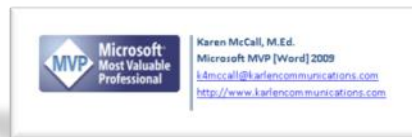




# Karlen Communications

Karen McCall, M.Ed.  
AODA and Education in Ontario  
A Discussion Paper

Phone: 1-519-442-2856  
E-mail: [info@karlencommunications.com](mailto:info@karlencommunications.com)  
Web: [karlencommunications.com](http://karlencommunications.com)



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## Abstract

The [Accessible Ontarians with Disabilities Act](#)<sup>1</sup> or AODA is now the law in Ontario. While the immediate needs are to establish the standards for five categories covered by the legislation there is a large piece of the evolution of access to employment, the built environment, customer service, information and communication and transportation that has not been identified or planned for.

The former categories of AODA are:

1. **Customer Service.** This ensures that the needs of people with disabilities are met as they access customer services.
2. **Employment.** This set of standards ensures that someone with a disability has access to employment opportunities whether they use adaptive technology or not.
3. **Transportation/Transit.** This set of standards ensures that people with disabilities have access to public transportation.
4. **Information and Communication.** This set of standards ensures that people with disabilities have access to hardware and software as well as digital content.
5. **Built Environment.** This set of standards ensures that people with disabilities have access to the physical plant spaces or “buildings” including housing.

As of June 2010 the categories of employment, transportation and information communication are being combined because there are areas that overlap the three categories. While the categories are being sorted out, the issue of this discussion paper apply to all categories.

There are two main components to implementing AODA:

1. The standards we will see in the workplace, on web sites and through business interaction.
2. How we are going to design the curriculum in primary, secondary and tertiary levels of Ontario education to ensure that our graduates are employable under AODA.

We are actively trying to identify and implement the standards and principles for the first component of the AODA legislation. However we do not hear much about how we are going to achieve the second.

For some of the standards identified in the legislation criteria are still being developed. This makes it somewhat difficult to plan for compliance as we move forward. However it is clear that the component that will ensure the success of AODA and lift Ontario to a global leadership role in education is the inclusion and integration of accessible/universal design in every aspect of Ontario curriculum [primary, secondary and tertiary levels].

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<sup>1</sup> Accessible Ontarians with Disabilities Act 2005: [http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_05a11\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_05a11_e.htm)

In the closing panel discussion for the 2010 [Aiming for Accessibility conference](#)<sup>2</sup> held in Guelph Ontario June 8 and 9, Jutta Treveranus of the University of Toronto's Adaptive Technology Resource Centre encouraged us to "...find something unique about Ontario [framed in accessibility/universal design]. And develop it and market it to the world..."

The way to do this is to develop and provide truly inclusive education so that every student in Ontario is working with and producing accessible/universally designed material and that any tools used in education meet or exceed AODA criteria/standards. As educators, parents and students we can advocate for revisions of curriculum to include AODA standards as part of the complete educational process and to begin including universal design/accessibility into the current curriculum.

## Background

One of the questions that keeps returning to the surface of discussions around meeting legislative standards and compliance is "why can't we find employees that know how to do this stuff after we've had the standards and guidelines for 10 years now." This question is particularly relevant in the United States where Section 508 has been in effect for 8 years and is undergoing a refresh to include formats other than HTML. The WCAG 1.0 has been used as a standard for 10 years or more.

The answer has always been both simple and complex: we do not teach our students to create and design for universal design/accessibility as a seamlessly integrated component of everything they produce.

This discussion paper is meant to serve as a starting point that explores the impact on employability for students graduating from primary, secondary or tertiary education without the skills needed to work in a global economy of universal/accessible design.

The author's position is clear and biased: we need to review and revise our curriculum in primary, secondary and tertiary education to include universal design/AODA standards and to teach our students with disabilities how to effectively use their adaptive technology.

Ontario is not alone in legislative criteria to ensure that digital and physical environments are accessible. Other countries have legislation mandating accessible/universal design:

- [Australia and New Zealand](#)<sup>3</sup>
- [Canada](#)<sup>4</sup> which includes a quote from the Canadian Human Rights Code.
- [Europe](#)<sup>5</sup>
- [United State Section 508](#)<sup>6</sup> and [Section 508 Refresh Draft](#)<sup>7</sup>.

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<sup>2</sup> Aiming for Accessibility conference 2010: <http://www.accessconf.open.uoguelph.ca/>

<sup>3</sup> WebAIM resource on accessibility laws for Australia and New Zealand: <http://www.webaim.org/articles/laws/world/australia.php>

<sup>4</sup> WebAIM resource on accessibility law in Canada: <http://www.webaim.org/articles/laws/world/canada.php>

<sup>5</sup> WebAIM resource on accessibility laws in Europe: <http://www.webaim.org/articles/laws/world/europe.php>

<sup>6</sup> Section 508 web site: <http://www.section508.gov/index.cfm?FuseAction=Content&ID=3>

<sup>7</sup> Section 508 Refresh Draft: <http://www.access-board.gov/sec508/refresh/draft-rule.htm>

- [United Kingdom](#)<sup>8</sup>

This is a critical juncture in the evolution of our educational requirements. Not only are there existing people with disabilities but there are people who are [acquiring disabilities due to lifestyle](#)<sup>9</sup> [[obesity is now recognized as a lifestyle based disability](#)<sup>10</sup>] and a [growing population of “baby boomers”](#)<sup>11</sup> who are used to a lifestyle and will not be willing to “give it up” simply because it has not been designed to be accessible.

Combined with increasing legislation providing standards for universal design/accessibility the failure of academic curriculum to seamlessly incorporate universal design/accessibility standards will leave graduates lacking critical skills needed to work in a global economy as well as their own province.

The element that can be the catalyst for our future in Ontario is AODA and the requirements for compliance.

## Misconceptions

There are some misconceptions about accessible environments and universal design. This section of the paper attempts to identify and describe some of the major misconceptions as they exist at the present time.

### Digital IS Accessible

**Myth:** There is a “global misconception” that anything digital is accessible. This is not true.

Electronic devices and the content on them both have to be accessible. For example if an E-Reader cannot be used by someone who is blind [all menus and dialogs are spoken], cannot be used by voice activation [all menus and dialogs respond to voice commands], or the buttons and controls on the device cannot be used by someone with a physical or motor disability, it doesn’t matter how accessible the content is, it cannot be accessed.

Likewise if the device is accessible to people with disabilities but the content is not, the digital environment is not accessible. For example if content is accessible but someone who is blind cannot access the menus or dialogs, they cannot access the content. If someone who uses voice recognition cannot get to the content because the device does not allow for voice commands, the content cannot be accessed. If someone who has a physical or motor disability cannot use the controls to locate and open content on a device, even if the content itself is accessible it cannot be accessed.

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<sup>8</sup> WebAIM resource on accessibility laws in the United Kingdom:  
<http://www.webaim.org/articles/laws/world/uk.php>

<sup>9</sup> Public Health Agency of Canada, Healthy Lifestyle: <http://www.phac-aspc.gc.ca/ph-sp/docs/healthy-sain/chap2-eng.php>

<sup>10</sup> Ontario Human rights Commission, Obesity as a Disability: [http://www.chrc-ccdp.ca/publications/2001\\_lr/page36-en.asp](http://www.chrc-ccdp.ca/publications/2001_lr/page36-en.asp)

<sup>11</sup> Disabilities Demographic Issue Paper from Kitchener Waterloo: <http://www.socialplanningcouncil-cnd.org/pdfs/publications/Disab%20Demog%20issue%20paper.PDF>

This is the same with computer based content. There are many examples of content that is so poorly designed or created that it is inaccessible even if adaptive technology is used.

### **Differently Accessible Content**

**Myth:** If a document or content is created to be accessible, we have an obligation to create differently accessible versions based on end-user preference.

In Ontario, and within the refresh of Section 508 in the United States, there is a growing consumer movement that promotes the idea of a need for differently accessible content. This misconception is directly related to the way we create content and “wrap” it in formats such as word processed, presentation, spreadsheet, multimedia and web based formats.

The background for this movement is the inaccessibility of many types of documents and content. The first pieces of legislation could not predict the popularity and evolution of the Internet and digitally based content. As a result the primary focus of the first pieces of legislation were on ensuring that there were standards for HTML or web based content that would appear in “the average” web page. This did not include PDF, Flash, multimedia, audio, or emerging formats.

The other part of this equation is that there were no techniques for making these formats accessible when the first pieces of legislation were invoked.

The consumers who are trying to access inaccessible content have been provided alternate formats for many types of content over the past few years and this is a difficult service to shift away from. However, there is a line that must be established between something that is universally accessible and end-user preference. If content is accessible the end-user must now take responsibility for reformatting content into something that is preferred over the accessible format.

We can either produce 100 accessible documents or pieces of content or 1 document or piece of content in 100 formats. Choosing the “format on demand” approach means that organizations cannot budget for AODA compliance in the category of Information and communication. There is no way to anticipate the requests for end-user preference. It also begs the question “why make accessible content in the first place if we have to create differently accessible versions?”

### **Accessibility is too expensive**

**Myth:** Creating accessible hardware, software, transportation, and built environments is expensive and/costs more.

This may be true at the beginning of a current project but it is because the workforce is not educated and trained to include universal design principles in every aspect of what they learn.

The current “additional cost” is to retrain the workforce on how to design and implement compliant living and working environments. If employees came to the hiring process with the necessary skills to start work without retraining the cost would be as it is now: for professional development to learn new techniques and methodology rather than a complete re-education of the workforce.

## Clarifying the issue

We are not teaching our students while they are in primary, secondary or tertiary education to create and design according to principles of universal/accessible design yet we now have legislation in Ontario with compliance standards for accessibility/universal design that will affect their employability upon graduation.

## AODA Compliance

There are several areas that can be identified within the existing curriculum where students will need the addition of concepts and practical work in designing and implementing accessible design:

1. Creation of documents including but not limited to word processed, PDF, presentation, spreadsheet, multimedia and web based.
2. Access to social media and collaboration/conferencing tools including but not limited to tools such as Facebook, Skype, Google Apps, Wikis, Microsoft Web Apps, Twitter, Microsoft LiveMeeting, Adobe Connect and so forth.
3. Programming for software applications including but not limited to accounting, word processing, presentation, spreadsheet, web based, multimedia, authoring tools and playback applications.
4. Architectural and interior design including but not limited to way finding, accessible entrances, navigation systems, and other built environment components.
5. Engineering including but not limited to appliance design, vehicular design, and other mechanical devices including but not limited to mobile computers/devices, touch screen, gesture driven devices, banking ATM's, computers, and other digitally based devices.

Every aspect of what our students create **AND** use in the classroom from this point on must be accessible to people with disabilities. This will ensure that students using adaptive technology will have equal and direct access to collaborative learning opportunities.

A “real world” example of the evolution of curriculum and the potential for inclusion is the Ontario government’s decision to [integrate financial literacy into the curriculum](#)<sup>12</sup> of grades 4 through 12. It is not clear from any of the coverage on this initiative whether the tools to be used to teach financial literacy will be accessible to students with disabilities who are using adaptive technology such as screen readers, voice recognition or alternate input devices. At the present time, since many [people with disabilities live below the poverty level](#)<sup>13</sup> access to financial literacy is as important to them as to other students. Tenders and RFP’s for tools to be used with this curriculum need to include criteria for AODA compliance.

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<sup>12</sup> The Wealthy Boomer blog; Ontario to Integrate Financial Literacy into Curriculum:  
<http://network.nationalpost.com/np/blogs/wealthyboomer/archive/2009/11/02/ontario-to-integrate-financial-literacy-into-schools-from-grade-4-to-grade-12.aspx>

<sup>13</sup> Disability Related Policy in Canada, Income Documents:  
<http://www.disabilitypolicy.ca/groups/income/idocs.php#anchor3>

## **Summary**

As we move forward with AODA in Ontario the curriculum in primary, secondary and tertiary education must be revised to include the standards outlined in AODA. These are the standards of accessible universal design.

This revision of the curriculum will ensure that all students are employable upon graduation that employers don't bear the burden of retraining employees to produce to the AODA standards, and that graduates have employment opportunities in a global economy that is inclusive.

We have the opportunity to make Ontario a leader in education for a global and inclusive economy. We have an obligation to our students to provide them with the skills necessary to be successful in their educational process and employable at the end of it.