

# Digital/Electronic Learning in the Classic School

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## Introduction

Since the use of computers has become pervasive, many things have changed. One of the more intriguing changes is that, often, children are teaching their parents how to use a computer. When the parents want to use a Word Processor, they need the assistance of their children. When Dad wants to book a vacation, little John has to stay around, just in case. It is the same at school; teachers need the students to set up the Internet exercise from the school book. As a result, many teachers are not greatly at ease with using computers in the classroom. Let us see what are the consequences on the organization of education.

## Why an ELE?

How does a child function today? Typically, children have the Internet, MTV, numerous TV channels and soaps, TV and computer with MSN and a mobile phone in their own room. An i-Pod is within reach at all times with their favourite music, etc., etc.

On the other hand, how does the life of a not-so-young teacher look? The not-so-young teachers have a study room with books; they do a great deal of reading and they save everything that is interesting. There is a TV in the family room; they even listen to Radio 1 and watch the public TV stations. They use a computer to do e-mail and they get pictures printed at the photo shop.

The teacher must communicate with the student! He uses a class agenda, and provides a studybook for homework based on the study guide. The workbook is used by the students to finish their homework. The students have to make sure that everything is noted in their workbooks and that they do not lose their study guides. Frequently, the student has two

homes, one with his mother and one with his father. All this results in a great deal of stress for everyone.

The ELE is a way to reduce the stress by better organizing the information for the teacher as well as the student. The ELE can be used to work and communicate more effectively. The ELE has other benefits by being able to innovate with regard to teaching, but that may not be the first benefit that is realized. The fact that the ELE can have a positive influence on teaching is clear but in itself, the ELE as a tool is neutral.

## What is an ELE?

An ELE or an **E**lectronic **L**earning **E**nvironment is a location on the Internet where one can organize teaching. The agenda can be present, and one can send messages to the students using e-mail or SMS. The teaching materials can be made available as documents (Study Guides). Homework assignments are provided at the right time with their due-date. The students can turn in their homework over the Internet. Students can collaborate in their own "Internet Room" or there can be "discussion chat rooms" for the students that cover their material in general or where specific topic can be discussed. Recently, video conferencing has been added to some ELEs; this raises the possibility of working with other schools in various countries! Since the ELE is virtual, there are 2 important prerequisites for using it properly. The teachers and students need stable access to the Internet, and the ELE has to be available at all times. Teachers and students can then work from their classroom, teacher's room or home and they can do so at any time.

## Implementation

A number of people at the school are enthusiastic about using an ELE and want to introduce it. They would like it used in all aspects of the school..... so what needs to happen?

A communication to everyone stating " We have found something really great and starting next Monday you will all be using it" is the death of the ELE. This approach shows contempt for the colleagues. Basically we would be saying that we, the ELE enthusiasts, know what is best for them. This will result in more resistance to the ELE than was there before.

First, you must develop a program to convince a few people that the ELE is a great step forward and will be of benefit for all (teachers and students). This program must provide information on what the ELE is and how the ELE will make everyone's life better:

- What must the ELE provide to us? What are our requirements?
- What software, open-source or commercial, will be used?
- How will the ELE be introduced to generate enthusiasm from even its strongest opponents?

Because these questions are rather important I have added specific criteria for the selection of the ELE software in an Appendix

Once an ELE package has been chosen, purchased and tested, it is time to start the work at the school itself. It is best to start small. We recommend a pilot with a few enthusiastic teachers. As a precursor to an ELE, teachers often use a website to help organize their information and assignments. The disadvantage of the website is that it provides one-sided communication. Students can only react and communicate using e-mail. This should be avoided. The teacher can send e-mails to the students but if all students start sending e-mail to the teacher, then the situation gets out of hand. The teachers that have experience of this are the best candidates for an ELE pilot.

It is very important that numerous updates are provided to the staff and the teachers in general. One can do this at general meetings or as a topic at study gatherings. These updates and status reports should be positive and enthusiastic but should also mention any problems that are encountered. It is important not to turn the updates into sales talks. This will be perceived as threatening. The objective of the updates is to make everyone curious and to create a positive feeling around the event of ELE.

After the pilot is completed, an evaluation has to be done that includes School Management. This is the time to make clear agreements to start using the ELE with a larger number of teachers. It is important to provide mentoring to the teachers who are to start using the ELE. One must also determine if the computers for the students and the Teacher's Room are adequate. The ELE must be able to handle a larger number of participants. There must be computer backup and restore capabilities that must be tested regularly, also full testing of the ELE, education of the new participants, a "helpdesk" in case there are issues, etc.

The next step is the status report on the pilot for the teachers. One can now show them the results, and maybe have a student tell about his or her experience. In particular, one can show how the pilot accomplished the previously-agreed objectives. It is now time to offer the ELE to all the teachers in the school. Who wants to participate? Going from a website to an ELE is a small step with large benefits. In this manner, one forms a group of teachers who are positive. It is important to make sure that a large number of departments are represented, as this will be useful during the next steps. The School Management must

be completely supportive and must actively participate in the initiatives by offering school resources to the teachers.

Status reporting to all personnel remains a critical activity in this second phase of the ELE implementation. The status report should address the specific needs of, for example, the English teacher. One can use it as a forum for an ELE teacher to show how he uses the ELE to provide writing skills and exercises; one can have a teacher of Physical Education explain how the ELE supports a Sports Project. One is now ready to start talking to all the teachers and showing them the advantages of the ELE with practical examples in their own School. For example, one can show the teacher of French how texts are provided via the ELE and not hardcopy. The advantages have to be practical and direct or the teachers will not be interested, and one has to continue to make sure not to be "threatening". I use the metaphor of a candy store<sup>1</sup>. Everyone can get the candy they like.

At a certain moment in the project, one will notice that the students will ask the teachers: "Why do you not use the ELE?"

Two important things to keep in mind are first to let everyone recognise their own value, even the teacher who does not like computers, and second that the teachers have to acquire a positive attitude towards the ELE.

As one can see, the students have no part in this story. They have no problem with using the ELE. One will need to tell them what the objectives and intentions are, but once that is done, there will be no problems with them at all

As the project progresses one will notice that everyone starts using the ELE from their own viewpoint. It is then time to start implementing a structure. One should make sure to do this "bottom up" as a number of teachers have now become experts. They should be involved in the definition of the structure, and made part of this activity.

Now the moment has come to speak to the last teacher who refuses to join in. This person will need to join one way or another. One should offer assistance and mentoring to this teacher; provide one-on-one help in getting started; be there when they have questions or have problems.

## The end

Looking back at this time, a few years from now, we will all laugh at how we made things so difficult. The ELE will have become as natural as writing with a pen. I hope that the new colleagues in the Teacher Education area will include the ELE as a normal part of the curriculum.

## Appendix

### Sample of how to select an ELE

*Usually, the idea of using an ELE originates with enthusiastic teachers who want to adjust their didactic methods. They have seen an ELE elsewhere or they are looking for new ways to support their primary function. Sometimes, a progressive school management member wants to initiate an ELE. In both instances the proposal is made based on enthusiasm.*

In this appendix, we try to provide a synopsis on how to make a responsible selection of an ELE package. After that, we provide details on the various phases of the selection process.

## Synopsis

### Step 1 – Initiation phase

First, take an inventory of the current situation. What are the objectives for Education renewal?. What has already been

achieved? What is the status of e-learning? What is necessary, desirable and realistic?

### Step 2 – Analysis

Define the requirements for the ELE.

### Step 3 - Exploration

Research and compare the various potential ELEs against the requirements defined in the Analysis Step. Use the requirements for making the comparisons easier and make a matrix of them.

### Step 4 - Decision

Select the preferred ELE and document the reasons. Provide the school with the recommendation.

## Details for each step in the selection plan

### Initiation phase

Usually, the idea of using an ELE originates with enthusiastic teachers who want to adjust their didactic methods. They have seen an ELE elsewhere or they are looking for new ways to support their primary function. Sometimes, a progressive school management member wants to initiate an ELE. In both instances the proposal is made based on enthusiasm. It is however important to obtain detailed requirements for the ELE, to ensure that the resources required are identified in a clear fashion. The best way to do this is the interview the three constituents of the ELE:

#### Teacher

- What does he want to do with the ELE? How does he envision the new learning process?
- Why does he want to use an ELE?
- What does he believe are the advantages and gains?
- How does he expect the students to interact with the ELE?
- What is his education vision?

#### Student

- What do you think of learning using a computer?
- Do you have a PC with the Internet in your room?
- Do you use MSN or equivalent service?
- Do you send a lot of SMS?

#### Management

- What is the vision of learning in your school?
- What organizational and educational developments are there in the school?
- What development can be expected of the teachers and is there explicit coaching in this area?
- What facilities and moneys are available or can be made available?

It is important to record the interview and provide notes. Don't be tempted during the interview to describe solutions, indicate the requirements or say what it not possible.

## Analysis

In this step, the data from the interviews are analysed and translated into requirements. Review the answers provided and determine if they contain needs that can be met by an ELE

### For example

*The answer to a question is :*

During the second four weeks (PO) groups of students work together on a project. During this period they need contact the teacher twice. During the last 2 weeks they have to evaluate the project of another team and they must submit their own project to the general group (15min.)

#### Requirement

There must be project environments.

The students must be able to share documents.

## Exploration

Categorize all the requirements that you uncovered in the analysis step. Put them in a matrix.

There are about 30 ELEs in the market. There are commercial packages, open-source packages and a combination. Select about 10 of these based on an initial review and sense that you will have. Look for easy language, how intuitive it is, how many clicks are needed to get to a subject. Listen to what others have to say about them. Go to user groups, conferences and other schools that use them. The technical management of an ELE is also very important. You will need to make choices beforehand. There are generally speaking 3 possibilities.

An Open Source Package that you will install and manage on your own server	A package installed by a vendor on your own server and that you will manage yourself	A package hosted at a service provider
<ul style="list-style-type: none"> <li>• Free or very cheap</li> <li>• You need to customize it yourself</li> <li>• Requires good technology knowledge</li> <li>• Continuity is a risk</li> </ul>	<ul style="list-style-type: none"> <li>• Cheap</li> <li>• Any adjustments or changes will cost money</li> <li>• Technically, only Application Management knowledge is needed</li> <li>• Continuity is a minor risk</li> </ul>	<ul style="list-style-type: none"> <li>• Costs depend on the service provider and must be negotiated.</li> <li>• A lot of possibilities per package</li> <li>• No technical knowledge needed</li> <li>• <u>Continuity is assured</u></li> </ul>

Add the shortlist of ELE packages to the matrix and compare how each fills the requirements. This can be done by either indicating if the package has functionality filling the requirement or by describing how the ELE package fills the requirement. This last method is more detailed but provides a better picture of the alternatives to others.

Assign a weight to each requirement, to add up to 100. An important requirement would be assigned 20 points, whereas a less necessary requirement would get 5 points. When an ELE supports a particular requirement, then it gets the points assigned to that requirement. If they satisfy the requirement partially, give them only some of the points.

Then total up the points for each package and the packages with the 3 highest scores should be selected for the next step.

## Decision

Identify a group of future users (teachers) to be the group that will make the recommendation. Include Systems Administrators if you choose to use an open source package.

For each of the 3 finalists, establish a test environment. If an open source package is part of the final three, work with your systems administrator; for commercial packages, ask the vendor to do this. Simulate a curriculum in the test environment and if feasible, include small experiments with students. Do not be tempted by large experiments.

Let the vendors show you what they promise.

Review and discuss your findings and document the final

decision and recommendation in a written report. Keep the report realistic and focus on both what can and what cannot be done.

Set up a working demonstration so that the final decision makers can be convinced.

## Notes

<sup>1</sup> Thanks to F.Hidden