

GUIDELINES FOR E-LEARNING IN THE JOINT DONORS COMPETENCE DEVELOPMENT NETWORK



**TBL, Technology-Based Learning Group
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GUIDELINES FOR E-LEARNING IN THE JOINT DONORS COMPETENCE DEVELOPMENT NETWORK

1. Introduction

1.1 Objectives

At the Joint Donor Competence Development Network conference in Copenhagen in June 2004 the newly-started Technology-based Learning subgroup received a mandate to develop *“draft guidelines on the development, administration and management of e-learning across joint-donors by the next workshop for discussion and approval”*.

The main objectives of this work are to

- a. facilitate the sharing of e-learning courses
- b. facilitate the sharing of e-learning expertise
- c. assure the quality of our separate and joint e-learning courses

1.2 What is e-learning?

E-learning is used here in the sense of any kind of electronic or technology-supported learning. In many cases it is web-based, using the Internet as its medium of distribution, but it can also cover, for example, training distributed on CDs or via mobile telephone networks, which represent a possible distribution channel in the future. While e-learning is distance learning in its truest form, we choose to eliminate here traditional distance learning which only covers distribution of training material by post and communication with the trainer by letter.

E-learning can take the form of

- **complete courses**, where the participants work their way through all the learning material and gain both overall and detailed knowledge of the subject they are studying.
- **support programmes**, so-called just in time learning, where participants' use of the programme is motivated by an immediate need to learn more about a specific work routine. They access only small parts of the learning material at any given time and will spend no more than a few minutes gaining the necessary information before returning to their original work.
- **virtual learning communities**, networks of people with common needs and interests who share documents, research, comments and questions with each other. Since this category is dealt with in connection with knowledge management, we will not deal specifically with it in this document.

While purely electronic training, based on interaction only with the computer, does exist, **blended learning** has in recent years become more and more popular. Blended learning makes use of other learning tools and situations in addition to a computer/mobile phone. A human tutor, who interacts with the participants at various levels, from answering questions and giving general guidance to organising the entire learning experience in a more traditional

teacher/student relationship, is the most obvious example. But blended learning can also include virtual group work, physical study rings, workshops, use of books and other printed documents, among other things.

1.3. Where does e-learning apply in a joint donor perspective?

Our target group, principally staff stationed abroad, both expatriates and local, was previously very difficult to supply with regular training. Traditional classroom courses meant either travelling home for training or participating in regional seminars. Because of the distances involved, both were costly affairs in terms of time and money. The result was that staff, in many cases, did not receive the training they needed. Recent social developments, such as globalisation and the need for adaptability, mean that this is no longer viable. Our organisations belong to the knowledge sector and our workers rely on constant updating of skills in order to do their jobs efficiently. E-learning, by delivering courses and just-in-time learning swiftly and accurately throughout the world, helps us to fulfill our training needs and obligations. In addition, cost per capita is greatly reduced by using e-learning, where the costs of development and distribution are the same for 2000 participants as for 10. The Danish anti-corruption course, for example, lasting approx. 20 hours and taken by 850 participants, cost DKK 950.000. This amounts to a cost of 150 EURO per capita, which is considerably lower than comparable classroom courses. See Appendix 1 for details.

Nevertheless, not all kinds of e-learning are suitable in all situations. Limitations derive from:

- **The technological infrastructure.** Only five years ago many areas of the world, particularly those where our organisations were taking part in development cooperation, did not have stable access to the Internet and many computers did not support full multimedia presentations. Technological advances mean that each year the situation improves. Where there are still difficulties, we must consider a form of blended learning that reduces the amount of electronic intervention, perhaps supplying most of the course material in printed form, and only using e-mail for communication with the trainer and other participants, or using CD-roms instead of the Internet.
- **The nature of the material to be learned.** Traditionally e-learning was used in the training of hard skills, such as computer programming or the simulation of technical processes, where there is little ambiguity and the literal nature of computer programming is not a drawback. Simulations and multiple-choice interactive tests characterised such training. Nowadays, the introduction of blended learning, better communication tools and, not least, more relevant pedagogical methods such as problem-based learning have made it possible to give training in soft skills, too. Several countries in our group have experience in e-learning for soft skills such as anti-corruption and HIV/AIDS, topics where there are few clear answers and which require reflection and discussion. The intervention of a teacher, group work and discussion fora make this possible.
- **The target group's culture and learning preferences.** This is a highly relevant question for our organisations+, which have local employees with a cultural background very different from our own. Variety of tools and presentation methods must be ensured so that we reach as many participants as possible, while at the same time avoiding any alienation of the various groups.

The above-mentioned limitations have to be taken into consideration when planning training activities. Given that the big advantage of e-learning is its flexibility, however, e-learning – or

elements of e-learning – will apply in most cases, and will be a valuable tool for providing training to our target group.

2. Principles of sharing

The following section focuses on principles for joint donor cooperation regarding e-learning, and also outlines some of the lessons already learnt.

2.1 Degrees of sharing

E-learning programmes and resources can be shared in various ways:

1. We can open participation in existing courses directly to staff of the other agencies in the group. In this case no attempt is made to adapt the course to other countries' interests, and foreign participants have to make do with the supplier's examples and documents. They are enrolled as users of the supplier's Learning Management System (LMS).
2. We can allow other members of the group to use the basic files, documentation and codes of existing courses which they can adapt to their own needs and publish in their own LMS's. In some cases small changes, such as links to national documents or other, more relevant, examples, are enough. In other cases designers may want to make more radical changes, keeping the structure and changing the content, for example. Even so, this saves a lot of time and work.
3. We can develop new courses from scratch in collaboration, as in the case of the Nordic HIV/AIDS course. This is relatively time consuming in the design phase, but the end product is tailor-made and quality assured for all parties involved.
4. We can pool individual resources such as teachers, illustrators, content suppliers. The quality of the services supplied by all these people is crucial. When we identify good suppliers we should be able to tell each other about them and share them. The fact that they live in another country isn't really important where e-learning is concerned.
5. We can share case studies and local examples.

In principle, all these methods can and should be adopted by the joint donor group. All require a certain amount of standardisation, as described in the following pages, especially under point 3, *The Tools of the Trade*.

2.2 Sharing Administrative Routines

Some of our agencies are fairly small, with a relatively limited target group for any given course/support programme. In addition, marketing of and recruitment to courses is becoming increasingly difficult for many of us. Lack of time is a problem, and training needs come way down the list of priorities. The result is often low application rates for non-compulsory courses. It's probably not worthwhile running a course which has a paid tutor/facilitator with less than 10 participants. In addition, collaborative learning is limited when there are only a few participants. That's when admitting participants from other agencies makes sense.

Good information flow is essential. We must use Train4dev as a clearing house for sharing information about existing courses/programmes and those being planned and developed. This isn't happening yet, so we need good strategies and routines for marketing and use of the network. Plans for Train 4Dev in the near future include specific areas for existing courses

and planned courses. The site must also be user-friendly enough to encourage donors to check it often for new information.

2.3. Sharing Costs

How can we organise payment? Direct payment for participating in each other's courses is the least practical solution because it involves a lot of administration, time and money in the form of currency transfer etc. for relatively small amounts. The best solution would ideally be a form of barter, allowing free and flexible use of each other's e-learning programmes without payment. This is only fair, however, as long as everyone contributes equally and profits equally, and at the moment we are far from that stage.

In the case of joint ventures, such as new courses being developed and run in collaboration, it is possible to rotate costs on an annual basis.. Development costs of the HIV/AIDS course have, for example, been covered mainly by Norway, while administration costs are met each year by another agency. Alternatively, each donor can contribute a pre-determined amount to a central fund which we can draw on for running expenses. Finally, we refer to, which covers costs and other contractual issues.

In conclusion, all expenses connected to Joint Donors cooperation should be covered in the same way, without special arrangements for individual topics such as e-learning. The issue is discussed in the paper on "Development of improved rules and procedures for Financing and Administration of Joint Donor Staff Training Activities", a general model being developed for the network. The general question of financing is therefore left to the Annual General Meeting to determine.

2.4. Sharing Organisational Experience

Support from the top is crucial for the success of e-learning. While most organisations today pay at least lip-service to enrolling technology in the service of learning, it can still be difficult to get practical and financial support. Get management involved at an early stage. A good theoretical foundation is a great advantage, so have clear objectives and action plans to present to management. At the same time, demonstrate your courses to them so that they know exactly what you are talking about.

If you are starting out on e-learning for the first time, it is a good idea to form a reference group, consisting of colleagues from IT, Training and Personnel Departments as well as user representatives. Regular meetings have two advantages: a) they keep everyone informed and eventually turn group members into motivated advocates for the project, which they feel they have a share in, and b) they see the project from a different viewpoint, have different insights and give you valuable feedback in areas where your own competence is low.

Formulate explicit routines, with the help of the personnel department, for e-learning, that cover such matters as:

- when
- where
- what equipment
- what happens to the rest of your work while you are studying

Dedicated times and rooms can be a solution.

Work closely with the IT department from an early stage, so that they can advise on technical matters. It is also important for them to understand their own role, because they will almost certainly be involved and need to make plans. With their help, check that the equipment is functional and that the firewall isn't stopping users taking the interactive tests, for example. Listen to them closely, as technical requirements will limit your production, but do not allow yourself to be dictated to by technical requirements alone. The first e-learning courses were often spoiled by allowing technology to take the initiative away from pedagogics.

3. The Tools of the Trade

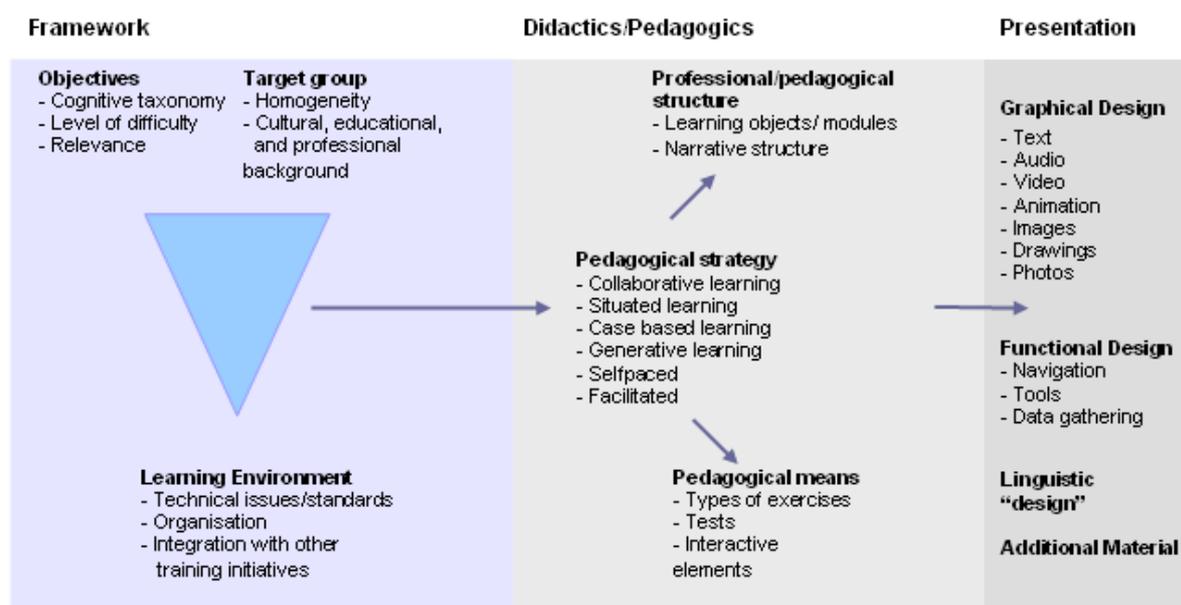
People use e-learning not for the learning process in itself, but for the information or skills they get out of it. Therefore developing e-learning require a professional approach taking into account both the importance of the content, the specific e-learning didactics, and the technical options and limitations.

The following section presents a phase-model for developing e-learning courses as well as a number of basic guidelines for some of the practical issues raised by the model. Please note that there is a certain amount of overlap between the various themes.

3.1. The Development Process

The above-mentioned guidelines for involving the organisation in and preparing it for e-learning should be followed up by careful planning of the development of each course. In the following section we present a model, which can be used for structuring the design process. It is not a project model as such as it mainly focuses on designing the course and does not encompass test and implementation plans.

E-learning development model



The model divides the design process into three phases:

- describing the framework
- designing the didactic approach
- designing the layout and functionality

3.1.1 Framework

It is important to carefully consider and describe the framework for the e-learning course as factors such as the characteristics of the target groups and the learning environment have great influence on the way you should structure the course material and the presentation of it.

An analysis of the framework should include a description of the target group, the goals of the course, and the learning environment. Moreover it should highlight the issues that are important to consider when choosing the methods and designing the didactics and the presentation of the course.

Target Group

The description of the target group should include the following:

- Age and sex
- Cultural background
- Educational background
- Professional experience
- Study experience
- Experience with computers and/or e-learning
- Obstacles to the course objective

It is important to assess the answers to the above as it has consequences for the design of the course material. In particular it is important to assess if the target group is sufficiently homogeneous. If not, you might need to define smaller target groups and design separate courses for them, or at the very least plan for different learning paths through the course.

Objectives

The description of the objective or purpose of the course should determine the taxonomy of the course, its level of difficulty, and its relevance to the target group. In other words, the description should answer the following questions:

- What should participants know or be able to do after completing the course?
- What is the desired level of knowledge compared to the present level of knowledge in the target group?
- Which parts of the course subject are relevant to the target group?

Learning Environment

The description of the learning environment focuses on all issues that have to do with the outer framework of the course, or the environment in which the course will take place.

The description should deal with the following:

- Integration with other learning initiatives, e.g. are there other training activities dealing with the same subject?
- Technological framework: e-learning platform and capacity of user equipment
- Organisational framework: test, certification, timeframe, confidentiality, learning conditions, facilitated or non-facilitated course

Another issue that might be addressed in the description of the learning environment is the financial aspect: What is the budget for developing the course?

Other organisational issues can be considered in the description of the framework as well, e.g. the organisational involvement described in point 2.4, *Sharing Organisational Experience*

3.1.2 Didactics

In the second phase of the design and development process, the focus is on choosing the didactical and pedagogical strategy for structuring the course content. Based on the conclusion from the analysis of the course framework it should be decided, which didactic and pedagogical approach fits best, which types of exercises are suitable, and what story to tell with the material.

Keywords for designing the didactic/pedagogical strategy are:

Pedagogical strategy

- Collaborative learning
- Situated learning
- Case based learning
- Generative learning
- Facilitated
- Self-paced

Pedagogical structure/structure of content

- Learning objects/ modules
- Narrative structure

Pedagogical means

- Types of exercises
- Tests
- Interactive elements

3.1.3 Presentation

The third phase of the development model deals with the actual presentation of the course material. The approach to designing the interface is based on the decisions made in the two precedent phases and focus on both the graphical and the functional design of the user interface.

Graphical Design

The graphical design deals with :

- Text
- Audio
- Video
- Animation
- Images/Drawings/Photos

The use of the above should be in line with the didactical approach and with any technological limitations described in the learning environment analysis.

Functional Design

The functional design deals with:

- Navigation
- Tools, e.g. discussion forum, chat, FAQ
- Data gathering, e.g. test results, course evaluations, user statistics, click-track

As with the graphical design, functional design should be in line with the didactical approach and with any technological limitations described in the learning environment analysis.

Linguistic design

The linguistic design deals with formulating the content according to the findings of the target group analysis and the didactical approach.

Iterations and Prototyping

Though the development model is presented as a sequential phase model, it is important to be aware that each phase can be iterated, this is especially the case with the didactics and presentation design phases. Prototyping and users test are valuable tools for adjusting the course and feedback from these might lead to redesigning. Preferably test all products on a pilot or test group (e.g. colleagues or students) before exploiting them.

3.1.4 Outsourcing, Collaboration and Project Management

Some of the agency training departments being relatively small, in-house resources for developing e-learning courses might not be available. Our own colleagues are experts on subjects referring to our professional work, but usually lack time and may not always be good pedagogues. Therefore outsourcing the development to external partners is an option. The ideal solution is to have a team working on the content from the beginning: both internal and external experts on the subject matter, a web designer/pedagogue, someone with practical experience, possibly an illustrator.

When outsourcing you can outsource the development as a whole or to just parts of it, e.g. making the framework analysis in-house and outsourcing the didactics and presentational design. The above model provides a good tool for defining the tasks to be outsourced and making requirement specifications for each phase. It is important though that project manager in the training department work closely with the external partner in the process to ensure:

- Product quality as defined by the requirement specification
- Technological set-up as defined by the requirement specification
- Observance of budget
- Observance of time schedule

3.2. Basic Guidelines

The following section provides basic guidelines on a number of issues related to the phase model described in point 3.1., *Development Process*.

3.2.1 Content

It is important that we have the same criteria for quality assurance for e-learning as we have for classroom courses, or even better, as e-learning has a potentially much larger audience and is more static. Use the best suppliers, either internal or external. Get the course approved by the relevant head(s) of department before publication. They should preferably have a role in developing the course from the beginning.

Text and illustrations must be acceptable, both politically and from a gender point of view, both to our own agencies and to the multicultural audience we target.

Suppliers often provide content in the form of a manuscript. Manuscripts traditionally have books or lectures as their final output. This does not necessarily give a good result in e-learning. The didactics involved in e-learning are not exactly the same as ordinary classroom teaching, although a good pedagogue should be able to make the necessary adjustments with time.

A course is never completed. Even after publication, constant updating will be necessary, checking for broken links, new developments, current examples etc.. If nothing else, routines should be established for updating regularly.

Copyright

¹Copyright is a protection that covers published and unpublished literary, scientific and artistic works, whatever the form of expression, provided such works are fixed in a tangible or material form. Copyright laws grant the creator the exclusive right to reproduce, prepare derivative works, distribute, perform and display the work publicly. The same laws and regulations apply to products distributed on the Internet or Intranet as to other works.

"Internet" and "public domain" are not synonymous. Material such as text, illustrations and midi files found on the web may not be copied freely, unless it comes from a site where the owner specifically renounces his own copyright. In all other cases you must ask for permission to reproduce it. Getting such permission does not entitle you to claim copyright to the material in question. On the other hand, you may provide hyperlinks to other sites without asking for permission.

Any contracts entered into in the process of outsourcing should contain a section stating your agency's copyright to the completed product, to ensure that you can develop, change and use it as you like.

3.2.2 Pedagogics

The pedagogical approach must correspond to the target group and the course objectives. Your approach/presentation should be as varied as possible to meet most learning preferences.

Participation and interactivity:

Participation and interactivity can be ensured by including:

- **interactive tests**, sometimes necessary before courses to allow the participant to plan his/her learning according to his/her strengths and weaknesses, sometimes during courses to check comprehension of short sequences, sometimes after courses to check overall learning and possibly form the basis for supplying course certificates. Multiple choice, true-false questions, drag and drop, crosswords – all of these can be used and have the added advantage of being varied and fun. Be aware, however that interactive tests annoy a certain number of participants because of their inflexibility. And avoid giving the impression that you are checking up on them, although such control functions are part of an LMS.

¹ Ref. <http://www.whatiscopyright.org/>

- more **traditional assignments** receiving feedback from a teacher. These are particularly good in soft skills courses.
- **more informal communication with the teacher**, to ask questions, make suggestions, be motivated etc
- **simulations** that require the participant to make correct choices and click in the correct places
- **CHAT and discussion forums**, providing many to many communication, either synchronous or non-synchronous. Synchronous CHAT forums can be difficult for our target group because they are spread over many time zones
- **mailing lists**

The learning process:

Be explicit about the learning process:

- Each course should have a good introduction, clearly presenting targets and explaining methods and expectations as well as introducing the teacher (where available) and the other participants.
- It is a good idea to let participants present themselves, including a photograph, since this somewhat reduces the impersonal aspect of e-learning, but this is probably not necessary for short courses where time is of the essence.
- In longer courses summing up is useful.
- A clear calendar of activities is necessary, including deadlines for assignments etc., but make it clear that one of e-learning's advantages is flexibility: participants are able to plan their course work according to their own needs and wishes, taking other commitments into account. Experience shows, however, that this form of learning requires a great deal of self-discipline. Deadlines are therefore meant as guidelines for their convenience, and an aid to structuring their work.
- At the end of the course give participants a chance to evaluate the learning process.

Facilitation:

When you need a teacher for a course there are various ways of organising this:

- Full-scale teachers, who follow the participants closely all the way through the course, give feedback on assignments, supply motivation and register progress.
- Tutors, who respond on demand
- Facilitators for discussion and CHAT fora.
- A two-layer model, with a primary facilitator who assesses enquiries, answers them where possible and sends them on to a technical or programme expert for replies where necessary.

3.2.3 Presentation

Graphical design

Text:

It is difficult for people to read text on the screen and they tend to “scan read”, ignoring long, wordy paragraphs and looking for headings and keywords. The eye jumps to headings and sub-headings first. The obvious conclusion is: avoid long, wordy sentences and paragraphs and supply plenty of headings and key words, bullet points and numbered lists etc. Keep the material short and concise. In short, don't crowd too much onto the “page”

If long texts are unavoidable, they should be provided in pdf format so they can be downloaded and read on paper.

Formatting:

- Don't use underlining, as it gets confused with links
- Be careful and consistent with bold text. Reserve it for items of the same kind that you want people to react to in the same way.
- Keep use of different colours, fonts etc to a minimum – use them consistently to underline points, not just because they look good. Colour coding is a good way to sort information into groups.
- Use only sans serif fonts (Arial and Verdana, for example). These allow the eye to remain steady along a horizontal line. Too much eye movement up and down the screen is tiring.
- Font size: no less than 10 point and no more than 12 for normal text (headings can be bigger). Some agencies now require 12 point.
- Dark text on light background is easiest to read. Avoid white text on black background at all costs (unless you want a shock effect for a very limited piece of information).
- Use web-safe colours (8 bits, 256 colours)

Be visual:

Make courses as practical and illustrative as possible:

- Exploit the differences between text in a book and electronic presentation, particularly the possibilities afforded by hypertext.
- Use animations, but assess the use carefully in each case, as animations are highly motivating, but tend to break the user's concentration.
- Be as visual as possible – use charts and tables, pictures and diagrams, provided by professional illustrators if necessary.

Scrolling:

Scrolling is acceptable, but preferably the vertical scroll, and the less the better. Never force users to scroll both horizontally and vertically in same document.

Functional design**File and Navigation structure:**

Clear, intuitive navigation is essential. Let your LMS take care of this as much as possible.

Since the tracking facilities of LMSs depend on their own file and navigation structures, this means that the optimal solution is one file per “page” with no separate navigation and no opening in a new window for the main pages.

However, it is probably best to open any external links in new windows for ease of navigating back to the main page again.

FAQ:

If possible, include FAQs (Frequently Asked Questions) for all technical and administrative issues.

Linguistic design

Language:

Adapt the language to the target group. Courses should preferably be in English. Depending on the target group, they may need to be offered in French, Spanish and/or Portuguese, too. The number of languages is largely a financial question, but here again we have a lot to gain from cooperation among donors. Whatever the language, if possible, get it checked by experts. Many agencies have their own translators, who make a big difference to the quality of the language. Unfortunately they often work under great pressure and consequently need to be contacted well in advance. Alternatively, translation can be outsourced. In any case, even when developing a course in our native language, get someone else to read it through for typos.

3.2.4 Technical standards**E-learning platform:**

A general observation regarding the e-learning platform is whether the platform for our e-learning activities should be the Internet or local Intranets. There are advantages and disadvantages to both. For security and performance reasons, the Intranet is preferable. On the other hand, this makes it impossible for participants to work on courses at home, and the very security measures in an Intranet system that we regard as advantages, such as firewalls, pop-up blockers etc., can stop interactive tests, for example, from functioning. A lot depends on our target group. If, as seems increasingly likely, we want to open our courses to members of NGOs, this is only possible in an Internet environment. Each agency must make its own decision, but the only way to share existing courses easily is to have them distributed on the Internet.

Material Formats:

The material used must be publishable and preferably optimised for the net. HTML, XML, PDF and WORD documents are all suitable. PDF files are best for long documents.

Illustrations should be compressed, preferably in GIF or JPEG-format

The material should be SCORM or SCORM compatible, if you want to be able to export it to other systems.

Capacity limitations:

Capacity and connection stability are problems in many countries. We should therefore limit the size of our files as much as possible.

This means that time-consuming plugins should be avoided and that e.g. PowerPoint files are not suitable, since they require too much capacity.

Flash is acceptable from a capacity point of view, but must be assessed carefully from a pedagogical point of view.

Multimedia-rich material (especially with sound and video clips) should be supplied both on the net and on CDs. CDs have limitations, but may be the only way to access the material for those with less than state of the art equipment.

Screen settings:

Screen settings of 1024 x 768 pixels is preferable, but it is a fact that outside developed countries many screens work better in 800 x 600. If you develop courses using tables designed either as a certain percentage of the screen or of a certain width in pixels, you will avoid this problem. Some users also complain that it is difficult to read text in a 1024 x 768 environment. If we use scalable fonts, this problem can be resolved by changing the text size locally in Internet Explorer.

System compatibility:

Test on various operative systems and browsers to make sure courses function in different environments.

4. Conclusions

E-learning is still in its infancy. This is therefore to be considered a dynamic document, which will need to be updated as we gain more knowledge and experience. Our proposals must be seen primarily as starting points for further discussion and experimentation. While attempting to formulate principles and guidelines, we hesitate to make unqualified statements about what is and is not the correct *modus operandi*. Nor must the restraints of good practice be allowed to stifle innovation and creativity, or to restrict “local” variations adapted to purely national needs and conditions. We must also take into account the practical limitations of time, technology and money. Not all the optimal solutions are realistic or practicable.

Certain conclusions are, however clear:

- The use of e-learning to make more courses available to all members of our community, no matter where they are posted, contributes to the Joint Donor Competence Development Network’s overall aim of learning and competence building
- We must work towards making as many courses as possible available to our joint donors’ community, by sharing existing courses and developing new ones together
- Shared e-learning programmes must be developed in such a way that they are readable, usable and accessible by all members of our community
- We wish to reduce costs in the production of e-learning programmes by cooperating

Appendix

Price per capita pr. course day - DCCD Anti-corruption e-learning course

Direct expenses - development and test	app. DKK 650.000
Indirect expenses - development and administration	app. DKK 300.000
Sum total	DKK 950.000
No. of participants	850
Expenses per participant	app. DKK 1100
No of course days in e-learning course	2 to3
Expenses per participant per course day	app. DKK 375 to 550
In comparison a course day in Copenhagen costs	app. DKK 4500