E-learning to support the development of disability awareness skills: a case study

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Abstract

This paper describes a case study undertaken at the University of Dundee Library in 2006-2007 in which an e-learning module was developed to support library staff training in disability awareness. The course was developed using the ADDIE model of instructional design. The module aims and objectives are discussed and feedback from participants is used to evaluate the learning materials. The study suggests that there are a number of advantages of using e-learning for staff development in disability awareness, particularly for widely dispersed organisations.

Background

Three years ago, I presented a brief paper at the IFLA Conference in Oslo, on using the IFLA checklist (Irvall and Nielsen, 2005) to carry out an access audit of the library in which I was working at that time, at Fife Campus of Dundee University (Forrest, 2006). Relevant legislation in the UK had recently changed with the Disability Discrimination Act 2005 (United Kingdom Parliament, 2005). This Act expanded the definition of disability and introduced new statutory duties on public bodies (including universities)

- to eliminate unlawful discrimination and promote equality of opportunity for disabled people and

- to publish a Disability Equality Scheme (from December 2006)

Dundee University established an Accessibility Team to co-ordinate the Library's response to disability equality legislation and to recommend and encourage the best use of resources to meet the information needs of disabled library users. One of the first tasks of the group was to carry out an access audit, very similar to the one carried out at Fife Campus Library. At that time the University had nine site libraries, widely dispersed geographically from Stracathro in Angus to Kirkcaldy in Fife. The audit followed guidance from the IFLA checklist and made a number of recommendations to help improve both the physical space in the libraries and also generic services to users including customer care and staff development.

From the initial library access audit at Fife Campus, to a University-wide audit and a focus on staff training, this paper can be seen as a follow up to the presentation I gave three years ago in Oslo and will focus on the value of e-learning to support disability awareness training. A detailed account of the pilot study of this project was recently published in *Library Review* (Forrest, 2007).

Staff training

When the University-wide access audit flagged up the need to support library staff training in disability awareness, the Accessibility Team considered a variety of training methods and the advantages and disadvantages of each, e.g.

- a study day provided by an external trainer to which staff could attend

- a repository of online resources on disability issues for use by library staff when required

- a web-driven course using the University's virtual learning environment (VLE)

As the University Library covered nine widely disparate sites, it was not considered feasible to train all staff through study days which would need to be repeated to enable everyone to attend. It was decided that an online reference resource alone would not be flexible enough to accommodate the different learning styles and information needs for staff development and as such was not likely to be used. Following much discussion the Accessibility Team began to develop an online course which would be delivered via the University's VLE on Blackboard software and accessible to all staff. It was decided that the course would take place over a five-week period, requiring a commitment from participants of one hour per week. At the end of the course the learning materials would remain available to staff which

they could then use as a reference resource and as a way of reviewing and revising their knowledge of the subject.

Developing the module

A sub-group of the Accessibility Team was formed, consisting of two librarians, two disability advisors, an IT disability support officer and an academic with wide experience of e-learning.

The sub-group used the ADDIE model of instructional design (Intulogy, 2006) to support it in the task of developing the e-learning materials. Staff training needs along with a variety of training methods were **analysed**. Information from this helped in the course **design** and **development**. Fourteen library staff took part in an initial **implementation** or pilot from October to December 2006 and an **evaluation** of learning materials was used to improve the course before roll-out in April 2007.

Module aim and learning outcomes

Both the module aim and intended learning outcomes were clearly stated in the introduction to the course. The purpose of the e-learning module was to encourage library staff to learn more about the needs of disabled people and use this understanding to provide an excellent customer-focused service to all library users.

By the end of the course it was expected that participants would have a better understanding of

1. the relevance of the Disability Discrimination Act for library services;

2. the most appropriate language to use when discussing disability matters;

3. how to promote inclusive practice in delivering library services;

4. how information technology can be used to provide equitable access to learning resources;

5. the alternative formats in which learning resources can be made accessible to readers with print disabilities

Module overview

In order to achieve the learning outcomes, participants were expected to commit a minimum of one hour per week, preferably made up of a number of 15-20 minute spells in order to interact with the learning materials. There was an optional face-to-face introductory meeting for all participants where they met the e-tutors and other

colleagues who were participating. At this initial session, participants were asked to complete a pre-study/diagnostic quiz to determine the level of their knowledge on disability awareness.

The e-learning materials were divided into five broad themes for each weekly unit of the course. The themes were

- legislation

- the language of disability

- inclusive practice and customer care

- harnessing assistive technology to support people with disabilities

- using and creating material in alternative formats

The design of the course was consistent for each weekly unit: there was something to read, something to do and something to think about with additional reading for those who wished to learn more. The "something to do" usually entailed some type of online learning activity to encourage the participants to interact with the learning materials and with each other. For example, one activity asked participants to reflect on their journey to work that day and consider how this journey might have been undertaken by someone with a disability and the barriers they could have faced along the way. Participants were then asked to go to the discussion board of the module and write about their reflections and compare these with others. Another activity asked participants to work together in groups using team websites (or wikis) and design a guidance sheet for new library staff to help them provide a good service to people with different disabilities. The unit on harnessing assistive technology included an activity which attempted to simulate the experience of having a print disability: participants were encouraged to use screen reading software to "read" material on screen by listening to a computer-generated voice.

Participants were given the opportunity to test their developing knowledge and skills with the occasional online assessment. At the end of the course, questionnaires were used to obtain feedback and the results of a post-study quiz helped to define any changes in participants' level of knowledge concerning disability awareness.

Evaluation and participant feedback

The results of the post-study quiz indicated that there had been an improvement of approximately 30% in the participants' knowledge of disability matters. Comments and feedback collated through the final questionnaire provided an additional source of evaluation.

The aim of the module was to encourage library staff to learn more about the needs of disabled people. Participants were asked to consider their own learning and indicate if they felt their knowledge and awareness had increased. 79% agreed that the module aim had been achieved and some provided comments, e.g.:

- *Being aware that disabilities are not all visible and everyone is an individual with different needs*

- *It has made me much more aware of the many electronic tools that the library can/could offer readers with particular needs*

Most participants (87%) felt they had increased their understanding in each of the intended learning outcomes.

The online learning activities which used the discussion board were popular with participants. 86% indicated they had enjoyed using this facility and that it had increased their learning, e.g.

- *Being part of the discussion board meant others came up with ideas and thoughts that made you think more about disabled people's needs*

- *Made you feel part of something and not isolated, valuable on a distance learning course*

Another type of e-learning activity is the online quiz. The module included one of these in the unit on disability legislation. Participants were asked to complete this quiz, check their answers and go to the discussion board to compare their results with others. The quiz was very popular and 86% of participants commented that they would like to have seen more quizzes in the course.

Participants were asked what they felt were the **best things about the e-learning course** and several mentioned the flexibility of being able to study at a time and place which most suited them, e.g.

- *Online course meant that learning could be fitted into the working week in chunks – which I find easier than the "information overload" that a full day seminar often brings.*

- *Doing it in your own time, being able to go back and refer, having each previous unit available, having tutors available.*

By providing the course online, staff from remote libraries and also staff who worked part time were able to study together with colleagues based in the main campus. The second time the course was run, there were a number of enrolments from another Scottish university library. Through the discussion boards and group activities, participants learned about accessibility issues in this neighbouring institution and commented on the value of hearing how another university tackles the same issues.

However, when working on the unit relating to accessible software, it was found that different resources were available from each university and so required a different approach to learning.

A gratifying 93% of participants said they would recommend the online course to colleagues. Several commented that they felt disability awareness training was vital for front line staff and that all staff would benefit from participating on this course. One participant stated:

- *I have learned that as a non-disabled person how much we take for granted. This course had made me look at things in a different light.*

Generally, then, the feedback from participants on both the pilot and the first roll-out of this course indicates that it was well received.

Findings and conclusion

This small case study of delivering staff training in disability awareness through e-learning suggests that there are a number of advantages in using this medium. Most of these are common to other types of e-learning courses and include a flexible approach to learning where students are able to study at a time and place which is most convenient for them. This is especially useful for distance learning and for organisations wishing to train staff who are based in very disparate workplaces. In this study participants valued the online discussion board where they met to exchange ideas and learn from one another. Team websites or wikis were used in a second version of the course and enabled participants to work together on the same document, modifying this in different ways and commenting on each other's contributions. An online quiz allowed participants to test their knowledge and learn from mistakes. This quiz could be taken at any time and repeated, if desired.

The e-learning module included a number of "re-usable learning objects", e.g. Word documents, PowerPoint presentations, online learning activities, links to relevant websites and a quiz. Although these were very time-consuming to develop, once created they could easily be updated and repeated in future courses. The ability to control the timed release of the learning materials over the five week period meant that later units could be carefully tailored to meet the needs of the current cohort of students as they progressed through the material. An additional benefit of presenting training online was the ability to save on paper and printing costs normally associated with traditional courses.

An attempt was made to include an activity which would simulate the experience of one type of disability and perhaps more use could have been made of websites which aim to do this for various print disabilities. In the current study a number of participants and e-tutors had personal experience of disability and were willing to share this through the discussion board. In an e-learning environment disabled

people could be invited to contribute anonymously (if they wished) to enhance the value of the course to non-disabled participants.

An important aspect of disability awareness is customer care and the development of interpersonal skills and it could be rightly argued that this can only be achieved through face-to-face training. However, I hope you will agree that this small case study suggests there is some value (particularly for organisations which are widely dispersed) in using e-learning to support the development of disability awareness skills.

Acknowledgement

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