

A Common Framework for E-learning Quality

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This paper and that which follows it are linked. They report two significant and generic contributions to the work of better understanding the pedagogic quality of e-learning. The work has been developed for Becta, the strategic education and communications technology agency for the UK. This first paper summarises a common framework for e-learning quality. The strength of the framework is that it enables all players who are interested in any aspect of the quality of e-learning, whether that is the technical, the institutional, the content, or the pedagogic, to see where and how their work relates to each or all of the other components.

We believe that while comprehending the quality of e-learning is a contextual activity, this common framework is sufficiently generic to be relevant across European school systems despite the difference in emphasis, from country to country, on the approach to teaching and learning.

Pedagogic quality framework

There are many views about what constitutes a ‘quality’ e-learning resource or course. Differing vocabularies are used to describe similar associated concepts and attributes. The range of e-learning resources available to educational institutions varies significantly, as does the capacity of institutions and teachers to research, review and select those most appropriate to their needs and those of their pupils. More often than not, the issue of e-learning quality is approached in terms of the quality of the content or the resource product itself. We believe that the quality of resources must be framed within, and guided by, an understanding of the broader quality of the activity of teaching and learning.

In this work we use the term pedagogic quality to refer to the quality of learning and teaching activity using technology-based resources and tools. The quality of the tools and the resources underpins the quality of the learning experience, but we believe that it will afford rather than determine the quality of learning. Quality is ultimately dependent on the decisions and behaviours of designers, teachers and learners. We also extend the term ‘pedagogy’ to relate to contexts in the school sector where teachers normally direct the learner, to those where learners have a stronger role in directing the learning for themselves (1). Beyond that, we are also interested in the impact of technology on those contexts where there is no underlying teacher/learner relationship, and learners largely or wholly determine their own learning (2).

Creating a quality reference framework (3)

It can be said of ‘e-learning’ that if the “e” is removed, then we are really talking about quality teaching and learning. While this is undoubtedly true, it is not the whole story. The scope of the current work is to better understand what additional dimensions – competences, knowledge and understanding – are brought to education when technology is used as the enabler of learning. We also believe that it is essential that this work on e-learning is connected and collaborative, that it is seen as part of the ‘family of quality’ in education and that it should not take place in isolation.

A similar, integrated approach ought to be adopted on a European-wide basis. Pilot projects in e-learning and investigations of classroom practice in the use of learning technologies and ICT resource were analysed to identify common threads. These threads were synthesised into common indicators and were used to establish a framework for e-learning quality which could, in turn, be validated and further developed against yet other sources of evidence and examples of practice. From this framework, reference models and views for particular areas of interest can be extracted; these will consist of subsets of the components and criteria from the broader framework. These specific views will then be used to produce specific outputs, such as tools and guidance: for example, a matrix for evaluation of online content for particular scenarios. Context and rationale This work aims to support innovation in the market by improving our knowledge of where e-learning works particularly well, and to up-date our standards for pedagogic quality, accessibility and safety(4).

If this goal is to be achieved, then we need to bring a sharper focus to the pedagogic quality aspects of e-learning than is currently the case. Improving the pedagogic quality of e-learning is best approached through an inclusive dialogue in which all of the main educational agencies help to set priorities and build capacity and capability for two prime audiences:

- developers and publishers, (whether practitioner or professional, e.g: commercial, noncommercial and teachers) who are designing and publishing the new generation of e-learning resources, and need to develop specialist skills
- education users, (teachers and learners) who are selecting e-learning approaches and need to develop their skills to deploy and use ICT effectively to support teaching and learning

Quality improvement is not just a question of clarifying vocabulary, and publishing quality criteria and indicators - much as that work is essential. It is largely a matter of leveraging professional and institutional development within these communities. In effect, it should be conceived as an ‘education project’.

Therefore the overall aim of the programme of work is to build the shared understanding of ‘what works well and why it works,’ and what makes e-learning compelling and effective. Shared frameworks will enable a coherent approach to this across a range of activities, including the provision of advice and guidance, the promotion of exemplars and the design of professional development projects and programmes.

The common framework for e-learning quality

The overarching common framework for e-learning quality presented here (Figure 1) identifies five broad and distinct categories of:

- 1 infrastructure provision
- 2 technical standards
- 3 content development
- 4 pedagogic affordances and practices
- 5 institutional development

These divide further into 17 sub-categories as shown. Whilst the framework in Figure 1 displays on paper or screen as a list, with a top and a bottom (and therefore seems to imply a hierarchy) it should not be viewed as such. For, most readers, “learning and the learner” will be the pivotal point of the framework.

The boundary running through the centre of the framework is significant. Some researchers believe that it is on this boundary where most tensions can arise.

Above the line, decisions about quality depend on conformance to specifications and standards. These are largely, but not necessarily, exclusively technical in nature. For computer systems to work there has to be compliance.

Below the line is where issues of pedagogic quality are to be found. Here, judgements about quality are situated in fitness for purpose, depending wholly on the education context. The context will include, for instance, the intended objectives and outcomes of teaching and learning, the needs of the target group/s and the expertise of the teacher. There are of course some specifications and standards either above or on the line that have pedagogic affordances (design principles, quality of assets and fit to the curriculum). The appropriate quality language is that of criteria and indicators.

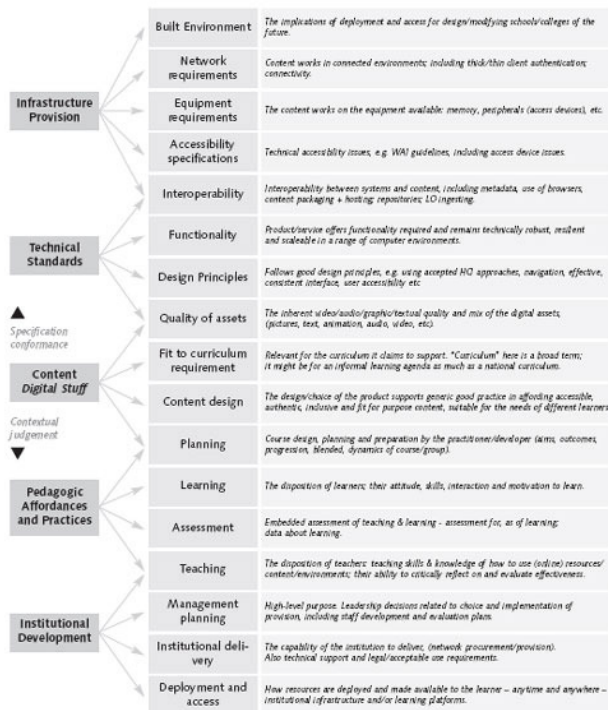


Figure 1: Draft common framework for e-learning quality

The overarching framework (Fig. 1) is not a model. Its role is to provide a high-level overview of all relevant quality components, where they are placed and how they relate to each other. The main purpose of it is to clarify the relationships and boundaries of the range of work on quality (and the related terms used), encompassing the different quality interests and priorities of different stakeholders: industry, academia, professional development, learners and so on. It exposes intentional overlaps and synergies and possible tensions at the interfaces. It enables the same realities to be viewed from different perspectives; an essential activity if misunderstandings and tension are to be minimised. It is also designed to be generic – that is to say, meaningful at all levels in the system.

The framework, however, has some self-evident limitations however. This is the current version of a work in progress and is offered in a spirit of discussion. While it has reached a level of consensus with some significant stakeholders, further validation and testing are

required with wider constituencies to ensure that it is as fully inclusive as possible. Being a static framework (and not a model), it does not model dynamic flow or reveal all the interactions between neighbouring components.

The boxes, for instance, do not imply an equivalence of weight or significance. In addition, if the framework were to be applied in a rigid way, rather than in the developmental and educational manner advocated in this paper, there might be some risk of inhibiting innovation. However, we will consider the role that feedback might play in introducing some understanding of the dynamics between the pedagogic components within the framework. 'Feedback' could enable us to capture how, for instance, content impacts on learning. Such an approach could then strengthen the developmental and educational principles of this framework, and begin to turn it from a framework into a dynamic model.

For now, the framework provides a common core of quality elements, which can be flexibly applied to a diverse range of applications of e-learning.

What does e-learning mean in this context?

We use the term e-learning throughout. By this we mean applications of ICT as a learning technology which may encompass part or all of the elements from a spectrum:

- information/data for and about learning –including digital assets
- Learning Objects
- authentic online research resources
- models and simulations
- tools for e-learning applications
- ICT learning support, learning resources or ICT packages
- user guidance materials
- courses packages (pathways) which may be delivered off-line or, in blended or in full mode, online, at a distance and may be supported, support and/or be exploited by an online community of learners.

At this stage, virtual learning environments are not within the scope of our principles.

Depending upon the educational context, one element, or a specific combination of elements might be selected and used in a variety of different ways which are fit for purpose and reflect different approaches to teaching and learning. The following paper shows how the elements related specifically to pedagogic aspects have been developed into underpinning principles.

Notes

1 The Modern Practice of Adult Education: Andragogy versus Pedagogy, Knowles, M. (1970) Associated Press.

2 From Andragogy to Heutagogy. Stewart Hase and Chris Kenyon. Southern Cross University. 2001 <http://ultibase.rmit.edu.au//Articles/dec00/hase2.htm>

3 For more details on Becta's views about work in this field, see: "A quality framework for e-learning resources: Becta's view"

http://www.becta.org.uk/corporate/publications/documents/Becta_view-quality.pdf

4 Harnessing Technology: transforming learning and children's services. 2005 Department for Education and Skills (England) <http://www.dfes.gov.uk/publications/e-strategy>