



Professionalism in ICT

who is accountable and to what extent?

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Dutch Congress Foundation on ICT education





Apologies for my English.

It is the first time in my life, I give a presentation in English.

But do not hesitate to interrupt, when you don't understand what I am saying.

Chartered financial experts



- Legal rules

with

- Code of Ethics / Code of Conduct
- Permanent Education
- Chamber with power to expel



"Make sure everything is done ethically. Within reason, of course."

Professionalism in ICT



The main question in this is: who is accountable?

- Government?
- Industry?
- Employers?
- Education?
- Labor organizations?
- Employees?

And if so, to what extent?

This presentation



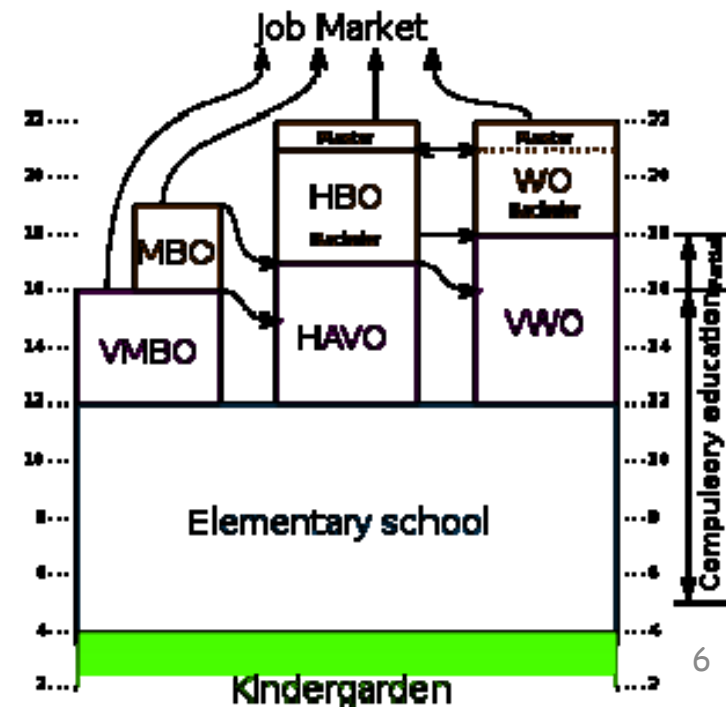
- Higher ICT Education (level/volume)
in the Netherlands
- Quality Assurance in Higher Education
in the Netherlands
- EURO-Inf project and EQUANIE
- Accountability in Education

Higher ICT Education in the Netherlands



www.nioc.nl

- 16 millions inhabitants
 - 260.000 working in ICT companies
 - 125.000 ICT professionals
 - 10.000 open positions every year
- 14 universities
- 16 universities of applied science
- 4.500 graduates every year



Quality Assurance

in the Netherlands

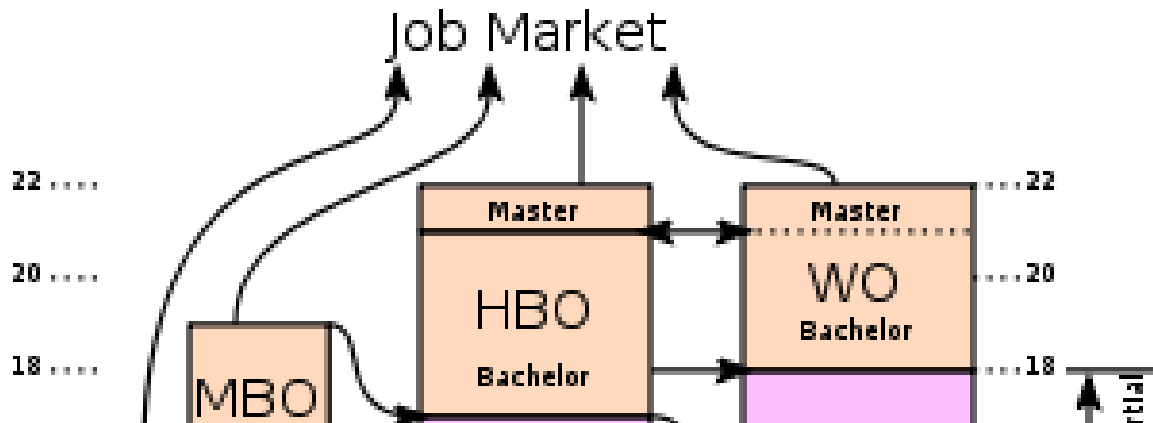


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EQF level	4	MBO (vocational training)	Annual report by Ministry of Education
	5	MBO+ (Associate Degree)	
	6	Bachelor at HBO or WO	Accreditation by Dutch Flemish Accreditation Organization
	7	Master at HBO or WO	
	8	PhD (only at universities)	

HBO = university of applied science (FachHochschule / Polytechnic)

WO = university



Management Review



- Aims and objectives of the program
- Curriculum
- Staff
- Services
- Internal quality assurance system
- Results

Concluding Remarks



- Trust
 - Graduation
 - According to expectations of industry?

 - We can conclude that the quality of the higher ICT education has no structural link to the needs of industry
- A world to gain I think.

EURO-Inf



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An European system for accreditation of higher informatics education:

- improving the quality of educational programs;
- providing an "European label" for accredited programs;
- facilitating mutual recognition by program certification;
- facilitating recognition by authorities;
- increasing mobility of graduates as recommended by Lisbon.

EURO-Inf

Outcomes 1



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Quality standards for competences, skills and knowledge, ranged in four categories:

- Underlying Conceptual Basis for Informatics
- Analysis, Design and Implementation
- Technological, Methodological and Transferable Skills
- Other Professional Skills

Expected program learning outcomes have been formulated.

EURO-Inf

Outcomes 2



Each program must be consistent with legal requirements and have in place:

- program educational objectives;
- a curriculum and processes;
- academic staff, facilities, resources and cooperation agreements;
- appropriate forms of assessment;
- a management system.

EURO-Inf

Outcomes 3



The complete conclusions of the project are available at the website

www.euro-inf.eu

especially the [end report](#) of the project.

CEPIS and EURO-Inf



- Survey of CEPIS Member Societies
- Responses from 19 Member Societies

NB:

Considerable diversity in the current and expected quality assurance arrangements for higher informatics courses around Europe

EQANIE



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European Quality Assurance Network of Informatics Education

Implementation of quality assessment practice for informatics education systems in Europe and to build confidence in systems of accreditation of informatics degree programmes within Europe

Concluding Remarks



- Ambitious

The link between Industry and Higher Education is recognized and will give support to the strengthening of professionalism in ICT.

CEPIS



The employees are represented by CEPIS, counsel of computer societies with 36 computer societies in 33 countries all over Europe. Good for more than 250.000 ICT-workers (estimation). CEPIS has exerted influence in certification and education

CEPIS



Active participates in:

- EUCIP
- IP3
- Harmonise
- EURO-Inf
- E-Skills

Only when we see our contribution, we are able to leave the adolescent phase and really become mature.

Appeal



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- Let us use our influence and connections to industry and government to work on professionalism.
- Only when we all use our influence this growing to maturity will develop regular and smooth.

Thank You.

Balance between management and teaching staff



- Management in Education
 - responsible for planning, creating frameworks, quality assurance, and accounting.
- Teaching staff
 - responsible for facilitating and promoting the best learning outcomes.
- They both work as `professional` and are interdependent.