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Assessment and Evaluation Techniques in SESAM/NKI E-Learning Courses

Article prepared for the EU Socrates Minerva Project “Student support services in eLearning”

Introduction

As described in previous papers on the project “*Student Support Services in e-Learning*” the internally developed LMS system SESAM manages the teaching, learning, communication and administrative processes involved in NKI Internet based distance education. Thus, in principle SESAM is supposed to handle all types of assignments, evaluation and assessment procedures built into NKI online courses and programmes. SESAM has been continuously developed during the last 3 years, and new functionalities are introduced according to development resources available and priorities decided by the NKI management group.

Traditionally, NKI has put little emphasis in objective, multiple-choice questions. This is mainly due to our general views on knowledge and learning. We look at learning as a change in the student’s perception of reality related to the problem areas studied and increased competence in solving problems in a field, ability to differ between focal and more peripheral questions, analytical skills and competence in using the tools within a field in appropriate ways. This means that learning results are shown in a qualitative change in the student’s understanding, academic, social and technical competence. The learning is a result of active processing of learning material and solving problems individually and/or in groups. This view is often opposite to what we can find in many so-called e-learning programmes, where knowledge often is seen as a larger amount of information or ability to recall and reproduce facts. In addition to cost considerations, this is why we have put little emphasis on using fancy effects in a behaviouristic pedagogical tradition, programmed learning and knowledge transmission (see Marton et al 1987, 1997, Morgan 1993 on students’ conceptions of learning, deep level and surface level approaches to learning). We also hold the view that learning is an individual process that can be supported by adequate interaction and/or collaboration in groups (Askeland 2001). The arguments above have resulted in emphasis on other assessment, exercise and assessment solutions than multiple-choice questions and similar assessment techniques.

On the other hand, we experience more often that corporate customers are influenced by the traditional e-learning industry and programmed learning traditions. Consequently, multiple-choice and testing systems are often seen as a quality element in some courses. Thus, the development group are now researching and introducing e-learning standards, specifically SCORM into SESAM, and the first assignments have been produced according to SCORM.

Definitions

We often use the term evaluation when referring to the evaluation of courses and programmes, and assessment when talking about the evaluation of student learning. Assessment of student learning is used both as a means for supporting the students in their process of learning and for measurement of student performances for certification and accreditation purposes.

Thus, we see *assessment* as the general term for measuring student's performance on a course, preferably against aims and objectives of that course. Assessment may be both formative and summative.

Formative assessment is assessment as part of the teaching: questions and assignments designed and administered to help the student learn, but not used to determine the student's course results.

Summative assessment is assessment to determine a student's overall level of performance in the course when completed: questions and assignments, and grades or scores that are used in determining the student's course results. Summative assessment may often be in the form of a formal exam, a portfolio of student work during the course, or a combination of these.

Course evaluation

When describing the functionality of SESAM we should first refer to the course evaluation system. SESAM has a built in function for course evaluation as part of the continuous quality assessment system. The students are asked to evaluate their experiences in each of the e-learning courses they take. Access to the evaluation system is given as a link in every course menu. After having answered the questionnaire, the student's link changes from "Questionnaire" to "Results" and access to the questionnaire is closed and access to results is opened. The tutor has access to the evaluation results including information about the students' views about the average rating of the quality of his/her tutoring relative to all the other tutors in the system. Licensed personnel in the NKI administration have access to all e-learning course evaluation results and can take action to revise courses and/or delivery or towards tutors with low ratings.



Figure 1. Evaluation results as shown to the administrators

The screen above shows the “bottom” evaluation results of all courses evaluated by 5 students or more during a certain period. The questions are:

Question

6. *How do you like to be an online student at NKI*
7. *How satisfied are you with this course?*
8. *How satisfied are you with contacts with NKI?*
9. *How satisfied are you with the tutor’s work?*
10. *How satisfied are you with the learning materials in this course?*
12. *How much of this course have you completed?*

The quality scale goes from Very satisfied (2), Satisfied (1), Neutral (0), Dissatisfied (-1), Very dissatisfied (-2). No opinion (not counted). Thus, positive averages give an evaluation of the course as better than neutral. Only one course on the list above has an average evaluation on the negative side. Positive averages are presented in green, neutral in yellow and negative in red. Colours and averages of Question 12 do not concern quality but only gives information of how much of the course respondents have completed before evaluating the course.

Student evaluation

Types of assignments used in NKI e-learning courses

Assessment is done in a variety of ways with different aims. Thorpe (1987) describes different types of exercises or assignments used by the Open University in the UK as “in-text questions” (ITQs), “computer-marked assignments” (CMAs), “tutor-marked assignments” (TMAs) and “Projects”. She adds that there are, of course, great varieties within these categories. According to Thorpe (ibid.) ITQs differ from the other types of assignments in that they only are means for learning, while the other types of assignments are components of continuous assessment – as well as (preferably) a means for supporting the learning process. ITQs are used for *self-assessment*, CMAs for *computer assessment* and TMAs and projects for *tutor-assessment*.

Paulsen (1999, 2000) adds *peer-assessment* as a fourth dimension is assessment: *Peer assessment* is included as a fourth category of assessment here because CMC provides more opportunities for peer communication than the traditional distance education setting at the Open University as described by Thorpe (1987). Peer assessment can be both informal comments among students collaborating on an assignment and more formal feedback on individual assignments.

All types and dimensions of assessment and assignments do have their place in SESAM. At the time of writing SESAM has no high quality solution for computer marked assignments and computer assessment.

Example from SPICE 601 Introduction to International Online Education

The course introduction describes the course learning activities as below:

Activities

Activities are included throughout this course to help you search for information that is relevant to the course and to give you an opportunity to practice some of the theory

discussed in the course. You are encouraged to collaborate and share your results with your peer students.

Questions for Reflection

In each study unit there is a number of questions for reflection. The questions are meant for individual reflection, self-assessment, and reinforcement, but they can also be discussed in small groups or in the class forum.

The Course Assignments

The assignments for submission are essay-style assignments that describe and analyse one or more providers of online education. There is one assignment in each of the study units. At the end of the course, you must compile your essays into a fairly comprehensive report about the course provider(s) and present it online to the class. You could choose to do the assignments alone or together with one or two peer students. However, the final report must be written as an individual report.

Participation in the Forum

You are required to collaborate with other students in the course and to contribute to the class activities. At the end of the course, you are required to assess your participation in class and give yourself a grade for this work. You must submit a short report that justifies the grade.

The assessment is based on the following activities:

The student submits 5 unit assignments (counting 8% each)

The student submits a final essay covering the whole course (counts 40%)

The student assesses his/her contribution/co-operation in the Forum (counts 20%)

Assignments for submission

The importance of assignments for submission

From the tradition of distance education assignments for submission have since the first courses online in 1987 had an important place in NKI e-learning courses:

NKI online student evaluation takes place continuously during the studies. Online students submit their assignments and receive from their tutor comments, corrections and evaluations as subjective overall comments and also a formal grade. Courses below tertiary level normally have a quite high submission density; every submission is expected to cover 20 to 40 hours of study. Tertiary level courses have much lower submission density; one submission is normally expected to cover 30 to 70 hours of study (Rekkedal & Blakstad 1994). Most courses end with a formal examination, either internal with internal examiners, internal with external examiners from public colleges/universities (according to requirements for national accreditation of college and university exams) or public nation-wide exams.

The following paragraphs represent nearly direct quotations of the advice given to NKI tutors to help them in evaluating and grading student assignments for submission (Rekkedal 1997):

When evaluating performance, the *setting of grades* can be a special problem. Written assignments in distance education must not be regarded as precisely parallel to a test in a conventional school. At school, a test is given mainly in order to examine what the students have *learnt*. In an online course, the written assignments are *an integral part of the tuition and the basis for the two-way communication, which* consists of the student's answers (with

possible questions), and the tutor's corrections, comments and draft answers. We can therefore say that the teaching to which the student is entitled and which the distance course contains in total in each study unit is not completed until the student has received and gone through the tutor's comments and evaluation of the answers to the exercises. Consequently, it is a bit of a paradox when we assign grades for each answer in distance teaching - we give grades on the student's performance somewhere in the middle of the learning process of the task that is evaluated! This paradox is still more obvious in cases where the average of the grades given during the study constitutes the final grade for the course.

Students, if they are aware of such procedures, may refrain from sending in answers when they meet problems in the course because they know this will lead to a weaker performance and subsequently bad grades. It is in just these situations that the student has a special need for the guidance and help the tutor can give. In the worst cases, such circumstances lead to the student's complete loss of courage, and to his giving up of the studies altogether.

We have yet to find a satisfactory solution to this problem. However, we will indicate some ways in which it may be partly overcome.

(1) The final grade on the course should *not* be worked out mechanically as the arithmetical average of the grades given on the individual study units. The final grade should instead be laid down following the judgement and evaluation of the student's total performance and development in the subject throughout the course.

(2) To a certain degree, the grades on the written answers could be used as an individual pedagogical measure to motivate the student. Each student's answers on each study unit should be judged individually, as a slightly better or slightly worse grade than the objectively 'correct' one may have the best effect on the student's motivation and learning efforts. If possible, comments on each successive assignment should relate back to previous marks - this not only shows the student that the tutor is watching individual progress (and 'remembers' work done, say, six months before) but may highlight study problems. A steady falling-off of grades may indicate de-motivation - material too hard for the student? Or demanding new skills in which he or she is weak?

(3) The student should be encouraged to ask questions if he or she is stuck or has, in vain, tried to solve an exercise - without being afraid that this will have negative consequences on the grade for the assignment or course.

(4) When a student obviously shows defects in understanding the content of the learning material, one should ask him/her to review it. The revision may concern single exercises or whole study units. The tutor should give guiding comments and an evaluation of the work, but *not* give a grade. One has to give the student guidance on *what* should be revised, and to tell him/her that both the old and new answers to the written assignment should be sent in a second time.

(5) If a student sends in answers far from complete (that is, neglects to solve essential exercises), the tutor should provide guiding comments, but not give a grade. Instead, the tutor should ask the student to complete the answers and also tell him/her that the entire set of answers must be sent in anew. A series of students encountering similar problems may highlight a structural or content weakness in the course material, and here NKI's department for material development should be alerted.

(6) The tutor should be cautious using the best grades; attaining the highest grade should be difficult to such an extent that the student would find this result extremely encouraging.

To get the highest grade, the student must show ability in independent treatment and evaluation of the material. In addition, the answer must be well presented and lucid. If a student has solved all the exercises in an assignment, free of errors, and the tutor has put a 'correct' mark beside each exercise without a comment, the student may be inclined to think that he/she has earned the highest grade. However, in many cases the tutor will give a slightly lower grade because he/she feels the right solutions can be even better done - with regard to content, logic, language, or even aesthetics. In order to avoid misunderstandings, one should comment along the way in the answers. In addition, the tutor should always state his/her *reasons* for the judgement.

Concerning low grades and incomplete answers, as mentioned above, it should be noted that many students become discouraged by having to revise or repeat an assignment. It could also cause the student to drop out. Sometimes it is good advice to give a preliminary grade and let the student decide whether to revise or continue further in the course.

In courses where one specific study unit is not a prerequisite for studying the next, the student could just continue after being informed about consequences for final grades or for earning a course certificate.

Different types of assignments for submission

Most assignments for submission in NKI distance learning courses are of the essay type or different types of problem-solving assignments in subjects like mathematics, natural sciences and technology. Multiple choice and other types of objective tests have been introduced in some subjects - without much success. The main reason is that experience shows that making real good assignments with adequate 'distracters' demands a lot of time and competence. As we for the near future are planning to some extent to use online scoring and feedback in e-learning courses, some submissions might consist of multiple choice type questions.

Assignments for submission can have different formats:

1. *Individual work sent to the tutor for comments and feedback*
2. *Group work sent to the tutor for comments and feedback*
3. *Individual work submitted to the Forum for comments and feedback from fellow students*
4. *Group work submitted to the Forum for comments and feedback from fellow students*

Both individual and group work may be published on the web for information and resources available to other present or future students with or without the tutor's comments (see Appendix 1)

Self-tests/self-assessment

All NKI e-learning courses have a large number of in-course activities, exercises and self-tests of different formats. In some instances students may also choose whether to submit certain assignments to the tutor or just apply them as self-tests in their learning.

Questions for reflection

In-course activities may have a simple form of *Questions for reflection*, such as:

From the course “*The tutor in distance education*”:

For reflection:

Which elements do you find in this course that is built in with the intention of stimulating active cognitive processing and learning through self-study?

From the course “*Introduction to International Online Education*”:

Questions for Reflection

Before you continue, take some time to reflect on these questions:

1. Which issues in distance education are of special interest to online educators?
2. What can online educators learn from adult educators?
3. How would you describe access to online technology in your country?
4. What do you regard as the most pivotal issues in online education?
5. What kind of providers of online education do you know of?

You may share your views on these questions in the class forum.

Exercises

Many courses have in-text activities that are training and exercises in solving problems. In these cases exercises may be very similar to assignments for submission. Subjects like arithmetic, mathematics, physics, chemistry, statistics, and economy etc. will often include a large amount of exercises including solutions and explanations.

Interactive exercises (multi media)

The following example is taken from the course “*Salg og service*” (*Sales and Services*). This is a study programme on secondary level, and great emphasis is put on developing interactive exercises in connection with self-testing at the end of every study unit. The exercises are of a multi-media type, multiple-choice and “drag and drop” including graphics and sound/voice.

The example below is typical:

Figure 2. Multi media “drag and drop” exercise.

Control questions

Control questions are often questions of an objective type with answers and references to help the student controlling learning, retention and understanding. Often this type of in-course activities contains internal links to the learning materials.

From the course *“The tutor in distance education”*:

Øvingsoppgaver ← **Exercises** **Link to Answers**

Nedenfor finner du noen oppgaver. Tenk gjennom svarene. Vi tror det er nyttig å prøve å formulere svarene på papir. Dersom du ikke føler at du kan gi et rimelig godt svar på disse oppgavene, mener vi det kan være grunn til å gå tilbake i studieenheten før du begynner på innsendingsoppgavene. Du finner noe hjelp til å finne tilbake i kurset med linkene i ["Svar på øvingsoppgavene"](#) som finnes på ressursidene.

← **Control Questions**

1. Hvilket svar ville du gi på spørsmålet om hvilken form fjernundervisningsformen er?
2. Hvordan mener du fjernundervisning kan defineres? Hva er forskjellen på fjernundervisning og brevundervisning?
3. Hvilke "lærere" har vi i et fjernundervisningssystem?
4. Hva mener vi med "tidsaspektet" i en analyse av brevundervisning?
5. Hvilke typer lærerkommentarer bør alle elever få?
6. Hva mener vi med "omløpstid", og hvilket ansvar har læreren i denne sammenheng?
7. Elevene i fjernundervisningen er vanligvis voksne mennesker. Hva mener du dette betyr for deg som lærer og din undervisning?
8. Beskriv forhold i elevens studiesituasjon og omgivelser som kan skape problemer.
9. Hvordan bør preproduserte lærerkommentarer brukes for at de skal ha verdi?
10. Hvordan kan læreren motvirke frafall i fjernundervisning?
11. I henhold til en del eksperter og forskningsresultater kan en nevne personlige kvaliteter som læreren bør legge særlig vekt på i sin kommunikasjon med elevene. Hvilke er disse? I hvilken grad føler du at du kan leve opp til kravene?
12. Vi sa noe innledningsvis om at studiematerialet i fjernundervisningen må legges til rette for elevenes aktive bearbeiding og læring. Hvilke tiltak har du sett i dette kurset med sikte på aktivisering? Hvordan synes du disse har påvirket din måte å studere på?

Figure 3. Control questions in *“The tutor in distance education”*.

When clicking the Link to Answers, the student gets this page:

"Svar" på øvingsoppgavene i studieenhet 1

*"Answers" to the Questions
in Study Unit 1*

Sammenlign dine svar med synspunkter som kurset gir. Sammenligning er gitt nedenfor. Du bør ha tatt med hovedsynspunktene fra kurset, eventuelt vurdert de du måtte være uenig i. Ideelt sett burde du kanskje ha tatt med punkter også basert på egne synspunkter, ideer og erfaringer.

*Links to course pages on
the question*

1. Se [Forordet](#) og [Fjernundervisningens utvikling](#).
2. Se [Fjernundervisning - den nye termen](#) og [Fjernundervisningens utvikling](#).
3. Se [Hvor kommer du inn?](#)
4. Se [Tidsaspektet](#).
5. Se [Mer om betydningen av formen i skriftlig kommunikasjon](#).
6. Se [Betydning av kort omløpstid](#).
7. Se [Voksne mennesker](#) og [Elevene har ulike mål](#).
8. Se [Sosial isolasjon](#), [Avstand i tid og sted](#) og [Studievansker](#).
9. Se [Preproduserte lærerkommentarer](#).
10. Se [Studievanskeligheter](#) og [Hvorfor faller noen elever fra](#).
11. Se [Din sentrale rolle som lærer i fjernundervisning](#).

*Explanations without
link*

12. Noen eksempler kan være: Du har fått råd om studieteknikk. Det har vært gitt en rekke "tenk etter"-spørsmål, noen med tilbakemelding senere (spørsmål om hvorfor fjernundervisning har fått så stor betydning i Norge). Kontrollspørsmålene bør stimulere til repetisjon og ettertanke. Videre finner du innsendingsoppgaver og henvisning til litteratur.

Figure 4. Answers to Control questions in "The tutor in distance education."

Multiple Choice Questions

Some courses have some multiple choice questions built in. A simple solution was used in one very interactive course "HMS i Bilbransjen" (Health, Environment and Safety in the Automobile Business):

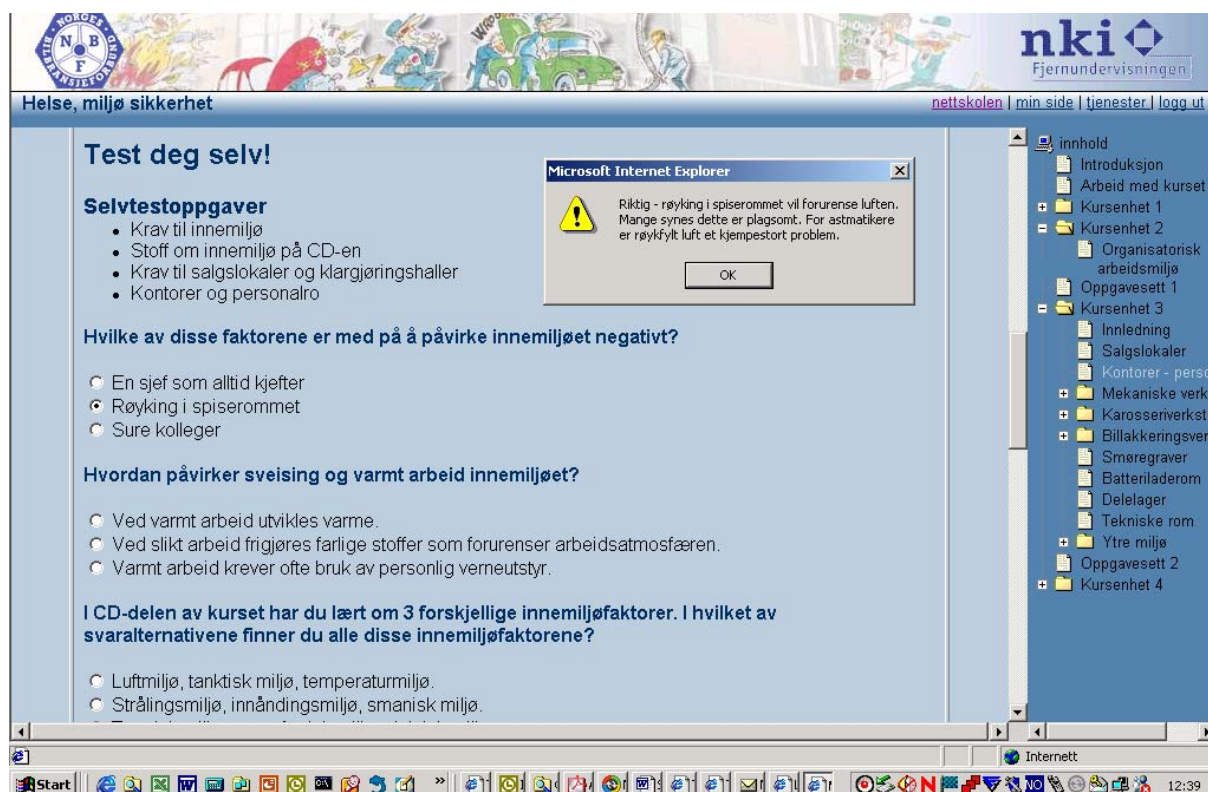


Figure 5. Example of a simple interactive multiple-choice solution for control questions.

The example above shows the solution with multiple choice questions and feedback through a “pop-up” window giving information whether the student is right or wrong including some information related to right and wrong answers. NKI is these days (autumn 2003) introducing the SCORM standard into SESAM and multiple-choice questions based on this standard.

Examinations

Assignments for submission are mainly measures for learning. Grades are meant to give information to help students to learn and to motivate them for further work. All NKI study programmes prepare for formal exams. Students, who for some reason do not sit the exams, receive a transcript of study results when completing a study programme including final grades for each course. The transcript is a documentation of completion and might be taken into consideration by employers, but has no formal value. NKI study programmes may prepare for the following types of exams:

1. NKI internal exams. Many NKI study programmes have no parallel in the public school system. The tests are constructed by NKI staff (full-time or part-time) and are marked by examiners appointed by NKI.
2. Public exams. The students study at NKI to register for public exams.
3. Exams at state colleges or universities - mainly for programmes where NKI Distance Education has a formal co-operation with the academic institution.

Until recently Norwegian requirements for national accreditation of college and university exams, all exams at tertiary level should have two examiners, one internal and one external. The external examiner is normally teaching equivalent subjects at another institution.

After having completed the distance study programme and having passed all the NKI internal exams related to the programme, the student receives a certificate from NKI. The certificate lists all courses completed including marks given by the distance tutor and exam results.

On-line examinations have generally been looked upon as difficult to arrange, mainly for security reasons of controlling who is actually doing the work. However, as institutions more and more apply portfolio evaluation, project work as basis for assessment and credits, also online examinations can be arranged. NKI has in some programmes introduced online examinations, where the exam assignments are distributed online at a specified time to students accepted exam access based on completed studies and work portfolios.

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Appendix 1. Example of submitted assignment with tutor comments

From: N N <mailto:student@noragric.nlh.no>

To: MM tutor@nki.no

17.01.01

Dear N, thanks for receiving your first assignment submission. In the following you will find my comments integrated with your own answers. In commenting, and in addressing, I try to keep in line with some major ideas in Professor Börje Holmberg's theory of "distance education as didactic conversation". Among some points personal style in both preproduced material and live communication is one of his recommendations. Holmberg was director of one of the world's largest distance teaching institutions, Hermods, in the 70's and research Director of FernUniversität in Germany until recently.

I also appreciate your attempts to initiate discussions in the "class" and regret, of course, that the fact that there are few students, and the majority already in local groups, active and live discussions seem to be difficult to achieve.

Assignment for Submission SPICE 601 Unit1 - Introduction On Providers of Online Courses: with the special focus on interactivity

Introduction.

Online education is getting quite popular. An important question is whether the majority of possible users and learners prefer an "electronic whiteboard" somewhere in cyberspace to a face-to-face contact in a physical classroom. There are enthusiasts fighting for the "human rights" for computers and information flying through the cyberspace. As always, there are critics and opponents - many people stating this media is not an appropriate means as mediator and carrier of knowledge, and the enormous effort put into development of internet courses do not pay off.

The specific feature called Interactivity of the web-environment, both in the meaning of transmitting the text material, and speeding up participation in discussions and self-assessment schemes, can be maintained in different ways. What is most important is its presence. Why? Because in web-based training students are physically separated from their instructors. "Educators in distance education provide the requisite structure for students to meet certain standards in learning excellence, and provide the necessary opportunity and means for students to engage themselves in learning to meet their individual needs" (citation from: Distance-Educator.com, 2000). Learners are also separated from each other and in order to fulfil these gaps of communication, a web-site should be based on the principles of interactivity as to facilitate their contact.*

See attempts for definitions attached in Norwegian.

Students left by their own by their classmates and/or their teacher may fail to meet the course requirements and may lose their interest for the subject; even worse, they may become sceptical about online educational potential as well. Grown-ups are self-governing since their views, expectations and behaviours are solidly based on their life experience. In the role of student they are, however, more vulnerable who due their time constraints may become

depressed. A person's motivation abilities should be supported by a positive attitude created through a well-functioning website. Ability of conveying information, ideas and creative forces through cyberspace in an encouraging and rewarding manner is a highly specific quality of the web environment - provided the Online Education Delivery Team has done its work properly. I would call this "web-site intelligence and elegance" which everybody knows is to become a central issue in the process of online training.

Agree with your point about the necessity in distance education that students do not feel left alone by class mates and teacher. There is an important point, though, whether feelings of being part of a learning society are most dependent on the attractiveness of the web-site or the real communication structures functioning between teacher and students. In some ways it seems that there have been some changes in views that attractiveness of web-site site and student-machine interaction is more important than interpersonal communication and students self-study. E.g are we learning by sitting at the screen, clicking at links and watching power-point presentations – or are student learning through studying academic materials and communicating with teacher and fellow students?

Online courses are delivered in a variety of interfaces, such as information on course offerings and registration, as supplemental material to existing face-to-face courses and as purely web-based offerings. Courses on how to arrange courses are to be found as well. For the purpose of this essay, three web-sites have been selected to assess these in terms of their interactivity.

It should be mentioned that the history of the research on online teaching methodology and technology is quite short. Valuable information reported at virtual and non-virtual meeting places is often hidden in dissertations while online articles are relatively few and still of much anecdotal, this-is-what-I-tried-with-my-class sort of research.

I appreciate your introduction as setting the scene for discussions quite well. Note that there has been a lively discussion in international fora on distance education whether research from distance education constitute the main relevant sources of previous valid knowledge: See enclosed article by Desmond Keegan on Seamless interfaces.....

Material. Our selection of material for this essay is based on three types of educational websites:

- (1) as a helping hand primarily designed for informative and administration purposes;
- (2) as full web-based training courses, and
- (3) as online courses on how to organise online courses.

These three examples (each representing one of the categories named above) are of different quantity of the information included, as well as of different quality of content and completion, considering both graphic and the general design of the whole website.

Method. Descriptive.

Discussion and conclusions.

1. The web-site for The Cambridge Center for Adult Education (online: <http://www.ccae.org/courses.html>) is a simple but powerful tool both for clients and administrators. This enables for selecting the right information from course listings and covers briefly the Center's policy issues regarding registration and guarantees for students. Necessary information incl. term schedules and holidays, together with two handy search functions appear on the main page of this web-site. Search forms categories/keywords repeatedly appear through the whole site that makes it possible to adjust the search since there are a lot of

courses to choose between. The layout of course listings makes the information easy to acquire.

Have you looked into other types of portals for course information? Do you see the NKI site as something similar to Cambridge site (which was down when I tried it – changing Internet provider)? More portals for wide course offerings from different institutions are being built up, e.g.

<http://www.dlcoursefinder.com/>

which claims to list more than 50.000 courses from 127 countries

or

<http://telecampus.edu/>

that claims to list 41.000 courses (includes only courses that can be studied 100% online)

The target groups of the courses organised by the Center are both learners and teachers. At the end of a course students may send an online evaluation by filling in a downloadable evaluation form. Those who are interested in teaching may view and download a course proposal. These are the bits of interactivity available on this site. A chat room has not been included but as the course titles cover many subjects, including conferencing this would be both time-consuming and expensive task but as well of little advantage and return.

As this is quite typical, well-functioning educational web-site materialise as a result of collaboration. In this case, "the combined efforts of the CCAE [The Cambridge Center for Adult Education] staff and friends". (This seems to be a temporary site. "Combined efforts with friends" quite often do not last long).

2. The Wayne Huizenga Graduate School of Business and Entrepreneurship at Nova Southeastern University (online: <http://emba.sbe.nova.edu/>) is delivering full e-MBA (Master of Business and Administration) course^{**}. The site is logically developed in terms of similarity with what we would expect from a traditional academic teaching.

At the first glance the site is interactive in all its parts and all necessary information can be found, dealt in suitable portions. Opening for example the link to Computer Requirements (under Virtual Orientation, repeated under Frequently asked Questions) leads a student to a choice between Computer Systems, Needed Skills and Online Account. All these pages are connected with each other so by clicking on one of them the user may navigate both NEXT and BACK inside this structural element - at the sequence which is most acceptable for him or her. There are software download pages (incl. virus updates) and full list of the contact support available in case somebody needs assistance.

<p>Brochures & Articles</p> <p><u>Online Program Curriculum</u></p> <ul style="list-style-type: none"> • Virtual Orientation • Sample Classroom • Online Faculty • About NSU 	<p>The School's online site looks online-like from the very beginning. The 2000-2001 Huizenga School Catalog is available online only. Other informational stuff (brochures, articles) may be read both in print and online.</p>
<p>eBusiness Programs</p> <p><u>Admission Application</u></p> <ul style="list-style-type: none"> • Admission Requirements 	<p>Notices and reminders for students are well reflected. Briefly but clearly students are reminded about their obligations, such as "it is the obligation of the accepted student to view and/or download the catalog and become familiar with its contents" and samples on how to organise their studies and forms are given for different occasions.</p>
<p><u>Frequently Asked Questions</u></p> <ul style="list-style-type: none"> • Computer Requirements • Tuition & Fees <ul style="list-style-type: none"> • Register for Classes • Term Dates • Late Registration Policy • Drop/Add 	

[Software Downloads](#)

[Contacts](#)

[Students/Faculty Enter Here](#)

[Huizenga School Homepage](#)

• [Ground Based Program](#)

One of the most fascinating parts in the electronic MBA web-site is the compulsory learning material: Learning Quizzes (Online Study Guides with Automatic computer grading), Short Stories and Web Exercises in addition to online Lecture notes, articles and textbooks, the latter both online and printed (may be purchased via Internet).

Links are established to organisations providing students with a wealth of information at no charge. In addition to homework and examinations, chat sessions and bulletin board discussions are scheduled and held on a weekly basis (chatting is compulsory!). Self Tests will assist a student to prepare to exams.

There are shortcomings, too. Many pages after each other are "illustrated" primarily by "normal" and "Italics" and by shifting between the black text for neutral information, the blue for links and the red for requirements. Though all pages are very informative and the background matches with what is written on it, opening these pages after one another cannot be uplifting for a student. In contrast with interactivity and informativeness of the site as a whole, individual pages (apart from the index page which is illustrated and the video-recorded About NSU page) are monotonous and petrified. Neither photos or other illustrations nor jokes.

BA deals by its nature with communication between individuals in terms of organisation management and a presentation of learning material needs not to be dry as a bone. I could not find any forms such as Categories/Keywords applied for any routine to structure the site. The minimum computer requirements for students would allow a reasonable share of graphics included and a more dynamic design .

Also it seems to me that posting Lecture notes to students and hyperlinking of articles is not enough and why not to launch some good lectures of teachers themselves? Quite schematic Power Point presentations do not contend much of interactivity and at least some lectures should have been rewritten for electronical presentation purposes. I am still not quite sure whether the whole site has been stand for to "pedagogically" approach a student. This is, in the end of the day, a typical example of synchronised learning process application which implies late penalties (assignments submitted after deadline will receive a grade of zero; answers should be e-mailed to the instructor by Sunday midnight, et cetera).

3. The NALA Campus, or The Virtual Learning Environment for Paralegals (NALA - The National Association of Legal Assistants) is a site for Continuing Online Education (online: <http://www.nalacampus.com>). Maybe it is even more correct to say its content is "online education about online education", since it is dealing with creating courses on how to create courses.

The main page of this site has been designed to contain as much information as possible. And indeed, this is a lot of valuable information available. The authors have chosen Times New Roman 10 (normal and bold) as the main font type with occasional colouring of the text. The very photos, logos and banners are of different styles and do not make you feeling the site is an entity. Including a graphic designer into the team would not damage the final result.

Additionally, this is not maybe a good idea to have non-working links and a coloured text that one logically would expect were links.

Instead of introducing select/search schemes, or some other solution, for example including an interactive site map, *description* of the NALA Campus (not active!) links occupies a lot of valuable monitor surface. One has to scroll down the page seven times to read all it. After all, the required registration to these described links is so easy (even if you have not got your own password) that it is not difficult at all to manage the information you might be interested in (incl. Course Preview, Pre-Test and Enroll hyperlinks).

This does not seem very attractive to a student with all information squeezed to minimal readable size and still on 7 pages. That could be more functional to spread this information through the whole site in a well-structured manner. Empty spots of different sizes and one animated banner do not work very well on the background of tight plain text and few hyperlinks. The logo is a combination of one jpg- and one gif-piece which are to be found in two cells of a table with visible borders. These two components of the graphical logo are of different size, style, colour and quality.

And last but not least, the text beneath describing the location of headquarters has the same size as the main text (10) but looks much larger since Arial (bold) has been applied instead of Times New Roman (normal and bold).

The conclusion is that even if a big amount of valuable information has been laid out, the main page itself looks clumsy, difficult to structure in one's mind and to handle. Most likely the site is still under development unless not considered of too little importance as to pay more attention to its redesign. Since the two authors have received a lot of appreciation for organising courses, this case demonstrates that an electronic web-site does not benefit from traditional way of thinking automatically transferred to a specific web-based environment.

Agree with your conclusion. Although only a quick glance, I did not understand that these were courses on how to create courses. As I understand it, this is web training not including any interpersonal communication – thus not distance learning in the normal definition(?).

Summary. Distance education is characterised by the separation of the instructor and the learner. The learners may or may not be separated. A web-based site is expected to be designed in a way that makes this spiritual distance as small as possible. Academic online educational sites may have a tendency to become monotonous and rigid - even in contrast with their informativeness and reasonable structuring. "Fossilisation" of some highly academic pages is the opposite process to loosely organised of structures with shifting styles, illustrations, colours, font types and animations there functionality primarily appears in tight rows of plain text which is meant to contain as much information as possible. Smaller web-sites may win in functionality when properly designed, incl. finding graphical solutions matching with the specific web-environment. A spiritual concept kin to neutral "Interactivity" that I call "web-site intelligence and elegance" is becoming one of the quests to follow for numerous e-designers.

N, for your conclusion – again agree. Of course, course developers face different challenges. Developing new online courses including every aspect from planning to delivery, content and communication is costly. Multimedia and specific attractive facilities add drastically to costs. It will always be a balance in educational philosophy, what is effective for learning, or actually cost-effective?

I have read your descriptions and discussion with interest. You demonstrate insight in the problems you describe and discuss. There is not much more to add. Actually, when planning this course, and expecting a possible target group of students from different countries, all these assignments should have been published for other students to read, as I have tried to do in the other course previously referred to:

<http://home.nettskolen.nki.no/~torstein/BesvarelserFjernundervisningspedagogikk.htm>

Perhaps a similar solution should be introduced in this course?

Grade: A

Look forward to hearing from you again.

Tutor MM

* Online Teaching and Learning Interactivity denotes a specific quality of the communication mediated by multimedia between the Facilitator (in the broader meaning - Online Education Delivery Team) and the Learner, as well as within the Online Learner Community (EH).

** "eLearning" is the newest entry in the vocabulary of online education. It refers to learning by electronic means, such as the computer and telecommunications. Primarily used in business.

See Morten Paulsen's attempts to define terms (referring to your own entry to the Forum)(here in Norwegian):

Definisjon av sentrale begreper

Hentet fra boka Nettbasert utdanning-erfaringer og visjoner

Av Morten Flate Paulsen

NKI Forlaget, 2001

Det finnes mange begreper som brukes i forbindelse med undervisning på Internett. På engelsk brukes ofte begreper som *e-learning*, *virtual education*, *Internet-based education*, *web-based education*, og *computer-mediated communication (CMC)*. På norsk hører vi ofte begrepene e-læring, nettbasert utdanning, og nettskoler. Disse begrepene benyttes ofte ukritisk om hverandre i ulike sammenhenger. Etter min oppfatning er det derfor et sterkt behov for den begrepsavklaringen som presenteres i det følgende.

E-læring er et relativt nytt begrep som oppsto i kjølevannet av den store interessen for handel via Internett (e-handel). Begrepet ble fort populært i investormiljøer og innen bedriftsintern opplæring. Begrepet er også mye brukt av institusjoner som har vært gode på datastøttet læring (*computer based training*) og CD-ROM baserte opplæringsprogrammer. Begrepet er ikke særlig presist og har vært brukt om det meste som har tilknytning til læring og Internett. Derfor har jeg valgt en mer presis definisjon i denne boken: e-læring er interaktiv opplæring der den som lærer får respons på sine handlinger via Internett fra et dataprogram og i noen tilfeller også fra en lærer.

Nettbasert utdanning er et mer presist begrep som også krever langt mer av leverandøren. Min definisjon på nettbasert utdanning er basert på Desmond Keegans (1998) definisjon av fjernundervisning og kjennetegnes av:

- At lærer og student er atskilt i rom og/eller tid i motsetning til tradisjonell klasseromsundervisning

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- At en utdanningsvirksomhet står bak aktiviteten i motsetning til selvstudier og privatundervisning
 - At datanett brukes til formidling av lærestoff
 - At datanett brukes til reell toveiskommunikasjon i læreprosessen slik at studentene kan dra nytte av kommunikasjon med hverandre, lærere, og administrativt personell

Begrepet *nettskole* er også brukt i mange varianter og sammenhenger som for eksempel Nettskolen, Nettverksuniversitet og Nettgymnaset. Et annet ord for det samme er virtuell skole. Disse begrepene indikerer at institusjonen tilbyr langt flere nettjenester enn læring og undervisning. En nettskole trenger ikke eksistere som et skolebygg med klasserom, kontorer, lesesal og bibliotek. Likevel skal den kunne ivareta alle skolens oppgaver og funksjoner. Å drive en nettskole er med andre ord mye mer komplisert enn å tilby e-læring og nettbasert utdanning.

En *nettstudent* er i denne boken definert som en student som primært er tilknyttet studiestedet via Internett. Nettstudentene er sjelden eller aldri fysisk til stede ved institusjonen de studerer ved. Typiske nettstudenten er voksne mennesker som studerer på deltid.

I forbindelse med nettbasert utdanning snakker vi om to forskjellige kommunikasjonsformer som har store konsekvenser for hvordan undervisningen tilrettelegges. *Synkron kommunikasjon* foregår i sann tid, det vil si at de som kommuniserer bruker nettet samtidig. Pratekanaler og videokonferanser er eksempler på asynkron kommunikasjon. Ved *asynkron kommunikasjon* lagres meldingene i nettet inntil det passer mottakeren å motta dem. E-post er et eksempel på asynkron kommunikasjon. Asynkron kommunikasjon er langt mer fleksibel i tid enn det synkron kommunikasjon er.

Nettskoler kan ha svært forskjellige fremdriftsplaner. *Individuell studieprogresjon* medfører at hver student selv kan bestemme startdato og fremdriftsplan for sine studier. *Kollektiv studieprogresjon* innebærer at skolen bestemmer en felles startdato og fremdriftsplan som alle studentene må følge.

I denne boka skilles det mellom undervisningsmetoder, undervisningsteknikker og undervisningsmedier for nettbasert utdanning. Disse begrepene er til dels kontroversielle i norske pedagogiske miljøer. Bakgrunnen for at de allikevel brukes i denne boka er at de er sterkt knyttet til begreper som brukes innen datamaskinbasert kommunikasjon og innen amerikansk terminologi (*methods, techniques, devices*).

En nettbasert *undervisningsmetode* er en måte å organisere mennesker som skal lære på nettet. Vi kan skille mellom fire metoder: en-til-nett, en-til-en, en-til-mange og mange-til-mange.

Nettbaserte *undervisningsteknikker* er forskjellige måter å tilrettelegge undervisningen på. Tre eksempler på undervisningsteknikker er rollespill, forelesninger, og prosjektoppgaver.

Undervisningsmedier er tekniske hjelpemidler som kan brukes i undervisningen. I forbindelse med nettbasert undervisning skiller vi mellom systemer for informasjonshenting, e-postsystemer, oppslagstavlesystemer og konferansesystemer.