

Position Paper on Accessibility aspects of Learner Interoperability Framework for Europe

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Introduction

Accessibility for eLearners is at a crucial point. Though there are still many gaps a variety of technical interoperability standards and guidelines are complete or nearly so. Experience of using them varies from there being no implementations of some standards through local implementations to widespread take-up of some standards and growing but possibly premature influence on policy. There is not long term experience of all of the effects of any of the standards on the accessibility of learning.

There is a need to build joined up systems that implement the standards in an integrated way but this needs to be approached with caution as experience of the use of any particular standard or group of standards grows. There is a danger that policy makers may be misled in ways that are not justified by real evidence by the loud voices of those with vested interests in the success of particular standards.

This paper briefly mentions some major approaches, drivers and obstacles to achieving widespread accessibility in planned integrated learning infrastructures. We present first a number of mini-themes that need attention and then list drivers, obstacles and things that need doing.

Disability and Access For All

An approach to accessibility in eLearning needs to cater both for persons that are in the small number of people who are literally “disabled” by current typical systems (cannot access them at all) and access for everyone, where systems are often less useable for individuals and contexts than they might be if the systems were able to respond to individual requirements. The first, because of the comparatively small numbers of persons and the great variety of assistive technology, often requires expertise that is specialised and rare. The second, which must also cater for the first, requires generic approaches to profit from the benefits of scale. Because technology always advances and improves we can say that the first is where we are now and the second is where we strive to reach and this will always be the case. Thus we seek generic systemic approaches that can adapt to specific requirements of individuals. This requires an approach that can bridge between business models of suppliers and the anarchy of completely individual requirements. To date approaches have favoured and been driven by suppliers and a shift is needed towards better meeting individual requirements of people such as is provided by the work in IMSⁱ and ISO to enable Individualized Adaptability and Accessibility in E-learning, Education and Trainingⁱⁱ. Such a shift will meet the needs of users and suppliers alike.

Dangers of an Approach to Content driven only by Single Object Design

There are many approaches to object design that in themselves may be good (such as the Web Accessibility Initiative Web Content Accessibility Guidelinesⁱⁱⁱ (WCAG)) but which, because they focus on the design or delivery of a single object at point of supply, carry with them an inherent danger that their value may be misinterpreted. It has been adequately shown that such approaches alone are not sufficient to meet the requirements of individuals^{iv}. The danger is that such approaches may be widely adopted alone and enable the claim that the supplier has used such an approach and has therefore “done” accessibility. This problem is serious because political and business pressures may give rise to policy makers being misled and taking us down a path that does not achieve the intended aims (and in fact may harm those aims). Some potentially inappropriate certification schemes are already in development, for example^v. Instead, what is needed is work to show how approaches like this can be used in ways that take account of contextual and individual requirements. Often, because of the need for specialised expertise, objects are made accessible separately from their original authoring and single-object design does not facilitate those real approaches unless its used in concert with other mechanisms such as distributed adaptations.

Lack of Cohesion of Authoring Practices

To date there has been a great deal of work undertaken on accessibility of content distribution (such as the WCAG work) but very much less on authoring and cohesive accessible practices for collaborative participative working such as for example a group of learners with different accessibility requirements co-authoring documents. There is some, such as the Web Accessibility Initiative Authoring Tool Accessibility Guidelines 2.0^{vi} (ATAG) but much more is needed to enable full participation of disabled learners in their learning. This is particularly important given the growth of use of ePortfolio systems as a major component of approaches to learning^{vii}.

That there is to date much more accessibility work that has been done on content than has been done on authoring may be because the main drivers have been the needs of suppliers of content and systems to sell those content and systems.

Granularity of Standards Approaches and Blended Learning

To date many eLearning specifications and standards have taken an approach to granularity that is fairly high-level and approached from the top. Examples would include the IMS ePortfolio specification and the IMS Learning Design specification^{viii}. But making learning objects accessible in these contexts may require

1. aggregating and delivering objects and adaptations for them at a finer granularity
2. aggregating and delivering online and offline objects and services at differing granularities. For example an accessible alternative for some user to some online resource may be a combination of a chapter in a book and an interpreter service provided at some specific time. Similarly an alternative to part of a course may be some completely different course.

Not all standards work to support these scenarios has yet been done. Work that needs doing here includes for example work to define descriptions of offline content (other than books) and activities, work to define services (such as with the JISC Framework^{ix}) relevant to provision of accessibility across eLearning systems and work that shows how guidelines such as WCAG and other single resource-oriented guidelines can be used in context together with possibly different granularities/aggregations of alternatives.

Distributed Adaptations and Metadata

Work is needed to harmonise Metadata schemes in use and conduct evaluated trials with systems of distributed adaptations. Also needed are efforts to bring large vendors on board with the need to facilitate searching and retrieval by accessibility Metadata criteria.

Drivers and Obstacles

This is an open-ended issue and addressable from many perspectives. Of major concern is that many drivers are focused around the needs of suppliers and the needs of disabled end-users are not often well-facilitated by them. Much infrastructure needs building and I believe this can only be done with political drivers and the appropriate standards work being in place. This is so broad a topic that its worth constraining discussion to technical detail as I do below.

Things that need doing (a “to do” list)

A very strong and immediate recommendation needs to be made to policy makers on the possible pitfalls of recommending or mandating that web sites implement **only** single-resource oriented accessibility guidelines.

Work needs to be commissioned as follows:

- Gathering together in a standard sets of cohesive document authoring practices that facilitate collaborative document authoring across disabilities. The CEN-ISSS Document Processing for

Accessibility group^x may be of relevance here. Funding projects that determine and extend the limits of technology in this respect.

- Funding work to develop accessible web services for delivery of content with distributed adaptations.
- Development of a standard that provides missing pieces and guidance on the provision of accessibility in blended learning contexts, to include work to develop:
 - A standard way to describe offline learning activity for integration with online activity
 - Advice on providing alternate activities at different structural granularities
 - Advice on how to use formal and informal single-object design guidelines in blended contexts
- Trials of distributed adaptation approaches to accessibility of eLearning with high priority given to work that harmonises Metadata approaches in multiple sectors.

References

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