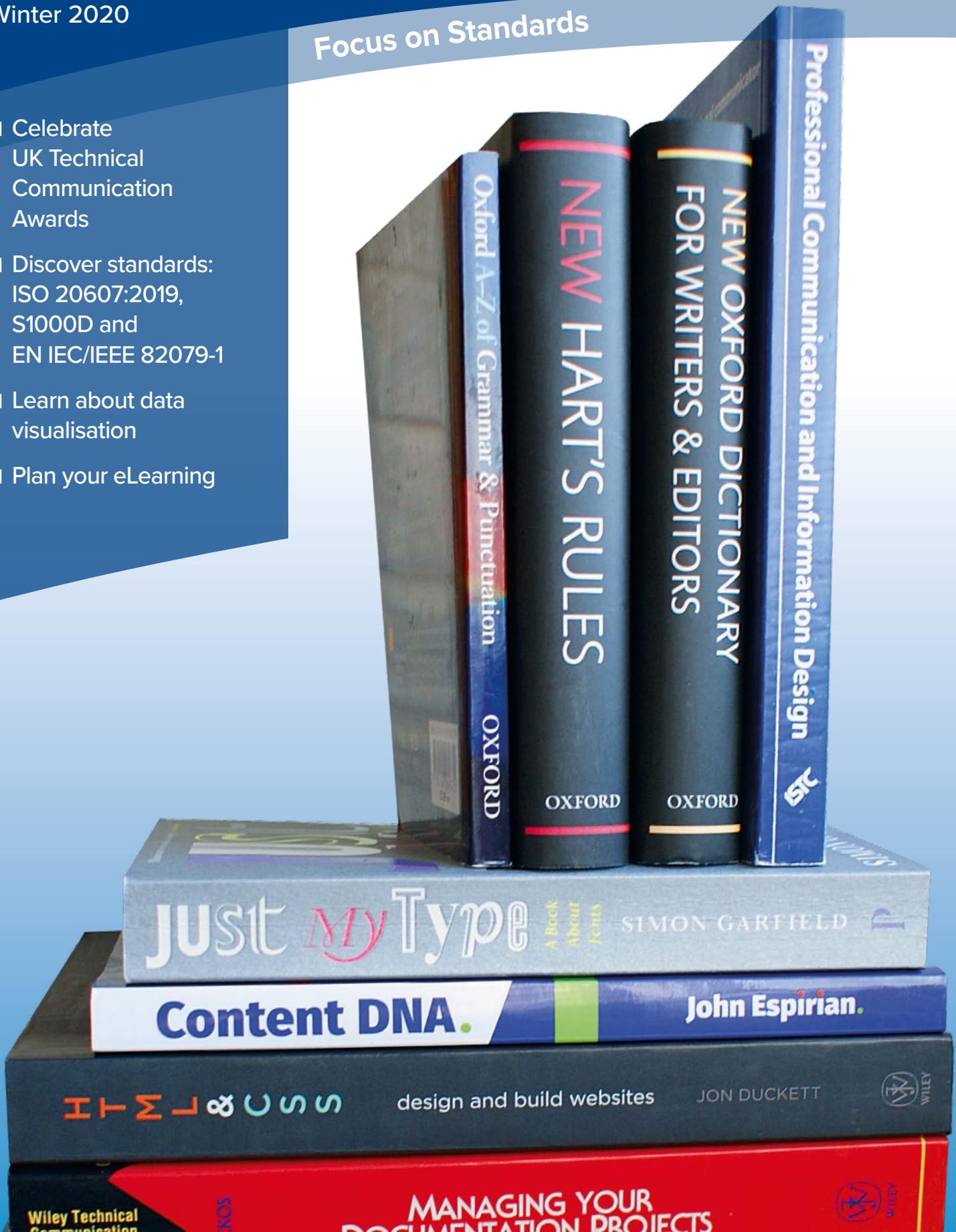# Communicator

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Standards in eLearning

Before you start the eLearning creation process, plan what you're going to do using the standards outlined by Helen Hill.

When the term 'standards' is used in relation to eLearning it can mean different things to different people — usually depending on their role in the eLearning creation process.

In an online search, the most common use of the term relates to how your course and the Learning Management System (LMS) in which it sits speak to each other. Not being someone who usually deals with the technical side of things personally, I think of standards as being the guidance that helps me to create the best learning experience for the learners. So, let's take a look at the myriad of standards that should be considered, whichever side of the LMS you sit.

First things first

The important thing with any of these standards is to agree them before you start the course creation process. They should be discussed in the scoping phases of a project, agreed upon with all the relevant stakeholders and then form part of the brief. By doing this you can avoid some costly rewrites and lengthy amendment processes further down the line, whilst helping yourself to achieve consistency, usability, and functionality.

The purpose of standards is of course to make sure everything works, but also to create the best learning experience you can for the learner and to maximise the likelihood of the learner successfully fulfilling the aim of the course through acquiring and implementing the new knowledge. Therefore, it is important to consider a range of standards encompassing all aspects of course creation.

As with any design, the most successful ones almost fade into the background to allow the message and content to be the focus. They help rather than hinder progress through the content and make the process intuitive for the learners. So, let's look at the standards that can help you achieve this.

Types of standards

I have broken the standards down into three distinct areas — Technical, Design, and Usability standards, see Table 1.

Technical standards

All LMSs have different features, offers and benefits. Combined with the number of authoring packages out there, this leads to a huge number of possibilities of combinations of software and LMS, therefore three file types have been developed as a universal solution — SCORM, AICC and xAPI. These are the main ways to export your course from your authoring tool and all interact differently with an LMS.

AICC (Aviation Industry Computer-Based Training Committee) was the original standard, created by the aviation industry, for how a course communicated with an LMS. This was then taken further to be developed into SCORM (Sharable Content Object Reference Model). xAPI is the most recent development which allowed the collection of more data than just course information.

As I stated earlier, I am far from being a technically minded person and so not best suited to explain this in any depth — there are many more people out there who can do this more clearly. Plus if you are a course creator you probably won't need to know much about this stuff, other than to know what the export types are that you may be asked for — I didn't even know what the acronyms stood for until now.

The only one of these I have ever used is SCORM. SCORM provides detailed information back to the LMS (learner completion rates, pass rates, time taken, etc) and appears to be the most widely used — no customers of mine have ever requested anything but this one.

If you wish to delve into the differences between the three in more detail I recommend reading the Trivantis article *'eLearning standards matter'*. I need to leave this one to the experts, and they explain it in lovely, simple terms better than I ever could.

So, let's move onto the things I do know about...

Design standards

When we refer to design standards this incorporates the written elements of the course as well as the visual. It includes the learning theory and methodology, the choice of media (and how these work) and the incorporation of assessments and certification boards. It can, and should, include your quality check processes.

The best way to ensure a consistent application of design standards is to ensure that *style guides* and a *design brief* are written, and that you have dedicated time and resource towards the quality checking process.

A *design brief* helps this process by laying out from the start the background of the project, the aims, design expectations and who the audience is. By making sure you and/or the team have a clear understanding of the audience, its level of prior knowledge and reasons for learning, the likely learning environment and any specific requests for the business

Table 1. Types of eLearning standards		
Technical	**Design**	**Usability**
SCORM	Writing	WCAG (Web Content Accessibility Guidelines)
AICC	Visual	Readability
xAPI	Methodology	User experience (UX) and learner experience (LX) design
	Media	UI (User interface)
	Assessments/certifications	
	Quality processes	

(branding, etc), then you can ensure that the content is tailored to meet these requirements.

For example, if your learners have little prior knowledge of the topic and do not have an academic background, then the writing style guide should set out that jargon needs to be either removed or well explained, and that plain language must be used to help increase their understanding.

In contrast, a style guide gets much further into the detail of the project. It sets out everything from the terminology and writing styles that should be used, to punctuation and grammar preferences, types of imagery, and how branding should be applied. Style guides generally take much more time to put together, but once you have a template set up, it is easily adaptable to future projects.

Here are some examples of considerations that could be included.

Writing (or editorial) style
- Language specifications — for example, UK or US English, any localisation or regional differences to account for?
- Specialist terminology — what is to be included or avoided and whether a glossary is required
- Tone of voice — how the product/process is described, and does it align with the brand's other communications
- Language style — for example, is the 'voice' active or passive, in the first/second/third person?
- Punctuation and grammar conventions — what are the preferences around lists, bullet points, use of abbreviations, etc?

Visual styling
- Image styling — is photography used, or illustrations? Any other specifics such as black and white or colour?
- Examples of the styling — include imagery here
- Symbols/icons and their style — what style is going to be used? Are they clear as to their meaning?
- Brand elements and the usage policy — for example, any specifics around logo size and positioning
- Guidance on use of characters or people — this should include guidance on how to avoid stereotyping
- Layout and hierarchy — what information or functions need to take precedence and how can you help make the flow logical and intuitive?

The aim is to consider how consistency will be achieved and how it has a clear visual link to the business's brand, whilst ensuring that the learner experience stays at the forefront.

Media
Rather than being specifically about where a media type is right for a piece of content, when referring to standards it is also about looking at the compatibility of the media with the technology available, the restricting factors in media choice and how the learners will be accessing the learning materials. For example, on what kind of device is the learning likely to take place? Will they be using the intranet/internet? Completing it at home or at work?

This can create important considerations for the design of the course — for example, if you know most of your learners will be completing the learning on a busy train on the way to meetings or out in the field, then you will need to design for unreliable internet connections, and for it to work well on phones and tablets, account for noisy conditions (for example, subtitles on videos) and break it into small chunks of learning. You may need to go light on large bandwidth-intensive videos, reduce or avoid the need to download and complete worksheets and to make sure that they will be able to save their progress and resume where they left off if they need to frequently dip in and out.

This can have a significant effect on the content production and costs — there is no use in creating that fancy, all-singing video or animation if it won't work when the learner needs it to. Really take the time to consider the likely learning environment for the learner and how it impacts your choices.

Methodology
When it comes to methodology standards we are looking at the reasoning behind how the learning is put together, the level of the learning and how our choices as designers enhance the likelihood of successful completion.

You need to ask questions such as; how will you:
- Apply instructional design practices?
- Make use of learning theories?
- Check learning is taking place?
- Account for all learners and the range of abilities (scaffolding[1], etc)?
- Increase opportunity for interaction?
- Ensure the learning is pitched at the right level?

This will influence how the learning and assessments are structured and the types of activities included.

Assessments
Assessments are not always given the in-depth consideration they should have, and they can be seen as a quick bolt-on at the end of the learning with a series of multiple-choice questions. Whilst that may be all that is needed in some cases, it is much more engaging to vary your assessment approach and challenge the learners in different ways.

Consider:
- How are you going to assess learning?
- What aims do the learners need to meet?
- How can you make sure the learner is using higher order thinking — that is, putting their learning into practice and not just guessing answers?
- What balance of formative and summative assessment is required?
- Does the course need to be validated by a certifying board?
- Is the learning to be accredited by CPD or an industry body?

Quality processes
What quality standards are in place in your team/project to ensure that standards are met and everything works as it should — Do you have a proofreader or an editor? A quality control manager? Or are you checking everything yourself?

Either way, it is a good idea to have a checklist of things to look for and to make sure you don't try to review everything

1. Scaffolding refers to a variety of instructional techniques used to move students progressively toward stronger understanding and, ultimately, greater independence in the learning process. Source: www.edglossary.org/scaffolding.

at once. Do a run through to check functionality, then punctuation and grammar, then other areas of the list. If you try to do too much at once things will inevitably be missed.

I also recommend that where possible you get someone involved in this process who has not been part of the content creation to have a look through, as it is very hard to edit your own work — we read what we think is there — and it is easy to fall into the trap of thinking that everyone would work through the content in the same way as we do, when actually there can be some surprises when someone else might click the wrong thing, or what they expect it to do.

If you do have to do it yourself, build time into the schedule to be able to step back from the course for a day or two before you complete the checks so you can look at it with fresh(er) eyes.

Usability

When it comes to usability there are four types of standard that should be considered — accessibility, the Readability Guidelines, user experience and user interface design. There is a lot of crossover with each of these areas as different fields and job roles have started to understand each other's role more and borrow tips to incorporate into their own.

Web Content Accessibility Guidelines (WCAG)

Some aspects of this actually will cross over into the technical column due to the nature of their setup, but to keep things simple for now, we will look at it as a standalone field.

Though WCAG was devised for web content specifically, it is a murky area as to whether this specifically relates to eLearning too. However, best practice is to ensure that at least the minimum standards are reached. The benefit of this is that it can actually create a better experience for all, not just those with disabilities — the zoom feature on websites was originally created for accessibility reasons and yet this is something we all use now.

WCAG relates to how a course or website functions in four key areas; here are those areas plus some examples of how they can be met.

It must be:
1. **Perceivable** — for example, providing text alternatives, making content readable by assistive devices, and providing captions.
2. **Operable** — for example, it can be navigated by a keyboard, provide enough time for everyone to read and use the content, and does not use content which could trigger seizures.
3. **Understandable** — for example, text should be readable and work in a predictable manner.
4. **Robust** — content must be compatible with a wide variety of user tools, such as assistive technologies.

Visit the WCAG website for more details. The 'At a Glance' guide is a great place to start — it can be quite overwhelming to jump straight into the full guidance.

Readability Guidelines

Not an official standard as yet (though they should be) the Readability Guidelines were created by Content Design London to advise on best practice for writing for everybody — making it inclusive, accessible, and easy to use. These

guidelines are based on the principles of content and service design and are heavily backed by usability evidence.

Being an avid campaigner for the use of clear language and accessibility in eLearning, I do use them a lot in my work, and find them a great tool for backing up my arguments with why something should be implemented. They advise on everything from writing effective link next (no more 'click here'), structuring sentences, and writing alt text, to cultural consideration, use of pronouns and writing for disabilities.

The guidelines are becoming increasingly well-known as a go-to resource and becoming a standard for those in the know. I really recommend spending some time familiarising yourself with the guidance in them and how they can help you improve your writing and design, to ultimately improve the standard of your eLearning and the learning experience for your learners. Which leads me to the next standard.

User experience (UX) and learner experience (LX) design

UX design looks at how people interact with products and services, with the intention of creating meaningful and relevant experiences. It considers factors broader than the product itself, and sees the product as a combination of experiences.

> *"Think through all of the stages of a product or service – from initial intentions through final reflections, from first usage to help, service, and maintenance. Make them all work together seamlessly."*
>
> — Don Norman, inventor of the term *"User Experience"*

Clearly this is very relevant to the field of eLearning and so there is a lot we can learn from this discipline. In fact, learner experience (LX) design is becoming a field in its own right as an offshoot of UX design and instructional design. LX designers have a broader skillset than traditional instructional designers, incorporating principles from other industries such as UX, graphic design and content design.

It is from this that we can see how LX has evolved — to consider where the learner is before they even start the learning, their experience in acquiring the course, their feelings after they have completed it, their touchpoint with you or a support system throughout, and how the learning can be applied to their life. By using planning materials like user journey maps and user personas we gain a greater understanding of the learner and how we can best meet them where they are.

In short, we need to look at the whole experience and how we can make it as seamless as possible. By taking this holistic view, we can pre-empt potential issues which may arise and improve the flow from start to end.

User interface (UI) design

UI design is a part of UX design, but can also be looked at as a standalone discipline.

This discipline looks at building interfaces in software or devices, and how to make them user friendly, consistent, and enjoyable to use. It encompasses features such as navigation, dashboard features, menus, buttons, and hierarchy.

In eLearning, this relates in particular to the player window that the learning sits within. Luckily a lot of this is often pre-programmed in the authoring tools and we only have to make simple decisions such as colour, whether the menu sits left or right, and which buttons to include. But this should still be done with a good deal of consideration, ensuring we are making such decisions based on the users' needs — not our own preferences — particularly as it ties in closely with accessibility.

We should ask questions such as:
- Is it navigable by keyboard?
- Is the UI easy and intuitive to navigate and consistent in its layout?
- Does the colour pass accessibility checks?
- Are the buttons clear and well labelled with icons and text?
- Are there any cultural factors to account for which may affect your decisions — such as reading right to left?

Summary
Due to the overlap with many standards described here, it makes it relatively easy to pick them up and put them into action. They all complement each other and slot together nicely. Once you have templates set up and are familiar with the standards, it will become second nature to include the use of them and to design your learning with them in mind.

Though this can seem a lot of work to implement, much of it before you have even started putting your content together, by working through this process you are helping to make sure that standards are high — not just in the type of content you produce, but in the conversion of the learning into knowledge that can be implemented.

Working to standards helps everybody — your reputation for quality learning, the learners' experience, your company's credibility. It also helps you to make sure that your course communicates effectively with your LMS and that all the tech works as expected. And by working together we can help keep standards high in the industry. ∎

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Helen Hill

Helen is a Self-employed Learning, Content & Graphic Designer at Unlikely Genius Ltd. She has been working in content and learning design for five years, combining the skills gained during nine years working as a Further Education lecturer, a graphic designer and developing literacy and e-learning in schools.
helen@unlikelygenius.com
www.unlikelygenius.com
Follow on Twitter @unlikelygenius
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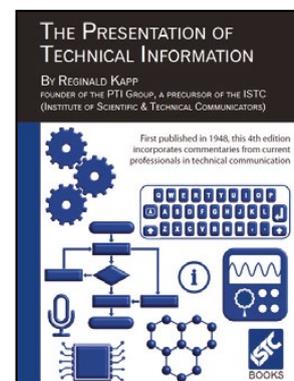
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