Cultivating Access:

Teaching Accessibility & Inclusion
in Graphic Design Advanced Diploma Programs

by

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Abstract

Graphic design reflects and creates culture. As a result, the growing need for inclusion and accessibility in all aspects of life in Ontario will drive how public communications will be designed and delivered. In order to foster this culture change to a more inclusive approach in the communications industry, there is a need for the pedagogies of design education to adapt and meet this future need. Design educators and the future designers they are training will need to be knowledgeable in inclusive design and the technical skills required to create accessible communications. Taking into consideration the AODA (Accessibility for Ontarians with Disabilities Act) and the program standards of Ontario college diploma programs for graphic design that are vague in their program outcomes related to accessibility and inclusion, design education can benefit from discipline specific resources to support faculty in enhancing their curriculums with accessibility and inclusive design learning outcomes. Faculty and students were surveyed to understand the current state of design education related to these topics and to identify where gaps may exist. The results from the surveys indicated that while many students and faculty have positive attitudes towards teaching and learning about accessibility and inclusion, more support was needed in terms of resources that related specifically to graphic design pedagogy and its project based learning. Many faculty identified the need for example assessments, real-world examples and curated resources to support the development of learning materials that include aspects of accessibility and inclusion which led to the development of a Faculty Guide to support design educators in Ontario colleges.

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Project Background

Graphic design is an interlaced discipline that not only creates culture but also reflects it. Graphic design is an integral part of our daily lives; we interact with designed artifacts when we work, when we shop, when we travel, when we go to the doctor and the list goes on. Graphic design is embedded in our culture: you will find it everywhere. Jessica Helfand describes the discipline as a practical art, an applied art and an ancient art (Helfand, 2016). In essence, the role of the graphic designer is to visualize ideas, to communicate complex concepts into digestible pieces of information through an often complex arrangement of text and images. By definition, the discipline traditionally depends on the visual nature of typography and image, which can create barriers to accessing information. It's important to recognize that all these daily interactions with information require more than just digital or printed visual elements to communicate in order to be inclusive and accessible. Accessible graphic design is an emerging practice with many unknowns, but is a vital and developing practice for a well-functioning and inclusive society. To effectively create accessible and inclusive communications, one needs to consider the larger systems used for information sharing, the context of the messages and all the potential stakeholders.

Inclusive design is a methodology that recognizes diversity, variability and complexity while investigating how our broader social systems can be disrupted to prevent exclusion. Jutta Treviranus, a pioneer in inclusive design, describes the goals of the discipline as: 'creating a

society where it is possible for people, with the full range of human difference, to participate

and contribute (Treviranus, 2018). To create a more inclusive society, a guiding framework has

been developed which includes the following 3 dimensions (Treviranus, 2018):

1. Recognize, respect and design for human uniqueness and variability.

2. Use inclusive, open and transparent processes and co-design with people who have a
   diversity of perspectives.

3. Realize that you are designing in a complex, adaptive system.

If we consider this framework in the context of graphic design, it suggests a reevaluation of our

design processes and deliverables. Graphic design is a component of a larger mass

communication system that typically aims to reach the majority or a defined, homogenous

target audience. An inclusive design process requires designers to consider the outliers and

design with flexibility in the delivery methods of their messages. The second dimension of

inclusive design encourages graphic designers to work with their communities and engage in

more active research with their audiences to optimize the reach of their designs beyond the

expected user. Lastly, the third dimension requires graphic designers to acknowledge that their

decisions are not made in isolation but rather contribute to a broader social context. These are

significant changes to the organizational structures of the communication industry and the role

that graphic designers play will need to be facilitated by a widespread culture change.

As a design educator, I am interested in exploring the role that education plays in creating a

broader cultural change towards more inclusivity and accessibility, and how relatively small

changes to our design pedagogy can initiate a ripple effect to promote awareness and advocacy

for accessibility and inclusion in the industry. In the context of this project, accessibility refers to the technical skills that a designer would employ to create an accessible communication such as adding alt-text or formatting their document in a way that is optimized for screen reader users. Inclusivity and/or inclusion refers to a designer's approach to a project and their 'accessibility mindset' to consider diverse audiences and alternative ways of accessing information.

This project is focused on graphic design in the college system since these programs of study encompass practical hands-on training rather than more academic and theoretical approaches to design which are more commonly emphasized in university programs. If we consider that accessible communications are the output of an inclusive design process, college graphic design programs are well suited since they can provide students with the foundational knowledge to design inclusively but also put technical skills in practice. In addition, college programs are often directly linked to industry through work placements, internships and work integrated learning strategies which will allow students to apply their accessibility and inclusive design knowledge in real-world contexts. These strong ties with professional design environments will accelerate the adoption of inclusive design approaches for both students and the industry.

To maintain the momentum of this culture shift, the primary stakeholders in the graphic design education system will need to work collaboratively to create lasting change that promotes accessibility in the communication industry.

The Education Landscape for Graphic Design

 When considering accessibility and inclusion in communications, it's important to recognize that each stakeholder in the system plays a role in upholding the dimensions of inclusive

design. To effectively build an accessible and inclusive culture, all the stakeholders need to

contribute simultaneously in advocating for accessibility in order to create a lasting impact.
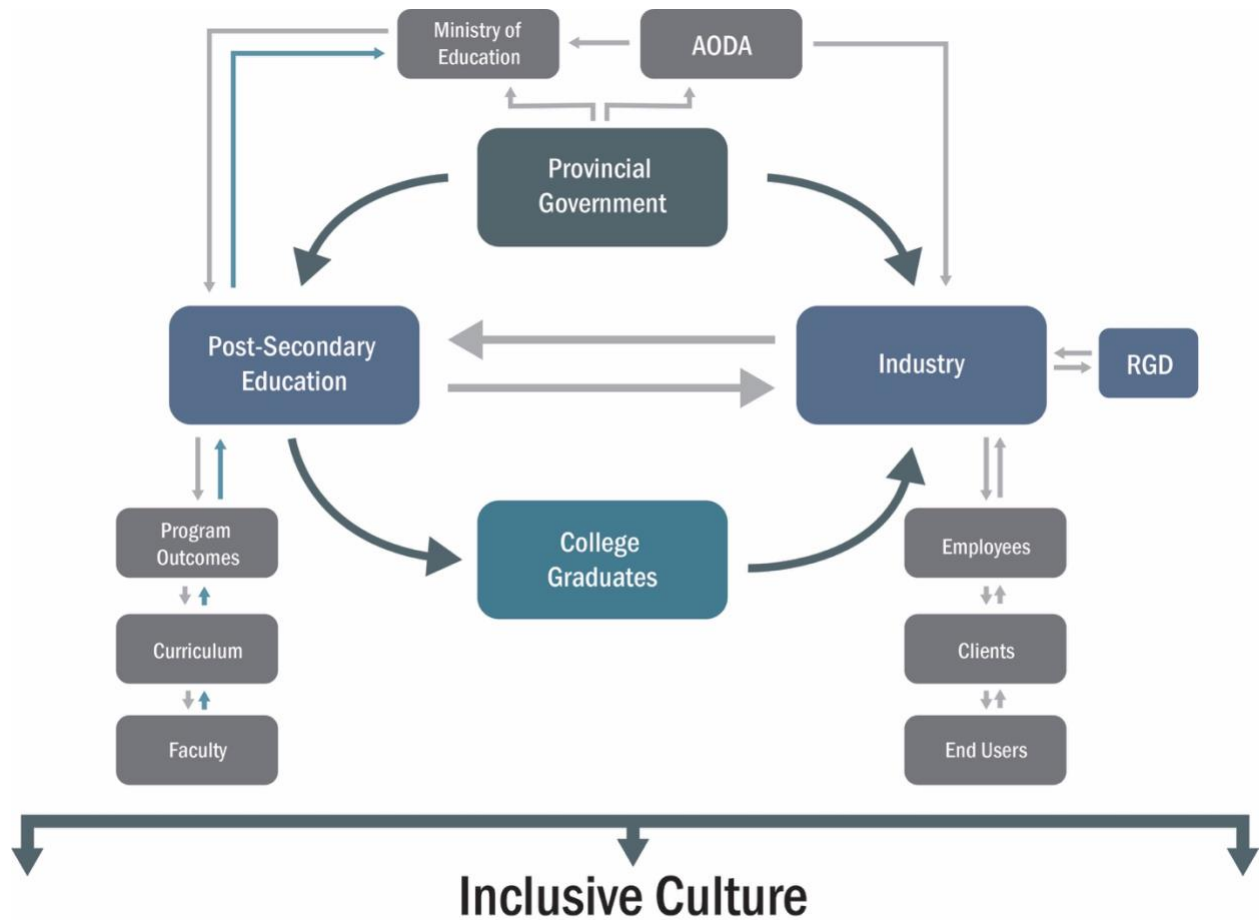
Figure 1. Infographic depicting the landscape of graphic design education

The infographic above depicts the interdependencies of the various stakeholders that will

contribute to the future of graphic design education (figure 1). The primary stakeholders in this

landscape include the provincial government, post-secondary education institutions, their

graduates and of course, the industry. The provincial government is placed at the top of the

cycle since it affects both industry and education through legislation, such as the AODA, setting

professional standards and establishing accreditation standards through the Ministry of

Education. Post-secondary education institutions and industry support each other with students

who supply the future workforce and the industry supports educational institutions in advisory roles. The entire landscape is then encompassed by the audience of the communications produced by graphic designers that is represented by 'inclusive culture' which is the future we are moving towards.

While this project is focused specifically on post-secondary education and how it can promote 'accessibility mindfulness' in its graduates, it will be important to understand the factors that influence each of the stakeholders. This overview of the factors in the landscape will help highlight the complexity of the issues that are central to this project.

Demographic Factors

As previously mentioned, graphic design creates and reflects culture. The socio-cultural environment that the graphic design education system operates in will have an impact on all the stakeholders. As the province's demographics transform, the priorities for government will change to meet the needs of the people which will then trickle down to industry and education. The most significant demographic factor when discussing accessibility and inclusion is Ontario's aging population. Ontario's Action Plan for Seniors anticipates that by the year 2041, 25% of Ontario's population will be over the age 65 (Ontario.ca, 2017). An aging population results in more individuals with age-related vision, auditory and mobility disabilities that will need to be accommodated. Prioritizing accessibility and inclusion as a society will not only support the disability community but also support independence for this significant future population of seniors.

Legislative Factors

Our socio-cultural priorities are reflected in our federal and provincial legislation and standards. Fairness and equitable opportunities are values that federal legislation preventing the discrimination against people with disabilities has supported for many years. Although the Canadian Human Rights Act and its complementary legislation have been important in creating access for the disability community, it is broad and does not consider the systemic barriers in daily life. In 2005, the province of Ontario passed Canada's first comprehensive accessibility legislation. This legislation was based on consultation with people from the disability community and acknowledged the barriers they face in their daily lives in both public and private sectors (Ontario.ca, 2020). The AODA (Accessibility for Ontarians with Disabilities Act, 2005) is the first accessibility policy in Canada to have a goal and time frame for accessibility (Ontario.ca, 2020). The standards identified in the Act acknowledge the barriers to accessing information and defined compliance deadlines that directly impact the graphic design industry.

The AODA has a goal for the province of Ontario to 'be accessible by the year 2025' (Ontario.ca, 2020). Passed in 2005, the AODA is made up of five standards with compliance guidelines for all public and private sector organizations. These standards apply to a range of areas from physical spaces to customer service. The information and communication standards of the AODA are most relevant to this project, as they address the way information is created and communicated. These standards directly impact the workflow and design deliverables needed to be understood and implemented by every communication designer in the province. With the approaching deadline of 2025, there is urgency for graphic designers to develop inclusive

principles in their processes and to produce accessible communications. The drive for legislative

compliance has certainly created awareness of accessibility needs in the industry, and it has

also highlighted gaps in technical knowledge and attitudinal barriers. Professional designers

have been thrust into accessible design, needing to quickly learn the compliance requirements,

their broader context and then change their production methods to successfully design

accessible communications.

While the AODA has created a catalyst for culture change, it also may create oversimplified

perspectives of inclusive design if reduced to accessibility compliance checklists.

In the third review of the AODA, conducted by the Honourable David C. Onley in January 2019,

the need for more awareness and broader cultural change regarding accessibility is a recurring

theme (Onley, 2019). While compliance to the legislation is the first step to improving access,

what is really needed is 'accessibility mindfulness' which is more of a cultural transformation

(Onley, 2019). In order to achieve this (accessibility mindfulness) inclusive design approaches

will need to be considered and developed for every aspect of design. In addition to having

awareness of their compliance responsibilities, designers also require specific technical skills in

order to produce communications that are accessible to diverse users.

They will also require knowledge of inclusive design practices that consider accessibility

throughout the process rather than just remediation after the fact. The review of the AODA

strongly encourages the government to work with post-secondary institutions to build

accessibility into professional and technical programs of study in order to produce a workforce

that is well versed in accessibility (Onley, 2019). For graphic design, some of these requirements have already been incorporated into the advanced diploma program standards (Ministry of Training, Colleges and Universities, 2014), set by the ministry although they remain vague.

In considering the legislative landscape in Ontario, the AODA has made it clear that the graphic design industry is experiencing a knowledge gap in this area, the result of a shortage of resources and experts.

Industry Factors

Fortunately, design is a dynamic industry, accustomed to reinventing itself. From the invention of the printing press in the first industrial revolution to the introduction of the personal computer and the availability of digital design software in the '80s, graphic designers have proven to be adaptable and flexible in the face of change. Today, in the midst of the fourth industrial revolution, graphic designers are being challenged once again to redefine their roles. Due to the rapid advancement in the availability of design tools, multi-media communication channels and artificial intelligence powering generative design applications, the role of the graphic designer is shifting away from one of mainly creation to one that has an increasing element of curation. The skill set required for a modern graphic designer is broadening beyond 'making things' to a more strategic and innovative role rooted in holistic and cohesive communication.

The discipline of graphic design has experienced a transformation from an artistic practice to a professional service. Design production has been demystified and is no longer exclusively the

province of industry professionals. Design tools are now approachable and enable anyone to create and publish their own communications. In the AIGA's Designer 2025 report, it is stated, "People are no longer passive consumers of information in this complex social and technological landscape, but active participants in generating the content and quality of experiences."(AIGA, 2017). With the audience also playing the role of designer, it will be imperative for graphic designers to differentiate their skills and function in the communications industry. Strategic design thinking and higher levels of expertise in complex digital design outputs will become new professional standards.

The widespread availability and ease of use of design software may suggest that professional graphic design is becoming less important, but industry projections suggest otherwise. In Canada, the industry employs nearly 85,000 designers and the projected growth outlook through 2026 is higher than average (Canadian Occupational Projections System, 2020). This growth is attributed to the increase in information that is shared across so many different platforms in various formats. The future of the industry indicates an evolution from traditional graphic design models to more networked communication design (AIGA, 2017). The McKinsey Quarterly Report on the Business Value of Design suggests that design is "more than just a department" (McKinsey, 2018). What were once siloed roles, where the designer focused on visual aesthetics are no longer so. Designers are now essential parts of multi-disciplinary teams focused on problem solving.

Michelle Wilkin of the RGD describes the value of modern design as improving upon something.

It could be a refresh of a logo or moving a product to a new market, but the goal of design is

always to improve on something and ultimately improve our lives (Hamilton et al. 2020)

Looking through this lens, barriers to access and systemic exclusion are communication

problems that can be addressed through design and thus meet the goal of improving the lives

of many.

Efforts to meet legislative compliance are supported by the overall shifts in the discipline. The

widespread emergence of human-centered design from complementary fields such as

computer science, industrial and UI/UX design has initiated an awareness of accessibility and

inclusive design methods. As these inclusive workflows become commonplace for graphic

designers, it will be imperative for post-secondary education to be proactive and equip

graduates with this knowledge.
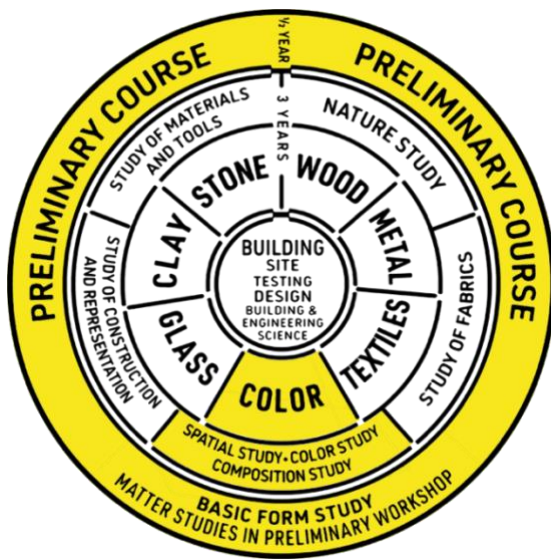
Figure 2. School of Bauhaus Original Curriculum
Sourced from: getty.edu

Education Factors

Although the design industry is dynamic and quickly

adapts to culture shifts, design education continues

to adhere to traditional models. Modern design

education typically mirrors the scaffolded structure

of the Bauhaus curriculum from the 1930s (figure

2). Briefly reviewing the history of graphic design,

we can see that education and industry are

symbiotic in shaping the practice of design and the artifacts it produces. Walter Gropius, in 1919, had a vision for the future of design. As the director of the Bauhaus, he wrote a manifesto and devised a new curriculum aiming to unite craft and industry (Cramsie, 2010). The Bauhaus style of teaching moved away from craft taught through apprenticeship toward more formal training through project-based learning. The Bauhaus 'Preliminary Course' was introduced as a foundation for all students to learn the fundamentals of design. Once this was completed, students would progress to workshop classes where they would focus on designing practical and useable artifacts (Cramsie, 2010). This model of design education continues to persist today, over 100 years later, although it has adapted to meet modern technological needs. To incorporate new and developing digital design processes, educational institutions have equipped graduates with digital design skills. In addition to teaching design theory, faculty have also taught themselves and their students the emerging tools of the trade. The studio classroom soon morphed into a computer lab for teaching software which meant faculty also had to find new ways of teaching.

The Bauhaus model's emphasis on technique and production is effective in teaching skills and developing design ability, but must be expanded to consider the audience of the work and its usability. Sarah Lewthwaite has identified that teaching accessibility is a combination of conceptual understanding, procedural knowledge and technical competence (Lewthwaite, 2019). When considering how to teach accessibility and inclusion, we can see that the existing model of project-based learning established by Gropius can be still be effective but that we need to layer in refreshed and relevant knowledge for our graduates.

Growth in the communication industry and an increased demand for skilled designers will positively impact enrollment in communication and graphic design post-secondary education. In Canada, post-secondary enrollment in visual art and communication technology programs was over 77,000 students for the 2016/2017 academic year (Statistics Canada, 2020). This projected growth and the fast-approaching 2025 deadline of the AODA make this an ideal time to re-evaluate how educational institutions are preparing our emergent designers for a more inclusive and accessible future. In Canada, the 21st century will have legislation push designers into an era of inclusion, shifting workflows and deliverables to support increased accessibility and to design multi-sensory modes of communication. Design education plays a vital role in supporting the needs of society, while the industry's role is to develop an emergent workforce equipped with the necessary skills to respond to an increasingly diverse audience of people with differing abilities.

Project Goals

After examining the broader landscape of the graphic design ecosystem, I recognized that I was uniquely positioned as a design educator to create learning materials and resources to advocate for teaching accessibility within design education. In her research regarding teaching accessibility, Sarah Lewthwaite describes the pedagogical challenges consisting of constantly changing technology and disability contexts along with a lack of clear learning outcomes and formal curriculum to draw upon. She observes that, although there are many guidelines and best practices, there are few discipline-specific resources (Lewthwaite, 2019). This lack of

specific resources in graphic design creates challenges for design faculty who need to interpret the knowledge from accessibility experts to fit their discipline and pedagogies.

The problem that needs to be addressed in design education is not only how can faculty incorporate the technical accessibility skills in our existing curriculum but also how to teach 'accessibility mindfulness' to the next generation of designers. Through my project, I hope to address the following questions:

1. How can changes to the graphic design curriculum in diploma programs help close the knowledge gap in industry with regard to accessible communications and inclusive design process that relate to graphic design?

2. How can inclusive design best practices be embedded in technical curriculum through assessments to modify perceptions around accessibility?

3. How can we promote the concept of 'accessibility mindfulness' across faculties and to then teach these principles to students?

At the end of my investigation, the goal of the project is to develop a practical resource for graphic design faculty that highlights effective teaching activities and assessments to help facilitate the inclusion of both technical accessibility skills and inclusive design principles.

1. Related Research

Graphic design is a burgeoning academic discipline with few resources specifically investigating accessibility. As accessible graphic design matures as a practice, visual accessibility and viable alternatives are a developing area of study along with broader investigations of the design industry. A study conducted in the UK in 2015 explored the client-designer dynamic and who was advocating for accessibility in projects. The results of their study found that although both clients and designers reported that visual accessibility was important in their day-to-day work, the proportion of projects that explicitly requested accessibility was low (Cornish et al., 2015). They concluded that poor client-designer communication with regards to accessibility was the cause and that neither party took responsibility to advocate for visual access (Cornish et al., 2015). These findings reinforce the importance of education and developing graduates that are knowledgeable in accessibility and inclusive design principles so that they can be confident advocates for access with clients.

With regards to accessibility pedagogy, not much has been investigated in the discipline of graphic design. Although much has been written regarding graphic design pedagogy by leading figures such as Steven Heller and Meredith Davis, there is little literature focused specifically on the role of accessibility and inclusion in design and teaching methodologies suitable for the topic. That being said, a considerable amount of research has been done in the field of computer science pedagogy. Human computer interaction (HCI) and web design & development have been researching effective ways to incorporate accessibility into their

curriculums for over a decade. These studies were helpful in establishing some of the barriers

to pedagogical change and the faculty and student perspectives related to this topic. Early

studies focused on 'what' needed to be taught while later studies focus more on the 'how'. In

2006, Brian Rosmaita advocated for an 'accessibility first' approach to teaching web design. The

paper makes the 'march of technology' argument (Rosmaita, 2006) for teaching accessibility

which explains that designing for access supports not just the disability community, but also the

broader population. As technology evolves, so do the ways users access information.

Consequently, embedding accessibility into our design work is a form of 'future proofing'

(Rosmaita, 2006). The 'accessibility first' approach will also make students aware of the social

importance of accessibility and will 'normalize' access in their design process (Rosmaita, 2006).

Measuring the success of these proposed pedagogical changes and the effect on students and

industry are subjects for long term studies that have yet to be investigated thoroughly.

Other studies regarding the teaching of accessibility focused on faculty. A study in 2019

explored the feasibility of a micro-credential model for the professional development of faculty

with regard to teaching accessibility. Their research found that most computer science

graduates learned very little about accessibility since their faculty were not knowledgeable

(Kawas & et al, 2019). Their research found that, although faculty had a desire to learn about

accessibility and had positive attitudes towards teaching it, there were many barriers that

prevents them from taking action (Kawas & et al, 2019). Overall, faculty reported that they did

not have enough time in their curriculum to add in more concepts; "*…courses were already full

of required topics, with no room to add on anything extra…*" (Kawas & et al, 2019). In addition,

faculty noted that they did not have enough time to learn about accessibility on their own in order to be able to teach it effectively (Kawas & et al, 2019). Lastly, faculty reported that they wanted more specific content provided such as activities and assignments to facilitate the integration of these principles in their classes (Kawas & et al, 2019). Sarah Lewthwaite in her research has also identified a lack of discipline-specific resources for teaching accessibility (Lewthwaite, 2019). Her ongoing research identifies the various systemic and attitudinal barriers to teaching accessibility. She identifies that the successful teaching of accessibility requires a combination of conceptual understanding, procedural knowledge and technical competence (Lewthwaite, 2019). Lewthwaite's research looks at the lack of pedagogic culture in teaching accessibility and the need for a better understanding of the 'pedagogy enacted' (Lewthwaite, 2020). In her research she makes note that teaching accessibility has structural problems in that there are subject matter experts who lack experience in pedagogy and that we have seasoned faculty who lack accessibility knowledge (Lewthwaite, 2019). Her current research investigates the most effective methods of teaching accessibility and bridging the gap between the experts and faculty. Lewthwaite is currently conducting a five-year research study, which comprises a systematic scoping review of the literature regarding accessibility pedagogy that is expected to be published in May 2021.

Accessible graphic design and its related pedagogical approach is an emerging practice that doesn't yet have a clear path. Design educators can learn from the successes and failures of computer science education and take proactive action to effectively implement curriculum changes that will have a social impact over time.

2.   Project Methodology

In order to develop the content and structure for the Faculty Guide, it was important to understand the current landscape of graphic design post-secondary education in Ontario at the college level. An environmental scan was required to get a sense of what we are currently teaching in graphic design college diploma programs. How these programs are scaffolded will highlight the core components that need to be addressed in the Faculty Guide. In addition, the development of the content for the Faculty Guide needs to take into account the student experience and how much exposure they are getting to accessibility and inclusive design related topics. Lastly, the content of the Faculty Guide must also consider the faculty perspective. Investigating current practices and constraints along with the resources that faculty is essential to the development of a useful Faculty Guide.

Phase I – Environmental Scan

Before conducting an environmental scan of design education, parameters needed to be defined in order to manage the scope of the project. The scan consists of accredited college diploma graphic design programs in Ontario. Based on the program listing available in OCAS (Ontario College Application Service), there are 15 colleges that offer advanced college diplomas. Programs that are not identified as graphic design specifically were excluded to maintain, as much as possible, an accurate comparison between programs.

A table was created outlining the following data: the college, location and the list of required course names by year of study (see appendix A). A list of keywords for each course was also

identified based on the course descriptions when available. Course listings and descriptions were pulled from each college's website and were assumed to be an accurate reflection of the program.

Based on this table, a comparative analysis was conducted and key course themes across all programs were identified as: design process, design history, typography, page layout, production, web design, multi-media design, graphic imaging and entrepreneurship. In addition to evaluating common themes across all 15 programs, it was noted how often accessibility or inclusive design was mentioned in the course description.

Phase II – Faculty & Student Perspectives

To further understand the landscape of design education and its teaching of accessibility and inclusive design to students, it was necessary to hear the perspectives of both faculty and students. Online surveys were used to allow anonymous participation in the hope of collecting candid responses from both groups. In addition, online surveys allowed to get a broader provincial perspective as opposed to conducting the surveys at a single educational institution. Factors such as geography and the size of the institution can play a role in a college's pedagogical priorities. For example, colleges in urban centers are typically larger with more resources which may attract more experienced faculty. In addition, these colleges are also in close proximity to industry which can provide more 'real world' learning opportunities for students. A limitation of surveying faculty and students across the province was the difficulty of procuring distribution lists. Program leads for the 15 graphic design diplomas were identified and were invited to share the survey links with their faculty and students. Without direct

distribution of the surveys, it is difficult to ascertain how many faculty and students were invited to participate. The methodology for surveying faculty and students received ethics board approval from OCAD University.

a) Student Surveys

Graphic design students in Ontario were invited to complete a short, anonymous online survey (appendix B) regarding their experience of learning about accessibility and inclusive design in their current program. The survey was distributed via email through their program leads and was open to students at any level of study in their program but was restricted to current graphic design students. The survey consisted of qualitative and quantitative questions which explored learning about accessibility through their assessments. The next set of questions explored current knowledge levels and perceptions regarding accessibility and inclusive design.

b) Faculty Surveys

Graphic design faculty in Ontario were invited to complete two short, anonymous online surveys (appendix C & D) regarding their experience with teaching accessibility and inclusive design. Like the student surveys, participants were sent the survey link through their program leads. Any faculty currently teaching in a graphic design diploma program was eligible to complete the surveys. The initial survey used both qualitative and quantitative questions to understand how faculty were incorporating accessibility and inclusive design in their existing assessments. The survey also explored faculty's comfort levels in teaching aspects of accessibility and their perspectives on how this topic can be approached in design curriculum. The survey was then followed up with a secondary survey which explored faculty's experiences with continuous learning regarding accessibility and the resources they would find most helpful.

Since both surveys were anonymous, respondent continuity from the first survey to the second survey was not a factor.

c) Faculty Interviews

The second faculty survey recruited participants for a confidential, remote interview to further discuss their experiences as design educators and the strategies they use to incorporate accessibility and inclusion into their lesson plans and assessments. The interviews are also an opportunity to discuss what information faculty would benefit from in a resource to facilitate including more accessibility into their course content.

3. Key Findings

In general, the results from the surveys were beneficial in understanding the current teaching practices related to accessibility in Ontario colleges and in guiding the design decisions related to the content for the Faculty Guide. As previously mentioned, survey response rates are estimated since the distribution of the online surveys was not done directly but through the 15 program leads. Student response rates were calculated based on the most recent aggregated data on Ontario College enrollment by program for the 2018/2019 academic term (data.ontario.ca, 2019) which indicate that there are approximately 2188 graphic design students. The student survey collected 80 complete responses for a calculated response rate of 3.6%, with the majority of respondents attending a college in the Greater Toronto Area (GTA). Faculty response rates were calculated by assuming a total number of graphic design faculty based on the total number of courses compiled in the environmental scan (appendix A). This

calculation assumes that each faculty member teaches one course per academic year, meaning

for 443 courses there are approximately 148 graphic design faculty in Ontario. The first faculty

survey received 8 complete responses for a response rate of 5.4% and the second survey

received 9 complete responses for a response rate of 6%. Much like the student results, the

majority of faculty participants were employed at colleges in the GTA.

The initial faculty survey and the student survey had similar questions in order to further

understand how faculty and student perspectives were aligned with regards to classroom

activities and attitudes around the topic of accessibility and inclusion. Overall, the survey found

that both faculty and students have positive attitudes towards the topic and both feel that it is

necessary for graphic designers to be knowledgeable and advocate for accessibility in the field.

In terms of classroom activities, the majority of students and faculty indicated that accessibility

was incorporated into assignment descriptions and rubrics only sometimes or never. This

finding indicates that accessibility and inclusion are being addressed in graphic design

classrooms but it does not appear that these skills are concrete learning outcomes that are tied

to assessments.

Student Highlights

Overall, the student respondents were consistent in their perspectives towards accessibility

despite being from different colleges and different levels of study. Respondents to the survey

represented 5 of the 15 Ontario colleges and were primarily students in the middle of their

studies (44%), along with 29% in first year and 26% who were in their final semester.

Early in the survey, students were asked what they thought the ethical priorities were for graphic designers. This question was open ended to reduce respondent bias and to allow students to express themselves in their own voice. Reponses were compiled in an affinity map based on central themes which were then collected in a summary table to deduce the most popular responses. Copyright laws and professional conduct were common themes. However the majority of student respondents mentioned accessibility and considering the diversity of their audience as their main ethical obligations. In addition, many student respondents mentioned a graphic designer's responsibility to be sensitive to different groups to avoid being offensive and to reduce harm in society. These responses indicate that students have the awareness and vocabulary to identify and discuss accessibility and inclusion. It also indicates that they can recognize the role they play in the industry along with an awareness of the cultural impact of the work they do as designers. Considering these responses, we can assume that students were exposed to these concepts at some point in their graphic design studies. This assumption is also reflected in the finding that 66% of student respondents indicated that they had heard the term 'inclusive design'. Based on these findings, it would appear that students are getting some exposure to inclusive design principles and accessibility in Ontario graphic design diploma programs.

With regard to student attitudes towards accessibility, nearly all the student respondents agreed (61% Strongly Agree and 34% Agree) that it was their responsibility as graphic designers to create accessible communications. Interestingly, when asked about their knowledge levels regarding the AODA, most reported moderate (38%) to low (33%) knowledge. We can infer that

although students may be have an introductory understanding of their legal responsibilities, their drive to create accessible and inclusive communications appears to be more ethical and tied to social responsibility.

In reviewing the responses regarding classroom activities, once again student respondents across the colleges were consistent. The majority of respondents were very interested (43%) or interested (39%) in learning the technical skills to create accessible designs. When asked if creating accessible designs affected their creativity, the majority of respondents (54%) reported that it did not affect them, while 25% of respondents reported that considering accessibility made them more creative. Overall, these responses suggest positive attitudes towards learning about accessibility and inclusion in their graphic design studies.

Lastly, student respondents were asked to describe their most enjoyable assignment. This question was open ended and was intended to get an impression of the type of projects students are working on which can inform the suggested assignments in the Faculty Guide. Once again, an affinity map was used to extract the central themes for analysis. The student respondents seemed to value assignments with creative freedom that allowed them to align their project deliverables with their own interests. Students also found assignments that were robust and leveraged a combination of technical skills most rewarding. Lengthy, real-world projects that allowed for iterative feedback were also common themes among the respondents. These findings support creating complex and multi-layered design briefs for students that can include both technical and conceptual aspects of accessibility and inclusive

design. To support holistic, large scale projects, accessibility knowledge will need to be more than just a 'one-off' topic but rather an integrated topic throughout the semester so students can think critically about its implications and apply these techniques and concepts to their work.

Faculty Highlights

The initial faculty survey focused on identifying the current classroom activities regarding accessibility and inclusive design along with general attitudes regarding the topic. Faculty respondents represented 5 of the 15 colleges and the majority were experienced faculty with 3 to 10 years as design educators. Most faculty respondents identified design process, typography and page layout as their core instructional topics and that teaching software was an aspect of their courses. These findings suggest that technical accessibility skills will need to be addressed in the Faculty Guide and incorporated into the sample assessments since practical applications continue to represent a significant component of the college curriculum.

Most faculty respondents reported a moderate comfort level in teaching topics related to accessibility and inclusive design. Generally, most faculty respondents agreed that access and inclusion played a role in graphic design from both a practical perspective and ethical responsibility perspective. Nearly all respondents reported that technical skills for accessible design were necessary for students despite the majority indicating that they were unsure if employers were seeking these skills in graduates. These findings imply that education has the opportunity to take a proactive role in reinforcing accessibility and inclusion by graduating students that will advocate for inclusive design approaches in the field.

The second faculty survey focused on identifying preferred approaches to accessible design

pedagogy and the resources that faculty were using to support their teaching of accessibility

and inclusion. With regards to pedagogy, respondents agreed that there is a need to address

accessibility and inclusion in the curriculum although they were divided in their recommended

approaches. Half of the respondents reported the need for a holistic approach with accessibility

topics incorporated into most courses throughout the program while the other half reported a

preference for a dedicated accessibility course. When asked if every course could discuss an

access and inclusion component, 5 out of 8 respondents agreed. This result is not surprising

since 6 out 8 respondents reported that they currently teach accessibility topics and the AODA

in their courses. Since the respondents have identified opportunities to incorporate access and

inclusion into their own curriculum, it is evident that they would be able to discern

opportunities in other courses. The findings regarding a pedagogical approach are not

conclusive and are reflective of the emerging practice of accessible graphic design and the lack

of proven teaching models.

Faculty respondents were asked to identify the challenges they faced in incorporating

accessibility and inclusion into their courses and most reported not experiencing barriers.

Again, since most respondents indicated that they are teaching these topics, these findings may

not be reflective of the broader faculty experience. That being said, some respondents did

indicate lack of access to assistive technologies and real-world examples as challenges.

Respondents also implied that there is not a consistent approach to teaching accessibility and

inclusive design, which results in students lacking foundational knowledge as they progress in

the program. One respondent indicated, "*maybe they've been taught it all and have forgotten, or they haven't encountered accessibility much yet. There doesn't seem to be a base level of understanding of the principles.*" With most faculty reporting moderate levels of comfort teaching these topics, the student experience may be focused on the same few concepts and techniques in a fragmented manner that doesn't support retention. The single faculty interview that was conducted supported this concern for a lack of scaffolding in the teaching of accessibility and inclusion. Without proper pedagogical planning, accessibility and inclusive design could be reduced to a handful of checklist items as opposed to a more holistic design process. The need for a program-wide approach was also identified in the discussion regarding available resources to faculty. If we consider that the majority of design educators are not full-time faculty members and that there is little interaction amongst faculty, particularly with remote teaching, it appears that fragmented delivery and repetitive overlapping of access and inclusion topics is inevitable. When respondents were asked about how they incorporated access and inclusion in their courses, many identified 'daily' or 'regular' mentions to the topics. However, only a few identified student deliverables such as an assignment or test. These findings help explain the inconsistent experience for students and the lack of concrete learning outcomes tied to assessments.

When faculty respondents were asked about their desired supports for teaching accessibility, the majority identified tip sheets or guides on teaching accessibility to designers, examples of assignments and pre-recorded modules as the most useful resources. While many resources are available to learn about creating accessible communications, few are tailored to the practice of teaching the skills to others. Nearly all respondents indicated that they sought their

own accessibility training outside of their educational institute. These finding support that the faculty respondents have an interest in the topic and have invested their own time in developing curriculum to include accessibility aspects. Based on the experiences of the faculty respondents who are engaged in the emerging practice of teaching accessibility and inclusion to graphic designers, the development of the Faculty Guide will aim to support an integrated pedagogical approach for design programs and to provide foundational resources for faculty that are unfamiliar with these topics.

4.   Design Decisions

The intent of the Faculty Guide is to act as a practical resource for design educators that addresses accessibility and inclusive design from a pedagogical perspective. Although the research focused on Ontario colleges, presumably the guide may find readership in other jurisdictions and other levels of education. The findings from the faculty and student surveys supported the structure and the content development of the Faculty Guide by informing on the core topics to cover and the types of resources faculty needed to facilitate teaching access and inclusion in their courses. The Faculty Guide is designed with the intention to introduce design educators to the key concepts of accessibility and inclusion that relate to graphic design and provide suggestions and resources on how they can be applied in the classroom. The format for the guide will be an accessible PDF to allow for ease of distribution and flexibility in accessing the information for faculty.

The Faculty Guide is divided into four sections; Design Process, Graphics & Images, Colour & Contrast, Typography & Structure. Each section will begin with foundational knowledge on the topic and how it relates to accessibility and inclusion, followed by real-world examples along with relevant discussion points for students to consider and gain a broader understanding of the topic. Additionally, the sections will include a proposed formative and summative assessment with suggested learning outcomes paired with related technical skills to support assignments and software demonstrations in class. Finally, each section will conclude with a curated list of additional resources for faculty to pursue their own exploration of accessible and inclusive design.

Overall, the concept of the Faculty Guide is to offer a variety of approaches to incorporating accessibility and inclusion to the existing curriculum. Taking into account the diversity of teaching styles and the broad range of classes that are included in a graphic design diploma program, the aspiration is that the suggested materials in the guide will prove useful to the majority of design faculty. Creating lasting cultural change with regards to accessible and inclusive communications is an ambitious endeavor. However, if each design educator in Ontario addressed even just one of these topics in their classrooms, education could begin to influence the industry by graduating students who design with an accessibility mindset.

5. Discussion

Léonie Watson, a well respected advocate for accessibility and inclusive design once said:

"Accessibility doesn't have to be perfect, it just needs to be a little bit better than yesterday.".

Although the primary research and resulting Faculty Guide may not contribute to sweeping

systemic changes in design education, it does have the potential to influence faculty to make incremental changes to their curriculums by nature of being approachable and achievable. In reflecting on the results of the research, it was clear that respondent bias was a factor. Despite efforts to craft survey questions to reduce bias, the topic of accessibility and inclusion inevitably produces a social desirability bias. Although the surveys were anonymous to encourage honesty, respondents may feel compelled to respond favourably to accessibility-related topics since there is a feeling of moral obligation produced by society. Authentic responses with regard to attitudes towards the importance of accessibility and inclusion are challenging to obtain and would have required more in-depth testing of the surveys and research on human behaviour with regards to preventing a social desirability bias. In addition, the survey titles and accompanying information letters prominently featured vocabulary around accessibility and inclusion which resulted in attracting respondents who are already predisposed to engage with this topic. Most respondents appeared to be knowledgeable in aspects of accessible and inclusive graphic design. Therefore the results reported are not reflective of the attitudes and experiences of students and faculty who are unaccustomed to these topics. In other words, faculty and students who don't view accessibility and inclusion as a priority are less likely to participate in the study or engage with its resources. Considering that the surveys were not distributed directly to faculty and students but through their program leads, if the person tasked with distributing the study doesn't value accessibility they may not have shared the opportunity to participate.

Another factor that may have played a role in low response rates is the environmental climate of post-secondary institutions at the time of the study. The global COVID-19 pandemic has resulted in major disruptions to Ontario colleges since March 2020 and most faculty have been under tremendous pressure to quickly adapt their course materials for online delivery due to persistent lockdown orders in the province. Although the surveys were deployed in the early months of 2021, it can be inferred that response rates were low due to the increased demands on faculty's time as they continue to deliver their courses remotely. With the immediate increase in screen time and the resulting 'Zoom Fatigue', along with overflowing inboxes, it is not surprising that few faculty participated in the study. Educators across the province are grappling with instructional delivery methods and fundamentals such as student engagement which were once second nature in studio classroom environments. For the most part, faculty are focused on delivering their existing curriculum to the best of their ability on new educational platforms and are perhaps not prepared to consider curriculum changes at this time.

From an inclusive design perspective, the development of the Faculty Guide would have benefitted tremendously from co-design sessions with design faculty and students. However given the situation previously discussed, this was not a possibility. In addition, the Faculty Guide is also missing the perspectives of industry representatives and the disability community. These perspectives are valuable in deciding the required content for the Faculty Guide but were outside of the scope for this project given the time and environmental constraints.

6. Conclusion

Design curriculum is the product of its social environment; it should react to the current state of things and anticipate future challenges in the industry (Davis, 2017). As design educators, it is our responsibility to equip our students with marketable design competencies that they can continue to build upon, and ethically employ, throughout their careers. Acknowledging that accessible and inclusive design is an emerging practice paired with the upcoming legislative compliance deadlines of the AODA, it is evident that it is an ideal time to investigate effective ways to incorporate these concepts into our design curriculums. Design faculty are recognizing the role that accessibility and inclusion play in their discipline and are seeking opportunities to include these concepts in their classrooms however they require more discipline specific resources. The question is no longer "are we teaching accessibility?" but rather "how are we teaching accessibility?".

This project has also highlighted some of the dangers of uncoordinated efforts to include accessibility and inclusion in individual courses. Students may be exposed to an oversimplified perspective and repetitive learning experiences that don't capture the full scope of this emerging dimension of practice. It will be important for faculty to focus not just on techniques but also on principles that will continue to be relevant as technology changes (Davis, 2017). In future work, it will be important to investigate the scaffolding of accessibility and inclusive design principles in graphic design diploma programs. In order to achieve a holistic and integrated approach to teaching accessibility and inclusion it will be necessary for program

planning to consider the distribution of these concepts and techniques throughout the students' time in the program. Further research can be conducted on the correlation between when and how the topics are introduced to students and their retention levels and overall attitudinal changes towards the topic. In addition, further work could be done to understand the industry's hiring needs and what skills they feel recent design graduates are missing with regards to accessibility and inclusion.

Next steps for this project will include further iterations of the Faculty Guide based on feedback from design faculty along with the development of additional sections that address data visualization and interactive media. Since this is an emerging practice, the Faculty Guide will exist as a living document and future iterations will be web-based to allow for more collaborative content creation.

In conclusion, effective pedagogy equips learners for life (Lewthwaite, 2019). By incorporating accessibility and inclusion into our existing design curriculums, design educators will be cultivating the next generation of inclusive graphic designers who will positively impact the industry and society.

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Appendix A

Map of Ontario College Graphic Design Diploma Programs

1. Algonquin College (Ottawa) – 3 year Program

Notes: 37 courses total. *3 courses mention access in the description

Semester 1
- Typography 1
- Graphic Design 1
- Computer Graphics 1
- Concept Sketching 1
- Design Strategy
- Understanding Color
- Communications 1

Semester 2
- Typography 2
- Graphic Design 2
- Computer Graphics 2
- Concept Sketching 2
- Web Design 1
- Communications for Graphic Design

Semester 3
- Typography 3
- Graphic Design 3
- Computer Graphics 3
- Motion Graphics 1
- Business of Design
- Web Design 2*
- Interaction Design 1

Semester 4
- Typography 4
- Graphic Design 4
- Computer Graphics 4
- Motion Graphics 2
- Web Design 3*
- Interaction Design 2

Semester 5
- Graphic Design 5
- Motion Graphics 3
- Web Design 4
- Interaction Design 3*
- Innovation Strategies
- Computer Graphics 5

Semester 6
- Graphic Design 6
- Computer Graphics 6
- Motion Graphics 4
- Fieldwork
- Interaction Design 4

2. Cambrian College (Sudbury) – 3 year Program

Notes: 35 courses total. *0 courses mention access in the description

Semester 1
- Intro Graphic Design
- Typography I
- Digital Design I
- Design Foundations I
- Introduction to Digital Photography
- Fundamentals of Drawing
- Art and Design Communication

Semester 2
- Typography II
- Digital Design II
- Website Design I
- Copywriting I
- Design Foundations II
- Analytical Drawing

Semester 3
- Typography 3
- Graphic Design 3
- Computer Graphics 3
- Motion Graphics 1
- Business of Design
- Web Design 2*
- Interaction Design 1

Semester 4
- Typography 4
- Graphic Design 4
- Computer Graphics 4
- Motion Graphics 2
- Web Design 3*
- Interaction Design 2

Semester 5
- Graphic Design 5
- Motion Graphics 3
- Web Design 4
- Interaction Design 3*
- Innovation Strategies
- Computer Graphics 5

Semester 6
- Graphic Design 6
- Computer Graphics 6
- Motion Graphics 4
- Fieldwork
- Interaction Design 4
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Map of Ontario College Graphic Design Diploma Programs

3. Centennial College (GTA) – 3 year Program

Notes: 28 courses total. *0 courses mention access in the description

Semester 1
- Design Process - Digital Imaging
- Drawing in Graphic Communication
- Two-Dimensional Design and Typography
- Photography and Imaging
- Graphic Design History and Theory
- Creativity in Context

Semester 2
- Design Process Intermediate
- Intro to Advertising and Copywriting
- Editorial Design
- Two-Dimensional Design and Typography 2
- Print Production
- Design Process - Digital Illustration

Semester 3
- Brand Visualization
- Design Process Advanced
- Publication Design
- Web Design 1

Semester 4
- Illustration Workshop
- Package Design
- Web Design 2
- Interactive Design for Mobile Platforms
- Interaction Design 2

Semester 5
- Motion Graphics
- Professional Practice and Self Employment
- Portfolio Workshop
- Infographics and Data Visualization
- Development for Designers

Semester 6
- Field Placement
- Design Thesis Workshop

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4. Conestoga College (Kitchener) – 3 year Program

Notes: 36 courses total. *0 courses mention access in the description

Semester 1
- Design History A
- Illustration 1
- Design Tools and Practices 1
- Typography 1-A
- Design Studio 1-A

Semester 2
- Design History B
- Design Tools and Practices 2
- Typography 1-B
- Design Studio 1-B
- Photography 1
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Semester 3
- Illustration 2
- Typography 2-A
- Packaging 1-A
- Design Technologies 1
- Design Studio 2-A
- Photography 2

Semester 4
- Professional Practices 1
- Creative Imaging 1
- Typography 2-B
- Packaging 1-B
- Design Technologies 2
-

Semester 5
- Creative Imaging 2
- Typography 3-A
- Packaging 2-A
- Design Prototyping 1
- Professional Practices 2
- Capstone 1
- Design Studio 3-A

Semester 6
- Portfolio
- Field Placement (Graphic Design)
- Typography 3-B
- Design Prototyping 2
- Capstone 2

Map of Ontario College Graphic Design Diploma Programs

5. Durham College (Oshawa) – 3 year Program

Notes: 26 courses total. *3 courses mention access in the description

Semester 1
- Design I
- Design Tools I
- New Media Design I
- Photography & Illustration
- Typography I

Semester 2
- Communication For Design
- Design II
- Design Tools II
- 3D & Materials
- New Media Design II*

Typography II

Semester 3
- Graphic Design
- Advertising & Campaigns
- Branding Identity
- Design Tools III
- New Media Design III *
- Typography III

Semester 4
- Design Studio
- Editorial Design
- Packaging Design
- Workflow Production
- New Media Design IV *
- Portfolio Assessment
- Visual Style

Semester 5
- The Business Of Graphic Design
- Portfolio Studies

Semester 6
- Field Placement - Graphics

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6. Fanshaw College (London) – 3 year Program

Notes: 34 courses total. *1 course mentions access in the description

Semester 1
- Design Basic 1
- Typography Basic
- Digital Applications 1
- Interactive Design 1
- Creative Concepts 1

Semester 2
- Design Basic 2
- Typography Digital
- Digital Applications 2
- Interactive Design 2
- Creative Concepts 2
- Camera Basics
- Communications for Design

Semester 3
- Design Intermediate 1
- Digital Illustration
- Digital Applications 3
- Natural Media Illustration 1
- Interactive Design 3 *
- Time, Money & Materials
- Photography

Semester 4
- Design Intermediate 2
- Packaging & Display Design
- Digital Applications 4
- Interactive Design 4
- Digital Illustration Advanced 1

Semester 5
- Design Advanced 1
- Digital Applications 5
- Digital Master Class 1
- Interactive Design 5
- Digital Illustration Advanced 2

Semester 6
- Design Advanced 2
- Digital Applications 6
- Digital Master Class 2
- Interactive Design 6
- Motion Graphics

Map of Ontario College Graphic Design Diploma Programs

7. George Brown College (GTA) – 3 year Program

Notes: 29 courses total. *0 courses mention access in the description

Semester 1
- Drawing 1
- Typography 1
- Design 1
- Digital Applications 1
- Production 1

Semester 2
- Drawing 2
- Typography 2
- Design 2
- Digital Applications 2
- Production 2
- Design Culture

Semester 3
- Advertising 1
- Corporate Design 1
- Web Design 1
- Typography 3
- Production 3

SELECTION OF MAJORS (2 Streams)
Semester 4 (Ad Design)
- Interaction Design
- Advertising 2
- Art Direction
- Ideas & Images

Semester 5 (Ad Design)
- Art Direction 2
- Advertising 3
- Professional Practice Advertising

Semester 6 (Ad Design)
- Design Thesis Advertising

Semester 4 (Communication Design)
- Interaction Design
- Ideas and Images
- Information Design
- Editorial Design 1

Semester 5 (Communication Design)
- Corporate Design 2
- Design Research
- Professional Practice Corporate

Semester 6 (Communication Design)
- Design Thesis Corporate

Map of Ontario College Graphic Design Diploma Programs

8. Georgian College (Barrie) – 3 year Program

Notes: 29 courses total. *0 courses mention access in the description

Semester 1
- Digital Page Layout 1
- Typography
- Graphic Design 1
- Print Production

Semester 2
- Adobe Photoshop
- Web Production
- Adobe Illustrator
- Graphic Design 2

Semester 3
- Web: Interactive Techniques
- Graphic Design 3
- Production Studio 1
- Drawing and Illustration for Graphic Designers
- Photographic Communication
- A History of Illustrative and Graphic Art

Semester 4
- Professional Practices for Designers 1
- Digital Page Layout 2
- Web: Content Management
- Motion Graphics
- Production Studio 2
- Graphic Design 4
- Visual Style

Semester 5
- Graphic Design 5
- Portfolio Development
- Professional Practices for Designers 2
- Production Studio 3
- Three-Dimensional Environmental Design
- Package Design

Semester 6
- Trends and Issues in Graphic Design
- Advanced Graphic Applications
- Field Training

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9. Humber College (GTA) – 3 year Program

Notes: 37 courses total. *0 courses mention access in the description

Semester 1
- Typography 1
- Design 1
- Digital Technology 1
- Motion Design 1
- Creative Thinking
- Web Technology 1

Semester 2
- Design 2
- Digital Technology 2
- Video Production 1
- Creative Coding
- Web Technology 2

Semester 3
- Typography 2
- History of Graphic Design
- Branding 1
- Web Technology 3
- Digital Technology 3
- Experience Design 1

Semester 4
- Design 3
- Typography 3
- Branding 2
- Web Technology 4
- Printing Technology
- Experience Design 2

Semester 5
- Information Design 1
- Marketing Strategies
- Editorial Design 1
- Typography 4
- Design Research
- Entrepreneurship
- Professional Practice

Semester 6
- Information Design 2
- Portfolio: Graphic Design
- Typography 5
- Internship
- Major Studio Project
- Communications Systems
- Digital Publishing

Map of Ontario College Graphic Design Diploma Programs

10. La Cité College (Ottawa) – 3 year Program

Notes: 34 courses total. *3 courses mention access in the description

Semester 1
- Créativité exploratoire
- Dessin
- Techniques de prépresse
- Fondements du design graphique
- Bases de la typographie
- Principes de mise en page

Semester 2
-
- Imagerie numérique
- Composition typographique
- Dessin vectoriel
- Création numérique
- Mise en page
- Initiation à la photographie

Semester 3
- Animation graphique
- Production imprimée
- Typographie exploratoire
- Design adaptatif
- Image de marque
- Illustration

Semester 4
- Édition imprimée et numérique
- Culture professionnelle en design graphique
- Expérience utilisateur
- Illustration numérique
- Emballage
- Design cinétique

Semester 5
- Production d'impression numérique
- Préparation au monde du travail
- Affiches
- Production numérique
- Signes et symboles
- Portfolio
- Portfolio numérique et autopromotion

Semester 6
- Design d'exposition physique
- Création synthèse
- Design d'exposition numérique
- Stage

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11. Mohawk College (Hamilton) – 3 year Program

Notes: 34 courses total. *3 courses mention access in the description

Semester 1
- Graphic Design Fundamentals
- Typography 1
- Creative Concepts 1
- Creative Application Basic
- Visual Web Design 1*

Semester 2
- Typography 2
- Creative Concepts 2
- Graphic Design Layout 1
- Image Editing Fundamentals
- Vector Design Foundations
- Visual Web Design 2

Semester 3
- Creative Image & Photogenic Design 1
- Graphic Design Layout 2
- Design and Production 1
- Specialized Print Design 1
- Visual Web Design 3*
- A History of Illustrative and Graphic Art

Semester 4
- Creative Image & Photogenic Design 2
- Graphic Design Layout 3
- Branding and Design
- Design and Production 2
- Specialized Print Design 2
- Visual Web Design 4*

Semester 5
- Creative Image & Photogenic Design 3
- Specialized Print Design 3
- Variable Data Design
- Packaging Design
- Prep and Presentation
- Web Design 5

Semester 6
- Portfolio Design
- Creative Image & Photogenic Design 4
- The Agency Collection
- Entrepreneurial Business Strategies
- Motion Graphics Introduction

Map of Ontario College Graphic Design Diploma Programs

12. Niagara College (Niagara) – 3 year Program

Notes: 34 courses total. *0 courses mention access in the description

Semester 1
- Applied Digital Technology I
- Design Appreciation
- Drawing Techniques
- Design I
- Typography I

Semester 2
- Applied Digital Technology II
- Colour Theory
- Conceptual Drawing
- Design II
- Fundamentals
- Digital Production Strategies
- Typography II

Semester 3
- Information Design
- Illustration Techniques
- Package Design
- Typography III
- Ideas and Images
- Web Design I

Semester 4
- Editorial Design
- Designing the 21st Century Book
- Critical Issues in Design
- Typography IV
- Time-Based Media
- Web Design II
- Corporate Identity

Semester 5
- Professional Practice
- Thesis I
- Web Design III
- Digital Illustration

Semester 6
- Design Workshop
- Web Design IV
- Portfolio and Exhibition
- Concept to Market

13. Seneca College (GTA) – 3 year Program

Notes: 32 courses total. *0 courses mention access in the description

Semester 1
- Software Training I
- Typography I
- Colour & Design
- Design Thinking I
- Drawing

Semester 2
- Graphic Design I
- Software Training II
- Typography II
- Design History
- Photography and Video
- Design Thinking II

Semester 3
- Graphic Design II
- Software Training III
- Typography III
- Design Production I
- Web Software I

Semester 4
- Graphic Design III
- Branding Design I
- Information Design
- Web Software II
- Interactive Design I
- Marketing Strategies

Semester 5
- Graphic Design IV
- Marketing Design
- Interactive Design II
- Portfolio Preparation

Semester 6
- Graphic Design IV
- Current and Future Trends
- Business of Design
- Professional Practices
- Graphic Design IV
- Field Placement or In-Studio Practicum

Map of Ontario College Graphic Design Diploma Programs

14. St. Lawrence College (Kingston) – 3 year Program

Notes: 39 courses total. *2 course mention access in the description

Semester 1
- Graphic Design 1
- Digital Photography
- Studio Materials & Techniques
- Drawing for Designers 1
- Colour Theory and Perception
- Typography 1
- Digital Tools 1

Semester 2
- Graphic Design 2
- Interaction Design 1
- Digital Imaging
- Drawing for Designers 2
- Design Illustration
- Typography 2
- Digital Tools 2

Semester 3
- Graphic Design 3
- Interaction Design 2
- Design History
- Information Design
- Typography 3
- Digital Tools 3*
- Motion Graphics

Semester 4
- Graphic Design 4
- Branding Design I
- Interaction Design 3*
- Brand Identity Design 1
- Design Research
- Print Media Workflow
- Typography 4
- Web Applications

Semester 5
- Graphic Design 5
- Design Thinking & Strategy
- Interaction Design 4
- Brand Identity 2
- Typography 5

Semester 6
- Portfolio & Practice
- Graphic Design Field Placement
- Photography for Portfolio Development
- Agency Capstone
- Entrepreneurship

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15. St. Clair College (Windsor) – 3 year Program

Semester 1
- Studio Foundations
- Illustration Foundations
- Design Foundations
- Typography I
- Copywriting for Design I
- Digital Photography

Semester 2
- Studio Production I
- Design and Layout I
- Illustration I
- History of Design Art
- Typography II
- Photoshop
- Copywriting for Design I

Semester 3
- Studio Production II
- Design and Layout II
- Illustration II
- Web and Multimedia I
- Typography III
- Photoshop II
-

Semester 4
- Studio Production III
- Design and Layout III
- Illustration III
- Web and Multimedia II
- Intro to Motion Graphics

Semester 5
- Web and Multimedia III
- Digital Photography II
- Motion and Interactive Design I
- Design Agency I
- Business of Graphic Design

Semester 6
- Motion and Interactive Design II
- Project Management
- Design Agency II
- b and Multimedia IV
- Internship

Appendix B

Student Online Survey

Accessibility & Inclusion in Graphic Design:

1. Are you currently studying Graphic Design in College? (Yes/No)

2. Which College are you attending? Choose from the provided list:

   - Algonquin College
   - Cambrian College
   - Centennial College
   - Conestoga College
   - Durham College
   - Fanshawe College
   - George Brown College
   - Georgian College

   - Humber College
   - Collège La Cité
   - Mohawk College
   - Niagara College
   - Seneca College
   - St. Lawrence College
   - St. Clair College
   - Other

3. Where are you in your studies? (Just started, In the Middle, About to graduate)

4. In your opinion, what are the ethical priorities for a graphic designer? (Short Answer)

5. How would you describe the final intended output of the assignments you have completed so far? (e.g. A tri-fold brochure, it's intended output is print, even though you submit your assignment digitally) (Digital Only, Digital & Print, Print Only)

6. What has been your most enjoyable assignment and why? (Short Answer)

7. On your assignment marking schemes, is the accessibility of your designs something that is marked? (Never, Once, Sometimes, Always, Never)

8. Thinking back to your previous assignments, how often was accessibility considered in the project description? (Never, Once, Sometimes, Always, Never)

9. Are you interested in learning the technical skills required to create accessible designs?
(Very Interested, Interested, Sort of Interested, Not Interested, I have these skills, Don't Know)

10. How would you describe your knowledge of the AODA (Accessibility for Ontarians with Disabilities Act)? (Very Low, Low, Moderate, High, Very High, Don't Know)

11. Have you heard the term 'inclusive design' before? (Yes, No, Don't Know)

12. Rate your level of agreement with this statement: 'As graphic designers, it is our responsibility to ensure that the communications we design are accessible."
(Strongly Agree, Agree, Somewhat Agree, Disagree, Strongly Disagree, Don't Know)

13. Do you feel considering accessibility affects your creativity as a graphic designer?
(I'm more creative, My creativity is not affected, My creativity is limited, I can't be creative)

Appendix C

Faculty Online Survey #1

Accessibility & Inclusion | Graphic Design Skills:

1. Are you currently teaching in a College level Graphic Design program? (Yes/No)

2. Identify the College where you are currently teaching. Choose from the provided list:

- Algonquin College
- Cambrian College
- Centennial College
- Conestoga College
- Durham College
- Fanshawe College
- George Brown College
- Georgian College

- Humber College
- Collège La Cité
- Mohawk College
- Niagara College
- Seneca College
- St. Lawrence College
- St. Clair College
- Other

3. Which core topics do you cover in your classes?

- Design Process
- Colour Theory
- Illustration & Imaging
- Data Visualization
- Typography

- Layout & Hierarchy
- Web Design
- Motion Design
- Print Production

4. How many years have you been teaching?
   (1-2 yrs, 3-5 yrs, 6-10 yrs, 11-15yrs, 16 yrs or more)

5. In your opinion, what are the top 3 skills graphic design students need to graduate with to be employable? (Short Answer)

6. Is teaching technical design skills, such as software, part of what you teach? (Yes/No)

7. How would you describe the intended outputs of your assignments? (e.g. A tri-fold brochure is intended as a print output, even though students may not be printing their assignments) (Digital Only, Digital & Print, Print Only)

8. What do you think is the most effective way to teach accessibility and inclusive design principles to the students in your program? (A single course, A single module, A little bit in each course)

9. Do your rubrics include accessibility as a marking point? (Never, Once or twice, Sometimes, Always, Other)

10. Describe your comfort level teaching topics related to accessible and inclusive design. (Very Low, Low, Moderate, High, Very High, Don't Know)

11. How would you rank your knowledge of the AODA (Accessibility for Ontarians with Disabilities Act)? (Very Low, Low, Moderate, High, Very High, Don't Know)

12. How would you rank your knowledge of accessible graphic design? (Very Low, Low, Moderate, High, Very High, Don't Know)

13. In your opinion, what role does access and inclusion play in graphic design? (Short Answer)

14. Indicate your agreement level with this statement: "Inclusive design principles and skills are important to employers hiring my grads." (Strongly Agree, Agree, Somewhat Agree, Disagree, Strongly Disagree, Don't Know)

Appendix D

Faculty Online Survey #2

Barriers to Teaching Accessible Graphic Design:

1. Are you currently teaching in a College level Graphic Design program? (Yes/No)

2. Identify the College where you are currently teaching. Choose from the provided list:

- Algonquin College
- Cambrian College
- Centennial College
- Conestoga College
- Durham College
- Fanshawe College
- George Brown College
- Georgian College

- Humber College
- Collège La Cité
- Mohawk College
- Niagara College
- Seneca College
- St. Lawrence College
- St. Clair College
- Other

3. How many years have you been teaching?
   (1-2 yrs, 3-5 yrs, 6-10 yrs, 11-15yrs, 16 yrs or more)

4. Do you think there is a need to teach accessibility and inclusive design principles in your current program? (Yes, as its own course, Yes, as a topic in most courses, Yes, but only in software courses, Maybe, not sure where it belongs, No, there is no need)

5. Do you currently cover aspects of accessibility in your class? (Yes/No)

6. Do you discuss the Web Content Accessibility Guidelines (WCAG 2.1) and/or the Accessibility for Ontarians with Disabilities Act (AODA) standards in your current curriculum? (Yes/No)

7. If 'Yes', please explain how you incorporated this topic into your curriculum. If 'No', please describe why you haven't incorporated this topic into your curriculum yet. (Short Answer)

8. If you teach topics related to accessibility and inclusion, what is your general impression of your student's interest levels? (Students are interested and ask a lot of questions, Students appear to be somewhat interested, Students are not very interested and wonder why they need to learn this, Students are uninterested and do not participate, Not Applicable)

9. When do you think accessibility mindfulness should be taught in the program? (Early in the program, Always, throughout the program, Late in the program, in their final year, Never)

10. When do you think technical skills related to creating accessible communications should be taught in the program? (Early in the program, Always, throughout the program, Late in the program, in their final year, Never)

11. What is your biggest challenge in addressing accessibility topics in your classroom? (Short Answer)

12. My College offers accessibility and inclusion training to support my classroom activities. (Yes, training is available, Yes, training is required, No, Not Sure)

13. Have you sought out resources and/or tools related to accessibility and inclusion to support your class content? (Yes/No)

14. Are you familiar with the RGD's Practical Handbook on Accessible Graphic Design? (Yes, No, Not Sure)

15. Please select the resources that would help you incorporate more accessibility and inclusive design principles in your curriculum.
    - Synchronous accessibility training sessions
    - Asynchronous accessibility training sessions
    - Tip sheets or guides on teaching accessibility to designers
    - Examples of assignments or case studies that incorporate accessibility
    - Subject matter experts to guest lecture
    - Pre-recorded lectures or modules to share with my students
   - More time to prepare accessibility lessons and assessments

16. Do you think every class in your program could have an inclusive design and accessibility component? (Strongly Agree, Agree, Don't Know, Disagree, Strongly Disagree)

17. Do you think other faculty in your program are teaching accessibility related topics? (Most, Some, None)

18. Do you think it is necessary for graphic designers to be knowledgeable in the tools and processes to create accessible communications? (Strongly Agree, Agree, Don't Know, Disagree, Strongly Disagree)

19. Do you think it is a graphic designer's responsibility to advocate for accessible communications? (Strongly Agree, Agree, Don't Know, Disagree, Strongly Disagree)

Appendix E
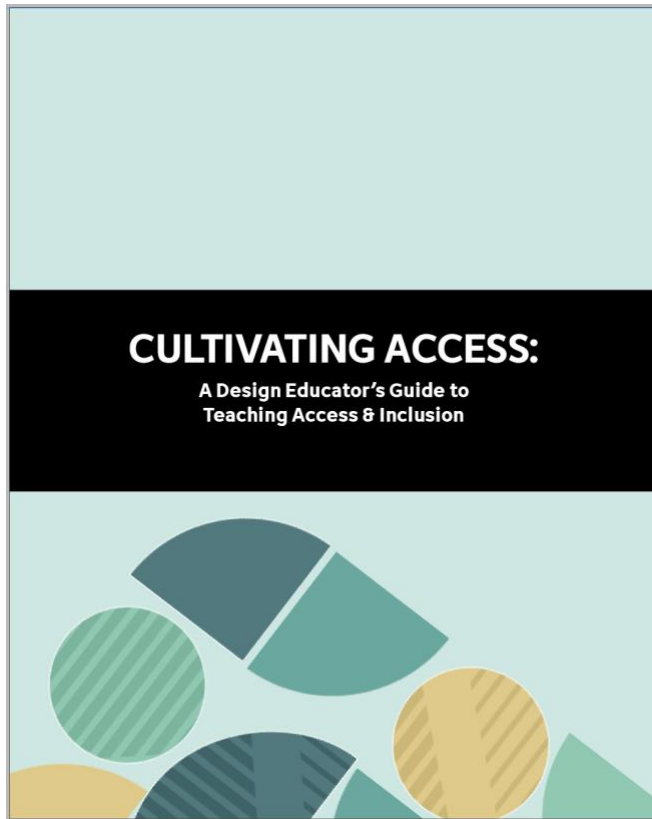
Cultivating Access: A Design Educator's

Guide to Teaching Access & Inclusion

The complete PDF Guide is available in the

OCADu Research Repository.