

E-Portfolio in the Regular University Chemistry Programme

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Outline

- pilot project “*Generic and research skills in the bachelor*”
2003-2006
- context
- role of e-portfolio
- evaluation
- future

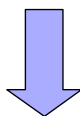
The context

- 1998 attention for skills in the chemistry curriculum: integrated approach to improve writing skills
- 2001 student monitor UvA: chemistry students most satisfied about communication skills of all UvA students
- 2003 targets Bachelor-Master structure
 - integrated and visible academic skills in the curriculum
 - students more involved with their own academic development
 - e-portfolio as a tool
- 2006 Eurobachelor label

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Integration of academic skills

Competence = knowledge, skills, attitude and reflection



development of skills should be integrated within the chemistry courses

Bologna process

- Dublin descriptors (Oct. 2004) and
- Budapest descriptors (last modified August 2006)

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Budapest descriptors

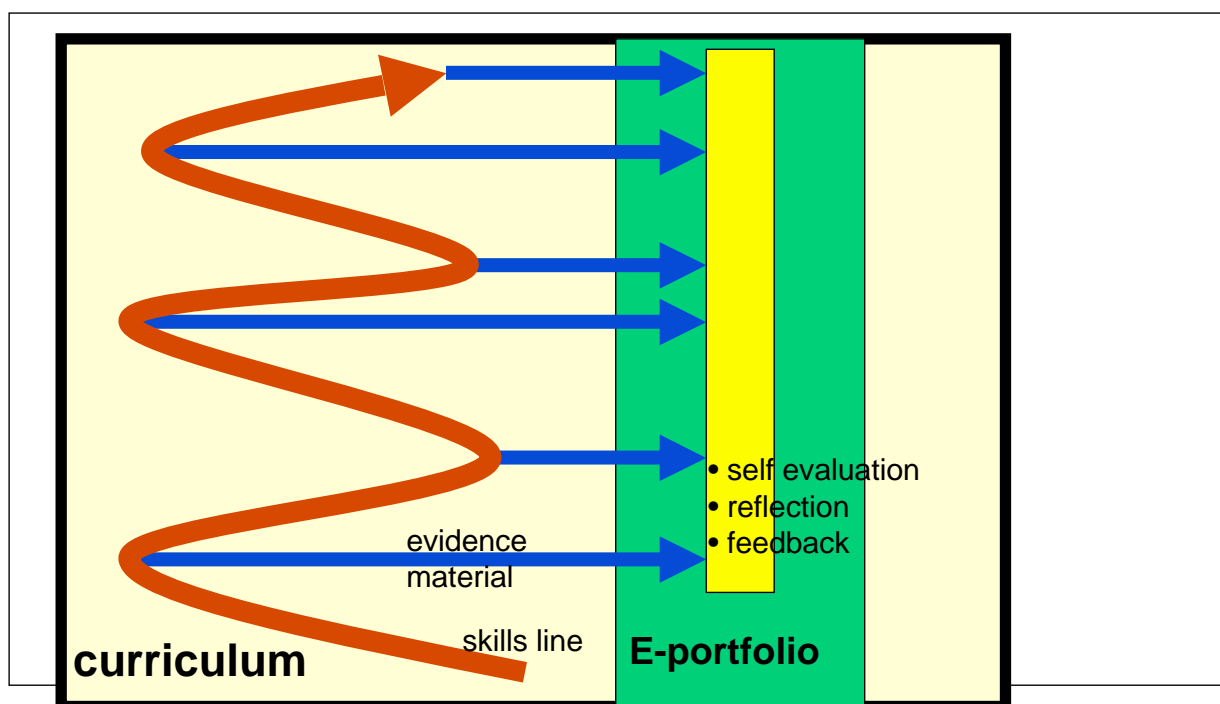
Eurobachelor qualification (first cycle)

- knowledge and experience in the core areas of chemistry, several specialized areas of chemistry and the necessary background in mathematics and physics;
- practical skills in chemistry
- **generic skills in the context of chemistry which are applicable in many other contexts**
- knowledge and competence to get access to second cycle course units or degree programmes.

See: Joint quality initiative: <http://www.jointquality.org/>

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Pilot project: academic skills and e-portfolio



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Skills line

- development of skills in several levels
- in certain compulsory courses skills get special attention
- teaching methods support competence development
- assessment: different assignments ((group) projects, reports, presentations, tests)
- direct feedback on each skill by the teacher (feedback form)
- reflection moments using e-portfolio: feedback on reflection on skills line by the coach

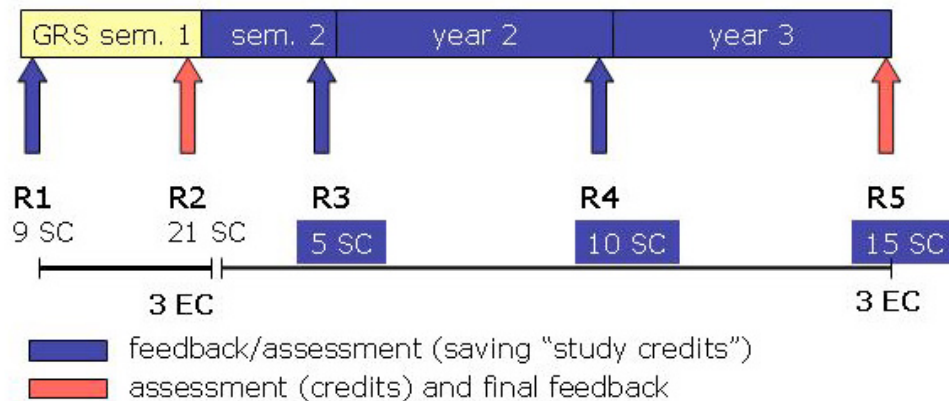
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Skills

- scientific writing
- oral presentation in different formats
- poster presentation
- computer skills (ICT and scientific tools)
- information skills: to gather and interpret relevant literature and experimental data
- collaboration skills
- subject specific practical skills
- research skills

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Reflection moments (pilot 2003-2006)



GRS= General and research skills
 R= reflection moment

R1 and R2 obligatory to all first year students
 R3, R4 and R5 own choice (a final portfolio assessment instead)

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e-portfolio in a reflection moment

E-Portfolio presentation

- short presentation of the student (who am I?, why am I here?),
- list of assignments / projects produced in the reflection period - links to the products (evidence)
- reflection on his or her own development in the reflection period.
- PDP in the third year

- support by a reflection sheet
 - self assessment check list
 - reflection assignment per reflection moment
 - same reflection sheet used throughout the bachelor

- example 1: [reflection 4](#) (bachelor year 2)
- example 2: [reflection 5](#) (pdp)(bachelor year 3)

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Evaluation

- 23 students started in 2003
- 9 students participated in 4 or 5 reflection moments
- 8 of them finished their bachelor in 3 years
- 1 student who followed none of the voluntary reflection moments and 1 student who participated in 1 voluntary reflection moment finished their bachelor in 3 years
- the remaining 13 students need more than 3 years to finish their bachelor (some of them have dropped out)

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Survey in the group who used the e-portfolio

- response: 8 of 9 students
 - all students appreciated development of skills integrated within the subject courses
 - all students appreciated the feedback of the coach
 - none of the students found working with the e-portfolio difficult, most of them appreciated to work with e-portfolio
 - 1 student found reflection moments important. He/she would not like to miss these activities at all
 - **7 students think that the reflection moments did not have any influence on their development**
-
- the coach could see their development very well
 - a precise monitor of the curriculum
 - about 2 hours work for coach per student per reflection moment

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Conclusions about pilot project

- promising results - skeptical students
- too little commitment by the students and the staff
- time consuming activity of the coach



future plans

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Future plans

Implementation project funded by the university (UvA):

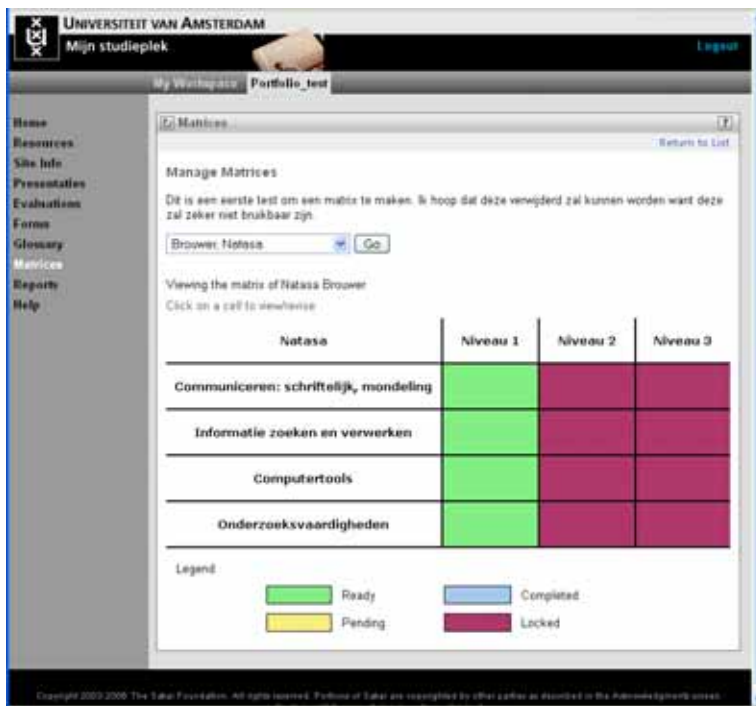
- Physics and Astronomy, and Mathematics will start the integrated skills line in the curriculum using e-portfolio
- Chemistry and Bio-exact continue on regular basis
- better embedding, more people involved
- a competence matrix in e-portfolio (feedback per skill development),
- new e-portfolio tool: OSP, Sakai

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Competence matrix

	level 1	level 2	level 3
Competence 1	course A: activities evidence reflection, assessment / feedback	course F	course M
Competence 2	course C	course J	course xx
Competence 3	course D	course K	course yy

Competences matrix



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My Workspace | Portfolio_test

Manage Matrices

Dit is een eerste test om een matrix te maken. Ik hoop dat deze verwijderd zal kunnen worden want deze zal zeker niet bruikbaar zijn.

Brouwer, Notasa

Viewing the matrix of Notasa Brouwer

Click on a cell to view/erase

Notasa	Niveau 1	Niveau 2	Niveau 3
Communiceren: schriftelijk, mondeling	Ready	Locked	Locked
Informatie zoeken en verwerken	Ready	Locked	Locked
Computertools	Ready	Locked	Locked
Onderzoeksvaardigheden	Ready	Locked	Locked

Legend:

- Ready
- Completed
- Pending
- Locked

→ portfolio

Acknowledgement

- Wolter Kaper for his contribution on designing of the skills line
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