

---

# PORTFOLIO SCENE IN DUTCH HIGHER EDUCATION

*Rubens, G.F.L.M.. Utrecht University, Kemps A.H.M. INHOLLAND University*

---

## Management summary

The Special Interest Group NL Portfolio of SURF has asked Alex Kemps (InHolland University) and Wilfred Rubens (Utrecht University) to carry out a desk research into the who, what, where and how in 'Portfolio Holland'. Objective of this research is to map and to open up the portfolio landscape within Dutch Higher Education.

This portfolio landscape has been mapped on the basis of a questionnaire. Besides, a ePortfolio maturity model has been developed that is used to position institutions in the portfolio landscape. Apart from that, descriptions per institution are available online.

In this paper an example of the questionnaires' working out has been included about one topic: educational concept. The other topics, not worked out in this paper, from the questionnaire are:

- Policy-related basic assumptions
- Use of portfolio
- Institution-wide portfolio systems
- Freedom of choice of students portfolio
- Roles with portfolios
- Embedding curriculum
- Guidance/coaching
- Assessment
- Freedom of choice students educational programme
- Still, a list is included of the institution-wide portfolio systems mentioned.

Furthermore, the ePortfolio maturity model is explained and the institutions are positioned in the portfolio landscape on the basis of this model.

On the basis of the abovementioned results, a number of conclusions can be drawn. For instance, it has been found that it is complicated to examine at an institution-level how the portfolio is used in education. Supposedly, the portfolio is used in a great variety of ways within institutions. Students also have reasonably much freedom when using the portfolio, whereas the freedom of choice in the design of the educational programme is not very large. From the perspective of the portfolio this can be called remarkable. After all, the portfolio is often considered as a tool that gives an insight into the development of a student who has much freedom of choice in the determination of his learning targets and learning activities. The research also shows that the portfolio is mainly used for the students' learning (and not, for instance, to promote the expertise of employees). Here, the main thing is to coach the individual development of the student, reflection on development and the collection of materials. Moreover, the portfolio seems to fill an important function within higher education.

Also remarkable is that, in a majority of cases, nobody from the professional practice is involved in the support of the portfolio. That is remarkable since it is the professional practice in which the level of competency must be demonstrated (and involved people from the professional practice are the best judges of that).

It is also striking that a large number of various portfolio systems is used. The market of 'digital portfolios' is as yet strongly split into fragments.

The ePortfolio maturity model shows that institutions are often in a higher phase of application, as regards ICT-infrastructure and freedom of choice portfolio.

Generally speaking, the institutions seem to be in the phase of process redesign as regards the consistency policy/practice and the curriculum embedding.

Finally, this paper is concluded with a number of recommendations.

## **Objective of research**

The Special Interest Group NL Portfolio of SURF has asked Alex Kemps (InHolland University) and Wilfred Rubens (Utrecht University) to carry out a desk research into the who, what, where and how in 'Portfolio Holland'. Objective of this research is to map and to open up the portfolio landscape within Dutch Higher Education. A stock-taking is made of what is happening per institution: which tool/system they use, which materials and templates there are and what one's position is in the portfolio landscape. The commission by NL-portfolio offers the opportunity to make a broad stock-taking of portfolio applications in Dutch higher education and to describe a current Portfolio landscape.

## **Method**

The researchers made a questionnaire for this research. Most questions were multiple choice questions, other questions were open. The draft questionnaire has been discussed with met Prof.Dr. Robert-Jan Simons (IVLOS, Utrecht University) and Dr. Jeroen Onstenk (reader InHolland University).

The researchers then made an inventory of who within the SURF-connected institutions could be considered as 'portfolio contact persons' of the institution. This inventory was carried out among the contacts of the Platform ICT and Education of SURF and among contacts of the SIG NL Portfolio. Then, the questionnaire was sent to a total of 38 'portfolio contact persons'. The researchers did also remind the intended respondents of the questionnaire a number of times through e-mail and telephone.

Most respondents have responded in writing. In five cases, the questionnaire was answered by telephone.

Then, the questions were scored in SPSS. The researchers gratefully used the advices by Dr. Heinze Oost from the IVLOS. Frequencies were calculated and where possible averages (and standard deviations) and contingency tables (if a connection between variables is suspected). A draft-report has been discussed with Prof. dr. Robert-Jan Simons (IVLOS, Utrecht University) and Dr. Jeroen Onstenk (reader InHolland University).

Then, the researchers developed an ePortfolio maturity model—also on the basis of literature. After that, the institutions were positioned in this model on the basis of the completed questionnaires. The respondents had the opportunity to react to the positioning. In part 3 this is further explained.

In this way, this document contains an overall outline of the current portfolio landscape within Dutch Higher Education.

Per institution a 'random picture' is also made. These descriptions can be found through [http://wiki.ossite.org/index.php?title=SIG\\_NL-Portfolio:\\_Portfolio\\_landscape](http://wiki.ossite.org/index.php?title=SIG_NL-Portfolio:_Portfolio_landscape)

## Response

The questionnaire was completed by twenty-seven institutions (twenty-one HBO= Higher Professional Education, six WO= Scientific Education). The HBO dominates, which may lead to a distorted picture.

One questionnaire was received when the tables and the text were adapted for the second time. That is why this questionnaire was not incorporated in the quantitative analysis, but it was included in the qualitative descriptions. For the rest, five institutions mailed information that has been incorporated in the qualitative data. These institutions however, did not complete the questionnaire.

A number of respondents indicated to find it very complicated to give an opinion about the whole institution. The way in which the educational process is designed and the portfolio is used, varies greatly. This paper gives an outline of the dominant applications within institutions. Undoubtedly, it fails certain exceptions because of that.

In a single case, two questionnaires were received from one and the same institution. Since the responses in these questionnaires were very different, they have been incorporated separately. It also is remarkable that the size of scale of some institutions varies strongly. Some PABO's (Teacher Training Colleges), for instance, are still organised as separate institutions, whereas other institutions (such as InHolland University and Utrecht University) comprise many different faculties/schools and filled in one questionnaire. Therefore, a distinction has been made between institutions with a limited size and those with a large size. The first category contains for instance the separate Pabo's or faculties that responded. This regards 9 institutions. Institutions with a large size are 'broad' colleges or universities (with several faculties/schools). Seventeen incorporated questionnaires regard large institutions.

## Questionnaires

The questionnaires were designed on the basis of the following topics:

- Policy-based assumptions
- Use of portfolio
- Institution-wide portfolio systems
- Freedom of choice students portfolio
- Roles with portfolio's
- Curriculum embedding
- Support
- Assessment
- Educational concept
- Freedom of choice students educational programme

Below, the applied institution-wide portfolio systems are named and the elaboration of the topic "educational concept" is included as an example.

### Institution-wide portfolio systems

Systems mentioned are:

- Topshare (intranet environment as portfolio environment) (2x)
- Sharepoint (5x)
- Portfolio portal (self-developed application to open up portfolio)
- WebCT

- Blackboard (courses per student) (2x)
- Blackboard CMS (4x)
- Own faculty system (3x)
- Netschool (5x)
- ID Portal
- Studyweb
- First Class
- Amico
- Concord
- DU Portfolio
- Self-developed system
- Portfolio on the basis of the CMS Roxen
- OSP (2x)

A large number of systems is used. Some respondents also indicate here that the use of the system is in a pilot phase as yet.

In well over 60% of the institutions, there are limitations with regard to the choice of portfolio systems for faculties/schools. 23 out of the 26 respondents indicates that institution-wide choices are managed at a central level (in almost 60% of the cases this regards a limited project organisation).

#### **Example of elaboration of questions around the topic ‘Educational concept’**

Admiraal et al. (2002)<sup>i</sup> distinguish three educational concepts (‘educational orientations’):

- Guided learning (comparable with ‘organised travelling’; for example in the form of lectures/tutorials).
- Experiential learning (comparable with ‘backpack tourism’; for example in the form of problem-based education).
- Active learning (comparable with ‘explorers’ who go and explore and have a lot of self-responsibility for their own learning process; for instance in the form of competence-based education).

In the questionnaire it was asked, on the basis of the abovementioned description, which educational concept is leading within the institution. That provides the following picture:

	Frequency	Cumulative Percent
Guided learning	2	7.7
Experiential learning	2	15.4
Active learning	12	61.5
Collaborative/experiential learning	1	65.4
All	8	96.2
Other	1	100.0
Total	26	

Table 1. Dominant educational concept

A large group of respondents (46.2%) indicates that within their institution active learning is the dominating educational concept. Almost 31% indicates that within their institution there is a mix

between guided learning, experiential learning and active learning. Those institutions that claim to use purely ‘active learning’ as an educational concept, originate from the HBO.

	Guided learning	Experiential learning	Active learning	Collaborative / Experiential learning	All	Other	
HBO	1	2	12	0	5	1	21
WO	1	0	0	1	3	0	5
Total	2	2	12	1	8	1	26

Table 2. Dominant educational concept and type of institution

Furthermore, those institutions that use ‘active learning’ as the educational concept, relatively often seem to consider the portfolio as heart of the education.

	Guided learning	Experiential learning	Guided learning	Experiential learning	Guided learning	Experiential learning	Total
Portfolio separate from regular educational programme	0	1	0	0	0	0	1
Portfolio assignments within subjects	0	0	1	1	0	1	3
Learning line/skills line	2	1	5	0	2	0	10
Portfolio heart of the education	0	0	5	0	2	0	7
Several variants	0	0	1	0	3	0	4
Total	2	2	12	1	7	1	25

Table 3. Relation curriculum embedding and educational concept

### Maturity model

‘Maturity models’ are developed to support the improvement of processes, products and services. The IBM company was among the first to use a maturity model to describe the relation between the quality of the developed software and the quality of the development process. IBM discovered that this development takes place step by step (Becta, 2005<sup>ii</sup>). By now, more often ‘maturity models’ are used to map the step-by-step development of technology and change processes. The British Becta, for instance, composed an ICT Maturity model for education<sup>iii</sup>. Marshall and Mitchell (2002) have developed an e-learning maturity model<sup>iv</sup>. KPMG Consulting (2002) described the use of ICT within the professional education and the adult education through a so-called ‘variant model’<sup>v</sup>.

In this part, we want to describe the portfolio landscape on the basis of an ‘ePortfolio maturity model’. This model was developed by us. A central point of departure here is that flexibilisation, personalisation and ‘lifelong learning’ become essential within higher education and, in fact, already are<sup>vi</sup>. The ePortfolio will especially have to be considered within this framework. We also want to emphasize that this is mainly a random picture, made in the winter of 2005/2006.

For the division into phases of the ‘ePortfolio maturity model’ we use Becta’s classification. We also used some elements from the use of ePortfolios from our research. In our opinion, that mainly regards a number of—as BECTA calls it- “key organisational features”. For the use of ePortfolios within higher education, these core elements are, in our opinion:

- Consistence policy/practice: is there a match between the policy-based basic assumptions of the ePortfolio and the implementation in practice?
- ICT-infrastructure: is a fitting ICT-infrastructure available for the development, storage and distribution of ePortfolios? By this we mean, within this framework: the application (software) and the server on which this application is installed.
- Freedom of choice portfolio: assuming that the ePortfolio is a tool within flexible education, the question is which freedom of choice students have in the use of the ePortfolio.
- Freedom of choice educational programme: assuming that the ePortfolio is a tool within flexible education, the question is which freedom of choice students have in the design of their educational programme (think of learning targets, learning activities).
- Curriculum embedding: to what extent is the ePortfolio integrated in the curriculum.

In practice, it sometimes happens that an institution can find itself in various phases per core element. This may lead to tensions within the organisation. It is better if there is a balance between the elements. Therefore, the model also indicates the priorities for an institution to undertake actions (for instance when the institution is in phase 3 as regards freedom of choice portfolio and in phase 2 as regards freedom of choice educational programme) .

Each core element is described for each phase. Below you will find a description of the core element ‘Freedom of choice portfolio’ for three phases.

<b>Phases</b>	<b>Description core element ‘Freedom of choice portfolio’</b>
1: local use 2: process redesign	The faculty/school formulates frameworks for freedom of choice in the use of the portfolio. Within these frameworks, schools are allowed to make their own choices. The chosen ICT-application puts limits to this freedom of choice. Students are allowed to partly determine themselves which material they include in their portfolios and who will get access to their ePortfolios. The school also indicates who must have access to the portfolio. Furthermore, students can adapt the layout of the portfolio to a limited extent.
3: network redesign and embedding	The faculty/school indicates to what extent there is a freedom of choice in the use of the portfolio. Schools are allowed to make their own choices to a limited extent. The chosen ICT-application puts limits to this freedom of choice. Largely, students can determine themselves which material they include in their portfolios and who will get access to their ePortfolios. On the basis of the collected material students can use several portfolios (for several purposes). They can also adapt the structure, within the limits the faculty/school sets. The school also indicates who must have access to the portfolio. Possibly, students can also allow others access to their portfolios. They can also adapt the layout of the portfolio to a limited extent.
4: network redesign and embedding	The faculty/school formulates frameworks regarding the freedom of choice in the use of the portfolio. Within these frameworks, the student (in consultation with the coach) can make choices of his own. The ePortfolio environment does not put any limits to this freedom of choice. Students

themselves can determine which material they include in their portfolios and who will get access to their ePortfolios. On the basis of the collected material, students can use several portfolios (for several purposes). They can also adapt the structure, and determine who gets access to the portfolios. Students also determine which functionalities/services are used and when they work on the portfolio. The student makes decisions about this in consultation with the coach. Furthermore, students can adapt the layout of the portfolio.

5: redefinition and innovative use

Then, we try to position the various institutions within this model, thus creating a portfolio landscape. For that matter, this model seems mainly suitable for more complex organisations. Therefore institutions of a more limited size are left aside in this chapter. That also applies to institutions from which we did not receive sufficient information.

Summarizing, the ePortfolio maturity model looks like this.

<b>Phases:</b> 5 Redefinition and innovative use 4 Network redesign and embedding 3 Process redesign 2 Internal coordination 1 Local use	Consistency policy/practice	ICT-infrastructure	Freedom of choice portfolio	Freedom of choice educational programme	Curriculum embedding
---	-----------------------------	--------------------	-----------------------------	---	----------------------

Anyway, not every institution has to strive for phase 5 . Some institutions might not even consider that desirable.

**ePortfolio maturity model applied**

In this paragraph, the institutions are placed within the ePortfolio maturity model. This is done on the basis of the individual questionnaires. Then, the respondents got the opportunity to react to the positioning. Finally, this positioning was adopted. So the point is their personal assessment/estimation of the positioning.

Some respondents did not fully complete the questionnaire, because of which they could not be positioned in the model below. Institutions of a limited size were not placed in the model below either. In this paper it was indicated earlier that the ePortfolio maturity model seems mainly suitable to map larger, more complex organisations.

The point is not that every institution exactly matches the abovementioned descriptions. The point is the dominant picture. Within some institutions there also may be schools/programmes who, as regards

certain core elements, find themselves in a different phase. As has been said, institutions may also find themselves in various phases per core element. Besides, some institutions find themselves in several phases as regards a number of core elements.

<b>Phases:</b>					
5 Redefinition and innovative use			HR		
4 Network redesign and embedding	HAN InHolland	Avans Fontys HAN HR InHolland UU UvA VU WUR	Avans Fontys HAN InHolland UvA VU WUR	HAN HR	HAN HR UU
3 Process redesign	Avans Fontys HAN Hanze HR UU UvA VU	HU	HAN UU UvA	Avans Fontys HAN InHolland VU	Avans Fontys Hanze HU InHolland UU UvA VU
2 Internal coordination	HU UvA	Hanze	Hanze HU UU	HAN Hanze HU InHolland UU UvA WUR	InHolland UU UvA
1 Local use	WUR				WUR
	Consistency policy/practice	ICT-infrastructure	Freedom of choice portfolio	Freedom of choice educational programme	Curriculum embedding

HAN: Hogeschool Arnhem-Nijmegen, Hanze: Hanzehogeschool, HR: Hogeschool Rotterdam, HU: Hogeschool Utrecht; TUE: Technische Universiteit Eindhoven, UU: Utrecht University, UvA: Universiteit van Amsterdam, VU: Vrije Universiteit; WUR: Wageningen Universiteit and Researchcentrum

In this survey it is striking that not one institution is fully in the phase of redefinition and innovative use. It is also remarkable that several institutions often find themselves in a higher phase as regards ICT-infrastructure and freedom of choice portfolio than as regards the other core elements.

In general, the institutions seem to be in the phase of process redesign, as regards the consistency policy/practice and the curriculum embedding.

The ePortfolio maturity model is a way to map the portfolio landscape of Dutch higher education. It can also play a role in the formulation of scenarios in this field.



## Conclusions

On the basis of the research, a number of conclusions can be drawn.

- It is complicated to examine, at an institution level, how the portfolio is used within the education. Respondents find it difficult to give an opinion about the whole – often large-organisation. The portfolio is supposedly used in a large variety of ways within institutions.
- Schools/programmes have a relatively large role in the determination of how the portfolio is used, whereas in many cases it is often determined at an institution level in which way the digital portfolio is technically used.
- In many cases there is a central steering of the introduction of portfolio systems, usually through a project organisation of a limited scale.
- Students have reasonably much freedom of choice in the use of the portfolio. It is remarkable that large institutions have comparatively more freedom of choice in the use of the portfolio, than institutions of a more limited size.
- The portfolio is mainly used for the learning of students (and not, for instance, to promote the expertise of employees). The main point there is guiding the student's individual development, reflection on development and collection of materials.
- It seems that the portfolio is used for the individual learning process of students. In chapter 2.6 the conclusion was made, among other things, that the portfolio is (reasonably) little used for peer feedback and collaborative learning. That could also explain why students have relatively little access to each other's portfolio (see chapter 2.5). The finding in chapter 2.2 that the portfolio is mainly used to coach and to reflect on the individual development of students seems to justify this conclusion.  
This is remarkable since recent views on knowledge and knowledge acquiring in educational science and educational psychology have an effect on the design of education that tends towards learning in powerful, flexible learning environments with complex tasks, in which learning is considered to be a social process<sup>vii</sup>. With this, the introduction of the ePortfolio anticipates in fact the introduction of more flexible, personalized education.
- The portfolio seems to fulfil an important role in higher education. The portfolio seems to fill a central position within learning lines/ skills lines or even forms the heart of the education. Furthermore, in many cases students spend more than 25 hours a year on working with the portfolio, and institutions often invest much in the implementation of the portfolio. Besides, the portfolio is compulsory for students. Possibly, this finding is influenced by an overrepresentation of the HBO within the group of respondents. Within the HBO, competence-based learning seems to gain more and more foothold. The portfolio is often considered as a major tool in competence-based learning<sup>viii</sup>.
- Generally speaking, there seems to be a consistency between policy and practice of the use of the portfolio. With regard to the application possibilities 'reflection on the development' and 'guiding the individual development of the student', this is, according to the respondents, the largest consistency between policy and practice.
- In a majority of the cases, nobody from the professional practice is involved in the portfolio implementation. That is remarkable since it is the professional practice in which the level of competency must be demonstrated (and involved people from the professional practice are the best judges of that).
- There is a large degree of diversity in the way in which the assessment of the portfolio is organised. A large group of the institutions uses the portfolio both diagnostically and certifying.
- A large number of different portfolio systems is used. The market of 'digital portfolios' is strongly split into fragments. Besides, some respondents indicate that the use of the system is still in a pilot phase as yet.

- In general, the freedom students have in the design of their educational programme, is not very great. From the perspective of the portfolio, the relatively small degree of freedom of choice regarding the educational programme is also remarkable. After all, the portfolio is often considered as a tool that gives an insight into the development of a student who has much freedom of choice when determining learning targets and learning activities.
- It seems that there is no connection between the educational concept and the degree of freedom of choice students have to design the educational programme. The concept ‘Active learning’ is mentioned the most often. This educational concept implicates much freedom of choice. Possibly, the concept is not widely implemented as yet. It may also be that there is a difference between the intended concept (‘espoused theory’) and the educational practice (‘theory in use’). A single respondent did explicitly indicate that in the response to the questions.
- The ePortfolio maturity model seems a meaningful tool to map the development of the portfolio landscape.
- From the ePortfolio maturity model it shows that institutions often find themselves in a higher phase as regards ICT-infrastructure and freedom of choice portfolio. These are also those aspects that are most arranged at an institutional level; see also table 4 in chapter 2.1.
- In general, the institutions seem to be in the phase of process redesign as regards the consistency policy/practice and the curriculum embedding.

## Recommendations

- On the basis of the research, we come to the following recommendations.
- The ePortfolio maturity model is a way to map the portfolio landscape of Dutch higher education. Our advice is to further develop this model, to substantiate it (through research, for instance through a Delphi-study) and also to use it at an institution level. It is also advisable to perform such a “scan” about every two years. The insight into the development of the portfolio landscape will increase in this way.
- It is recommendable to not perform a comparable scan at an institution level, but at programme level. This is especially the level where educational leadership has its effect and where in general the responsibility lies for the educational development. In this way, a more complete and balanced picture of the portfolio landscape will be created. Besides, this may promote network development. Such a research, by the way, is very labour intensive.
- Since the market of digital portfolio systems is strongly fragmented, there is an opportunity to work on standardisation at a central level. At the same time, the very diverse wishes regarding the contents-wise use of the digital portfolio will have to be taken into account. Therefore, a so-called ‘service oriented architecture’ is obvious. At a national level –for instance through the SURF Foundation- services can be offered centrally.
- The introduction of the digital portfolio cannot be dissociated from the didactic concept. If the conclusion is made that the education should be made more flexible and personalized, and there should be more learning in interaction with others, then a more extensive research should be carried out about if and how the digital portfolio can fill a more prominent role in the flexibilisation and collaborative learning.
- With the introduction of the digital portfolio, much room is needed for schools and faculties, the ‘owners of educational development’, to employ the portfolio flexibly –‘custom-made’.
- The professional practice can be involved more intensively in the support and development of the digital portfolio. Among other things, that implicates that persons who are not working at an institution for higher education, will have to get access to digital portfolios from students.
- The ePortfolio can be further embedded within the organisation, for instance by also using the tool for the professionalisation of employees and possibly also for the accreditation of schools.

## References

- <sup>i</sup> Admiraal, W., Jörg, T. en Droste, J. (2002). Onderwijsoriëntaties en het gebruik van ELO's. Utrecht: Stichting SURF. Dutch test: [http://www.surf.nl/download/SURF\\_EducatieFreeks\\_11\\_metbijlagen.pdf](http://www.surf.nl/download/SURF_EducatieFreeks_11_metbijlagen.pdf)
- <sup>ii</sup> Becta (2005). ICT Maturity. On 15 February 2006 picked from <http://www.becta.org.uk/leaders/leaders.cfm?section=4&id=4590>
- <sup>iii</sup> See reference 1.
- <sup>iv</sup> Marschall, S. and Mitchell, G. (2005). An e-learning maturity model?. Paper ASCILITE conference 2002. On 15 February 2006 picked from: <http://www.ascilite.org.au/conferences/auckland02/proceedings/papers/173.pdf>
- <sup>v</sup> Weistra, H., Egelie, C., Mengerink, M. and Rubens, W. (2002). Inzet ICT in het bve-veld. Vergelijking 2000-2002. De Meern: KPMG Consulting. ("Use of ICT in the BVE-field. Comparison 2000-2002).
- <sup>vi</sup> Laurillard, D. (2005). UK Perspective Targetting research on policy objectives: a gap analysis On 28 February 2006 picked from: [http://www.wun.ac.uk/elearning/seminars/seminars/seminar\\_four/seminar\\_four.html](http://www.wun.ac.uk/elearning/seminars/seminars/seminar_four/seminar_four.html)
- <sup>vii</sup> Admiraal, W., Graaff, R. de, & Rubens, W. (2004). Omgevingen voor computerondersteund samenwerkend leren: Samen, samen leren en samenwerken. In P. Kirschner & B. Creemers (Eds.), ICT in het onderwijs: the next generation (pp. 91-112). Alphen aan den Rijn: Kluwer.
- <sup>viii</sup> Zie bijvoorbeeld Tartwijk, J. van, Driessen, E., Hoerberigs, B., Kösters, J., Ritzen, M., Stokking, K. en Vleuten, C. van der (2003). Werken met een elektronisch portfolio. Groningen/Houten: Wolters-Noordhoff

## Authors

Drs. Wilfred Rubens  
Utrecht University, IVLOS  
P.O. Box 80127, 3508 TC Utrecht  
[g.f.l.m.rubens@ivlos.uu.nl](mailto:g.f.l.m.rubens@ivlos.uu.nl)

Ir. Alex Kemps  
INHOLLAND University, OKR  
P.O. BOX 23145, 3001 KC Rotterdam  
[Alex.kemps@INHOLLAND.nl](mailto:Alex.kemps@INHOLLAND.nl)