

# **E-courses for Teacher Training**

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Name, Stamp and Signature

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## **Purpose of this document:**

To describe best-practice cases from the region North Netherlands concerning e-education

Title:

E-courses for Teacher Training

## **Country and Region:**

Groningen, Netherlands

## **Issue:**

Education & Training will be one of the most creative field for broadband services and products. New ways of learning are often discussed, but teacher training organisations and universities have hardly changed their curricula for the future profession of a teacher. To prevent drop out and to motivate pupils, teachers have to get used to using much more education services supported by fast internet connctions. At the same time, a new field of research in pedagogy must be established at a larger scale: Learning & teaching by use of broadband technology.

## **Approach / strategies / results:**

In making use of broadband services and products in education, there is still a lot to do. We must be aware that without broadband technology in education & training we will loose out. One example: With fast internet access it takes about 20 seconds to download a video e.g. to demonstrate a learning situation. For students with analogue internet access, adding movies or animations to courses has consequences. File type "avi" takes 1Mb memory for 8 seconds of movie. Then it will take about 7 minutes to download a 1.5-minute video clip, which would result in a highly impatient and de-motivated student. So broadband in education & training is also a medium to motivate students and to stimulate a quick learning process.

## **Relevant keywords:**

e-education, new ways of learning, teacher training



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## Main impacts

- increase IT-skills of teachers
- prepares them for new teaching methods and closer to the students
- makes learning more interesting and creative
- prepares students for future professions
- brings formal and informal learning closer

## Recommendations

A clearly structured desktop is important. Sometimes it is made unclear on purpose. Searching with your cursor you will find your way through a virtual world. In that case it doesn't bother you when it is not structured because it makes it more exiting. Unfortunately there are also courses which are made not clearly structured in a non functional way. In the appendix is an overview of different desktops with comments.

Some courses are supported by music. In the beginning this is nice, but after a while it is annoying and it influences your concentration. Especially when music is built in as a loop and is repeated all the time. On the other side no sounds at all are also noticed in a negative way.

The number of levels you can go down to must be limited to two levels. This saves you from loosing your way. It is very annoying when are caught into the net. This means that you can go down one level but you cannot go up a level before you finish the complete subject with all information and tests.

It is pleasant when the course keeps records about what you already did and supports you with that the next time you start up the course. Especially with tests this is convenient. There are often tests with more than 60 questions. Then it is nice you can stop half-way and finish it later. Also you normally start with a piece of theory before you make a test.

Added games are in general rather simple. You move your figure over a path with the mouse. On your way you run into good and bad items. Sometimes you must collect things for later use. Sometimes you must solve a problem before you can continue. With the Play station, Xbox and Nintendo technology in mind the game must be of high quality to be taken seriously by the students.



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## Technical information

e-course development course for teachers

- 2 days working in a electronic learning environment
- 1 day Writing scripts; Making presentations (didactical not technical)
- 2 days Making an Animation

### **E-course structure:**

- Introduction
- Teacher
- Course information documentation
- Case
- Student control
- Communication Platform

### **Guidelines for e-course development:**

- Start simple, dress up later
- Keep desktop quiet with a clear overview
- Only use functional animations
- Be convinced it is challenging before adding a game
- Use well readable fonts: Verdana, Arial (14 Pts)
- Cut the information, test etc. in small parts

### Tests

- MPC- questions, right - wrong questions
- Drag and drop questions
- Photos right or wrong

### Often used file types

- Brand id gif files
- Pictures jpg files
- Photo's bmp files
- Animation flash files
- Video avi files 8 sec is 1 Mb
- Text pdf files (big files)  
doc files (small file) <100 Kb

### **Internet Acces:**

- Analogue 35 Kb /sec
- ISDN 64 Kb / sec
- ADSL > 512 Kb/ sec

### Development hours average course

- Direction, graphic design 400 h
- Content 450 h
- Testing, modification 300 h



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## Desktop examples

	<p>Subjects</p> <p>Explanation</p> <p>Explaining photos , videos, animations</p>
	<p>Clear quiet desktop</p> <p>Virtual room is exciting because it is not clear what you have to do on entering the desktop.</p> <p>Painting presents a piece of information.</p> <p>Door opens after all paintings have been collected</p> <p>Becomes visible when hit</p>
	<p>Leave the room</p>



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KAPITEL 1 WWW.ICH.DE PARAGRAF 2 LUISTEREN & KIJKEN SCORE HELP STOP

Stefan is nieuw op school. Kijk naar de tekening en luister naar de tekst. Waarover praten Lisa en Stefan?

Te verdienen punten		Score
In 1 keer goed	In 2 keer goed	
2	1	2

Over de zomervakantie in Frankrijk  
 Over bulddansen  
 Over braten en vakken

Start Volume Stop

Primal

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

OK Volgende vraag >

GRAMMATICA WOORDENLIJST REDEMIDDEL


important text difficult to read due to big picture

big non functional picture; Besides original desktop has big black edges

Water ontleden met behulp van elektriciteit

Je kunt hier een experiment bekijken, waarin water met behulp van elektriciteit ontleed wordt.

**Ontleding van water**



Wanneer een gloeiende houtspaander in de reageerbuis met de grootste hoeveelheid gas wordt gedaan, hoor je een knal. In deze buis zit waterstof.

In de andere reageerbuis zal een gloeiende houtspaander met een witte vlam gaan branden. Daarmee toon je de aanwezigheid van zuurstof aan.

De ontleding van water met behulp van een elektrische stroom heet **elektrolyse**.

Als je water ontleedt, ontstaan er twee niet-ontleedbare stoffen: **waterstof** en **zuurstof**.

$2H_2O \rightarrow 2H_2 + O_2$

Bij de ontleding van water ontstaan waterstof en zuurstof in de volumeverhouding 2:1.

Nova Nieuwe Scheikunde 2010 (nummer 10) 00:34 / 00:00

pagina < 2/8 > 1 2 3 4 5 6 7 8

Interesting content

A lot of text. Little fonts are difficult to read.

Once you are in, you have to finish the level

De eigenschappen van legeringen

Het filmpje toont de eigenschappen van brons. De hardheid van brons wordt vergeleken met de hardheid van koper en tin, waarbij ook gekeken wordt naar de kleuren van de metalen.

**Experiment:**  
Enkele eigenschappen van brons, koper en tin

Wij je meer weten?  
MESSING EN BRONS

De eigenschappen van de legeringen zijn anders dan die van de afzonderlijke metalen. De hardheid en sterkte die van de legeringen zijn groter, de smeltpunten zijn lager dan die van de afzonderlijke metalen. Ook de kleuren van de legeringen zijn anders dan van de afzonderlijke metalen.



Het bronzen plaatje kan niet door koper en ook niet door tin bekrast worden terwijl het bronzen plaatje wel het koperen plaatje en het tinnen plaatje bekrast.

[Scala] 02 Procestechnologie

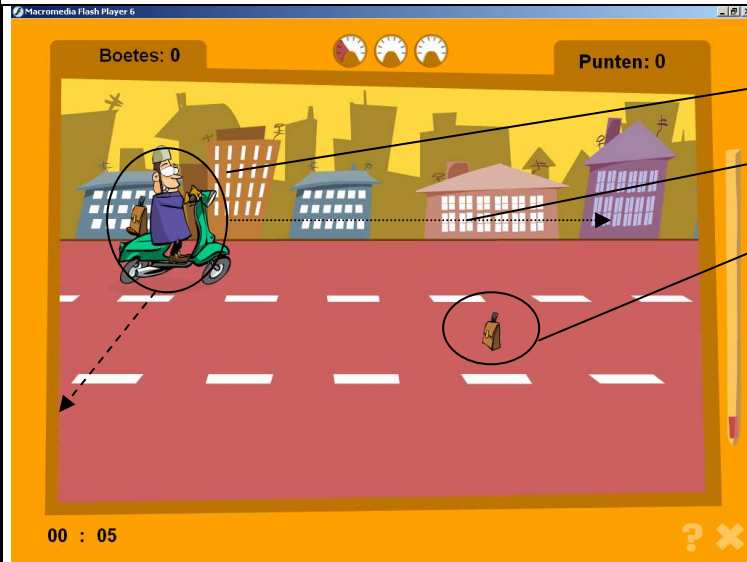
onderwerp < 2/2 > 2 pagina < 1/3 > 1 2 3

Desktop overloaded with information and pictures.



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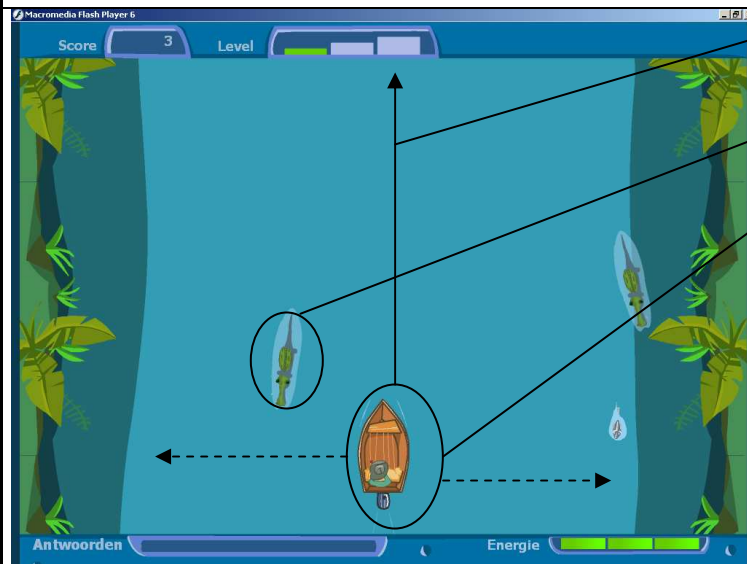


Moving object

Path to go

Obstacle

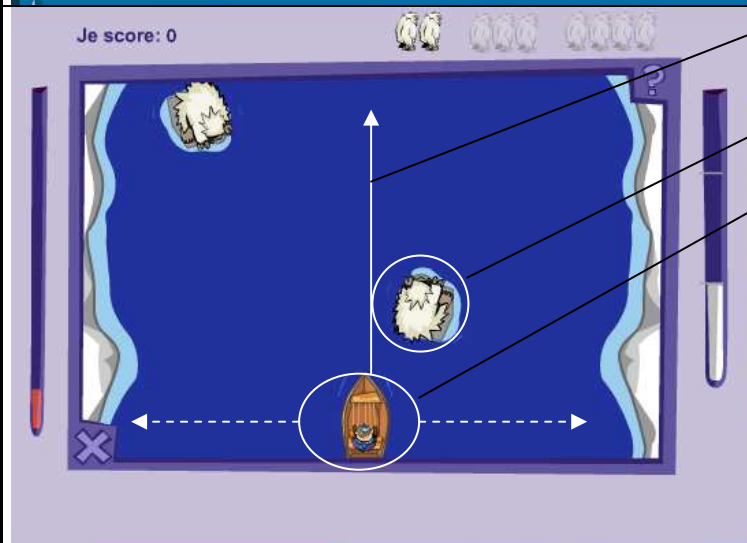
These kinds of games are not really a challenge for 'gamers'.



Path to go

Obstacle

Moving object



Path to go

Obstacle

Moving object



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