Designing Accessible Learning Content

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A practical guide to applying best-practice accessibility standards to L&D resources

Susi Miller

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For Farisai Moyo and Ananya Chittolla

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FOREWORD

Digital accessibility is not renowned for being inclusive or easy to grasp.

The Web Content Accessibility Guidelines assume a knowledge of coding which is beyond that of many eLearning professionals. They also assume an awareness of the needs of disabled users and their assistive technologies. Accessibility can seem like a mountain to climb – and for what purpose? How much extra time will you have to invest? Who will pay for it? How many actual users will benefit?

These are natural questions to ask and are worth addressing. But they are not the right questions to start with. Digital accessibility is less about standards and more about mindset, opportunity and professional 'value added'.

With non-digital resources – like a printed handbook – the difference in user experience and accessibility between an amateur version and a professional version is minimal. The professional one might have glossy paper and neater typesetting but from the user's experience they both contain words and pictures. Neither is more 'accessible' than the other because neither can be personalised to suit user needs. On a hard copy document, font size, type, spacing and colour are set. Neither the professional nor the amateur version will read its content to you. What you see is exactly what you get.

Digital resources are different. An amateur can create an eLearning resource which may be capable of some personalization. For example, it may reflow when magnified just because the authoring tool they have used has a responsive template. But a professional with accessibility expertise would bring enormous added value. Their version of the resource may be fully capable of text-to-speech, adaptable in terms of fonts, colours and contrasts and equally navigable by mouse and keyboard. It may be entirely perceivable to a blind person using their assistive technology and entirely operable by a paraplegic who accesses the content using a blink operated switch. Digital accessibility is an exercise in opportunity and imagination. It will only make your practice better, your repertoire wider and your problem solving more agile.

But where do you begin?

You have already made a good start by recognizing your need and buying this book. Even as eLearning professionals, it is easy to forget that learning

is driven by the recognition that there are things you don't know about and perhaps ought to.

When I started my own eLearning journey, I came across a model of education technology innovation where the limiting factor changed through time, starting with:

- hardware – the availability of networked PCs or personal devices; then
- software – the available of suitable software tools; then
- liveware – the skills, competence and imagination of the users.

But liveware does not represent the end of the process. Something is still missing if thousands of developers use software tools to deliver eLearning to millions of hardware devices only to find that more than 10 per cent of the end users cannot adapt the content to meet their needs. The final bullet in the model should be culture – a professionalism determined to create content with as few barriers as possible.

An excellent place to start such a cultural shift is here. Susi's wisdom has been distilled from experience; from trying to improve her own practice, shift her own skill set, learn from end users and learn from other professionals. That gives the book authenticity. It doesn't pretend that digital accessibility is always an easy process, but it offers a pragmatic approach which makes it achievable for everyone. This is the book I wish I had read 15 years ago. It would have saved me an enormous amount of time having to learn things a harder way.

Writing books on technology is a thankless task because technology changes so quickly. Susi has been careful to focus on principles rather than products but the inclusion of products to illustrate those principles is very helpful. We each have favourite tools we use. Understanding the constraints and opportunities within those tools is vital in our journey to creating better content. In some cases, we might even decide to change tools. As global legislation tightens up on accessibility requirements for digital content, the last thing you need is to have your accessibility practice constrained by an authoring tool that makes life difficult for you rather than easy.

Accessibility belongs to everybody. It should be at the core of every eLearning project. Creating accessible content is a marketable skill. If a client hasn't asked about accessibility, ask them yourself. 'How many end users do you want to have a bad learning experience?' is a great conversation opener and brings home the fact that if you're not planning for 'good experiences for all learners' you can guarantee bad experiences for some.

So, learn from this book. There's a clear logic to the layout and a detailed structure that helps you dip in and out as you need to. The book will take you on a journey through digital accessibility.

From a professional point of view, it might be the most important journey you embark on.

Alistair McNaught
Director, Alistair McNaught Consultancy Ltd

PREFACE

Growing up in the eighties meant that my beliefs surrounding disability were firmly rooted in the medical model which was common at the time. This model focuses on a person's disability first and is based on the idea that disability is caused by impairments that need to be treated, managed or cured. Fortunately, one of my first jobs after qualifying as a teacher allowed me to work first-hand with a disabled student. This experience challenged all of my assumptions and preconceptions about disability and marked the beginning of my interest in accessibility.

I met Farisai Moyo in the first class I taught as an English teacher at Gutu High School in Zimbabwe. I'd been teaching for a few years but was horribly nervous, mainly because it was the first opportunity I'd had to teach English literature since studying it at university, but also because it was the first time I'd taught a group of advanced level students not much younger than I was at the time. Soon after beginning my class, I noticed that every time I wrote something on the board, one of the students called Mercy would murmur what I'd written to Farisai. I wasn't sure why this was but was so concerned with maintaining my credibility as a teacher that I didn't want to ask. Luckily at the end of the class, the two girls explained that Mercy was Farisai's 'principal reader'.

Farisai had a condition called corneal opacity caused by measles as a child, which meant that she was blind. Mercy had been chosen by the head-teacher to support Farisai during lessons, and to organize a small group of the other students in the class who also helped her by reading the literature texts we were studying. When I found this out, my first reaction was panic. Like so many other teachers and trainers who discover they have a student with accessibility needs, I had no idea how to adapt my teaching methods to be inclusive. Things didn't go smoothly to begin with, mainly because I wasn't willing to ask for help, fearing that I'd undermine any confidence that anyone had in my teaching ability. It soon became obvious, however, that my reluctance to ask for advice was affecting Farisai's ability to learn. As a result, I admitted to Farisai and Mercy that I was struggling and together we worked out how I could adapt my teaching style and ways of working to accommodate them. The strategies we implemented were very simple. All they needed were a bit of extra thought and planning before each

class and around homework assignments. Yet, although these were relatively easy to achieve, they made a noticeable difference to how effectively Farisai could participate and learn.

There was one aspect of Farisai's learning support, however, which was clearly holding her back. This was her dependence on Mercy and the other students to read aloud the literature texts we were studying. Farisai was without a doubt one of the most gifted students in the class, but it was clear that in order to achieve what she was capable of she needed to be able to study in a way and at a pace that suited her. Access to assistive technology was not an option in our school, but Farisai could read braille. Although we had originally thought it would be impossible to source braille versions of the texts we were studying, after a lengthy search we did manage to find copies of most of them. Since our school was on a remote compound in a rural district of Zimbabwe, we arranged to have these books sent by post. One of my most abiding memories of Farisai is seeing her absolute joy as she unwrapped the huge braille version of *Hamlet* which had been sent from the central library in Harare.

Although Farisai's braille books were not an immediate fix to all of the barriers she faced, they made a huge impact on her ability to learn. What was most noticeable was the confidence that she gained from being able to study independently. It was clear that with the help of the braille texts, she felt that she had the opportunity to achieve what she was capable of and to fulfil her academic potential. This turned out to be the case. Farisai passed her English Literature A Level with a good grade and went on to study at a local teacher training college. Although this was an exceptional achievement, she once confided to me that her dream was to study literature at the University of Zimbabwe. I have often wondered since then whether Farisai would have been able to achieve this ambition if she'd been able to take advantage of the extraordinary developments in technology which have happened over the last 30 years. I am certain that she would.

Working with Farisai was one of the greatest privileges in my career. The experience forced me to reevaluate all of my assumptions about teaching and learning. It taught me to be more aware of the needs of my students and made me realize how important it was to be able to adapt to those needs, ultimately making me a better teacher. Even more importantly, however, it made me rethink my attitude to disability. Working with Farisai showed me that her impairment, in the form of her blindness, was not in itself something which disabled her. She was just as bright and capable as the other

students in her class, and with strategies and accommodations which allowed her to become more confident and independent she was able to fulfil her potential. Farisai's achievements were a perfect demonstration of the social model of disability. This model is based on the idea that disability is caused by barriers which are created when products and services are not designed to accommodate impairments. If these barriers are removed, a person may still have an impairment, but they don't experience disability. The social model of disability often focuses on physical barriers imposed by inaccessible environments or digital barriers imposed by inaccessible technology such as websites. Working with Farisai showed me that it was just as relevant to barriers in learning.

The social model of disability promotes equality and inclusivity because it is centred around the idea that we are all equal, we just have differing needs. This is a concept which is central to this book. If we design inaccessible learning content, we create barriers which disable people's abilities and potential. If we design accessible learning content, we allow everyone to participate equally. We also promote the idea enshrined in the first article of the 1948 Universal Declaration of Human Rights that "All human beings are born free and equal in dignity and rights."[1] I wrote this book for Farisai, because I believe that everybody has the right to be treated equally in their learning experience. If you agree, I also wrote it for you.

Endnote

[1] United Nations (1948) The Universal Declaration of Human Rights, 10 December, https://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf (archived at https://perma.cc/G29P-KM9V)