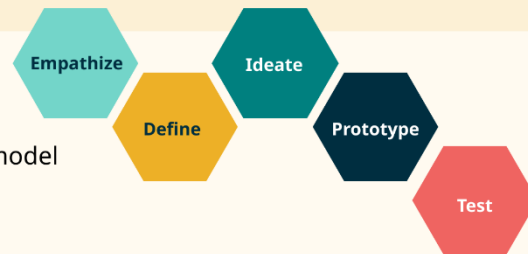
Design thinking is an empathy-based approach to innovation and problem solving.

With a design thinking approach, we base solutions on an understanding of the unique needs of the people we are designing for.

As such, it's both a method and a mindset. Not only does it offer a series of steps to help with designing solutions, but it also helps us think about problems differently.

Design Thinking as a Method

The Stanford d.school offers the following five-step model for human-centred Design Thinking.



Design Thinking as a Mindset

Design Thinking offers the following mindset principles to guide thinking about challenges and solutions.



Empathy. First, seek to understand the people involved. What are their needs? Empathy is essential for innovation and problem solving; people are integral to the solution.



Curiosity. Instead of making snap judgments, ask questions and seek to develop a deeper understanding of problems.



Prototyping. Adopting a prototype mindset means expecting failure and seeing it as a learning opportunity. First attempts often fall short; several tries are needed to meet stakeholder needs. Approach new projects as pilots and be willing to see shortcomings as key learning opportunities.



Disruption. Design thinkers are disrupters of the status quo. They're people who seek to transform rather than sustain. Sometimes, a whole new approach is preferable to a simple improvement of what already exists.

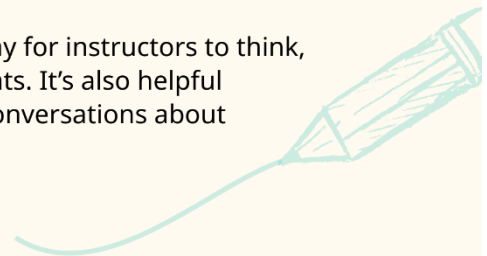


Divergence. It's human nature to try to solve a problem right away. Design thinkers consider the big picture before converging on a solution.

Why Is Design Thinking Important for UDL?

Design Thinking — as both **method** and **mindset** — is useful when thinking about UDL and its implementation in higher education settings.

It's helpful at the classroom level because it provides a way for instructors to think, empathetically, about the particular needs of their students. It's also helpful for administrators — it provides a framework to launch conversations about institution-wide UDL implementation.

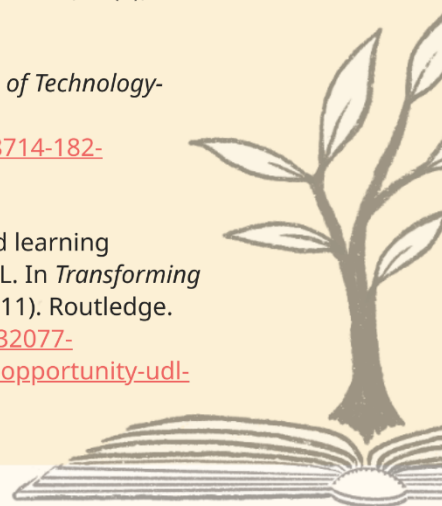


Design Thinking and Universal Design for Learning Resources

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