

Research and Inventory of present Portfolio use in Education especially in the IT sector

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Pellea

**Research and Inventory of present Portfolio use
in Education - especially in the IT sector**

A Survey Report

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PREFACE

The discussion of using portfolio evaluation methods is currently growing among educators in Europe. The partnership of the Pellea-project¹ wants through this project to contribute to the development and implementation of valid and reliable evaluation methods for adults especially in IT education. The overall objective of this project is to provide the IT field of education with sensible and highly alternatives for online multiple choice testing, which will contribute to the quality of the learning process shifting the accent in adult learning from factual knowledge to relevant competence by introducing portfolio evaluation and by this make IT learning programmes more accessible.

The outcome of the project is firstly this survey report, which describes the general use of portfolio methods in the partnership countries i.e. Denmark, Holland, Romania, Sweden, Lithuania and Italy. Secondly, a set of practice oriented assignments and evaluation procedures for a portfolio context in IT training with a special attention on the learning process of adults and thirdly, a web-based information module to support teachers and learners to use the portfolio evaluation method will be developed and tested.

The Pellea project is financially supported by the European Commission by means of the SOCRATES/Grundtvig programme. The project reference number is 110510-CP-1-2003-1-DK-GRUNDTVIG-G1 and additional information about the progress and the outcome of the project can be retrieved from the project website www.pellea.org.

June 2004
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¹ PELLEA stands for Portfolio Evaluation in Life Long Learning Improving Employability of Adult Learners

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1 Introduction

1.1 Executive Summary

In the last ten years we have witnessed a significant increase of interest for portfolio use in the educational systems of the EU members. More and more educational organizations - both in formal and informal education - began to use portfolio as a learning method - to document students' learning process and as an evaluation method - to assess the students' progress in the development of a competency.

This Survey Report is the main outcome of Work Package 1 of the "Portfolio Evaluation in Lifelong Learning improving Employability for Adult Learners" project (short name PELLEA) and was produced with contributions from the project's six active partners. The project is supported by the European Commission in the framework of the SOCRATES-Grundtvig 1 programme and includes partners from six European countries: Denmark, Sweden, Lithuania, Romania, the Netherlands and Italy.

The project's main aims are:

- To conduct intensive research into the present status and practice of the Portfolio evaluation method in various sectors of education, with emphasis on the ICT sector.
- To develop a sample of Portfolio related test assignments and evaluation procedures for the ICT training sector, keeping in mind the specific features and requirements of adult learning.
- To instruct teachers and trainers in IT-programmes to use the newly developed Portfolio products and to apply these products in interactive evaluation settings.
- To test the Portfolio method with small groups of students in IT training.

Chapter 1 – *Introduction* – begins with a detailed presentation of the project as well as of the seven project partners:

- Odense Technical College, Denmark (also acting as project coordinator)
- Atrium Research & Innovation Ltd, the Netherlands
- AISTEDA Academic Found, Romania
- Folkuniversitetet Syd, Sweden
- Klaipeda University, Lithuania
- The CSCS Group, Italy and
- Vytautas Magnus University, Lithuania (will join the partnership not to take an active part in the proceedings of the project, but to monitor them, with special attention for the quality of the produced outcome).

The partners' specific expertise in working with portfolio in adult education and their geographic location were of high value for the composition of the partnership.

We continue by laying a good *theoretical* foundation of the portfolio (methodology) by presenting several definitions and the background of learning portfolio thinking and assessment. Then we introduce the *working definition* of portfolio, the one we'll use in the Pellea project. We give it a special attention, as it provides all partners with a common denominator for understanding the portfolio methodology.

We proceed by treating other portfolio related subjects like learning portfolio assessment and learning portfolio development and failures.

Digital portfolios and their use both in USA and inside the European Union are reviewed, together with the main central initiatives for using portfolios in education.

The link between portfolio and lifelong learning is given a special attention, emphasizing the appropriateness of the method for documenting the progress made by learners throughout their lifetime.

We conclude this chapter with another important topic - portfolio for teachers and managers in educational institutions – regarding the use of the portfolio evaluation method in teacher education as a very efficient way to promote its use and to instruct the teachers how to use it.

Chapter 2 is entirely dedicated to the inventory of the portfolio use in the partners' countries, the result of the partners' own research at national level. In order to give a comprehensive and comparable picture, the contributions follow the same structure:

- Portfolio in general - a presentation of the portfolio concept in each country, particularities of its implementation, of the legal framework, of the national education system etc
- Portfolio use in schools (levels up to and including high schools)- whether it is or is not used in primary, secondary and high schools and in what forms.
- Portfolio use in higher education (university level)- whether it is or is not used, how spread it is, what are the cases when it is used
- Portfolio use in adult education
- Portfolio and ICT/IT - are there any situations when a portfolio was developed for learning ICT related topics?

Our intention was to discover innovative uses in order to generalise them, pitfalls in order to avoid them as well as building a joint pool of experiences in using portfolio as a starting point for implementing in the ICT field with special emphasis for the requirements of adult education.

Denmark's contribution presents a mixed picture, with portfolio use at many educational levels though not considered widespread. It also raises a lot of interesting questions like: is there a big brother aspect regarding the portfolio use in kindergartens?, are students ready to use portfolio? are teachers ready to use portfolio?

The Netherlands' subchapter paints an impressive picture of portfolio use spread in schools, universities and adult education, with higher and academic education as the sector of choice. No examples of portfolio use in elementary schools were found, as these are small educational units with no resources for developing and implementing innovative methods like portfolio.

The Romanian contribution is pointing at a portfolio use still at an early stage where the focus is on gathering material evidences in the learning process and not on reflection and progress assessment.

The portfolio use in Sweden is widespread throughout the entire educational system. A rather recent governmental initiative meant a boost for education in general and portfolio use in special. Examples of portfolio use at different educational levels – from pre-schools to adult education - shows that focus is adapted to the respective ages in a lifelong learning process. Also presented are some interesting tools like Flexus (an e-coaching system) and Fronter (a Virtual Learning Environment).

Lithuania's experience in using portfolio is, as Romania's, limited. The presented example - portfolio in teacher education – is considered very important, a kind of icebreaker, as learning portfolio plays a significant role in this particular sector.

In Italy, portfolio is a subject of heated debate between government and trade unions on one side, and teachers on the other side. The teachers and trainers showed interest in the introduction of the portfolio evaluation method, while the others expressed reluctance and much more caution to

innovation. The social partners agree on the importance of a *personal dossier*, very similar to the definition of portfolio, and the trend seems to be towards a progressive integration of school, university and the vocational training systems. Competence portfolios composed of two distinctive parts - an *assessment report* and a *guidance report*- were introduced in every school, but their usage is made difficult by other additional certification elements.

Chapter 3 contains a comparison of the portfolio use presented in the previous chapter as well as some conclusions.

Based on the criterion of the “wideness” of portfolio use, we placed the partners’ countries in 3 groups. In the first group we have Sweden and the Netherlands, countries where portfolio is broadly used throughout both in formal and informal education.

In the second group is made of Denmark and Italy, where we noticed a clear interest for using portfolio as well as examples of its use in the educational system even if not at a large scale.

In the third and last group we placed Lithuania and Romania, countries considered later adopters as their educational systems are going through major transformations.

As a general conclusion we stated that portfolio use is deeply influenced by the educational system (type, traditions/learning culture, development, etc.) in the six countries included in the survey.

We also observed that governmental initiatives/support, like the ones in Sweden and Denmark, were a welcome funding boost for developing and disseminating portfolios.

From a portfolio use point of view we also noticed that a liberal educational system like in the Netherlands seems to work much better than a complex legislation or tight control from the government/authorities in countries like Italy and Romania.

Finally, the partners’ research found no concrete and relevant examples regarding the use of portfolio in ICT training. This is both a confirmation of our assumptions in the project application as well as a validation of the need for research on extending the use of portfolio in that training sector.

Our work in the following Work Packages will fill this gap by developing samples of portfolio related test assignments and evaluation procedures for the ICT training sector, instruct teachers and trainers how to use them and apply these products in interactive evaluation settings and test the portfolio method on small groups of students in ICT training.

Chapter 4 concludes the Survey Report and contains a complete list of all references used in the previous chapters including links to websites mentioned in the report or found interesting from our research point of view.

1.2 Presentation of the project

1.2.1 Rationale and background

In September 2001 a learning partnership was established with Grundtvig 2 funding, consisting of 4 partner organizations situated in Romania (Aisteda University), Sweden (Folkuniversitetet Syd), Denmark (Odense Technical College) and the Netherlands (Atrium R&I). The partners set out to investigate the issue of digital literacy among citizens in European countries. In particular the project focused on the penetration of the European Computer Driving License into society; “ECDL for everyone” became the working title of the project.

The partnership has not only gained experience in carrying out European projects, conducting research and initiating development, it has also laid down in a comprehensive report the results of its comparative research of digital literacy in Europe. Testing and evaluation have been selected as main topics for the second year of this first project.

During the partnership meeting of 19 till 22 October 2002 the first results of the second year were discussed. Testing and evaluation in informatics show a tendency towards automated online testing, with a clear preference for multiple choice questioning. The main concern of test developers seems to be the *reliability* of their tests: under similar or comparable circumstances measurements should lead to equal results. In other words different people with the same capacities should obtain the same outcome for their tests. The importance of reliability is undeniable, but the claim of objective measurement causes the *validity* of testing to be lost out of sight. An increasing number of tests do not measure the complete set of knowledge and skills that has been defined as the outcome of the learning process. For the sake of fitting into a multiple-choice, online context questions tend to become simpler when learning content is concerned and trickier when they have to be selective. The present digital literacy project will pursue this investigation of current testing practice, but at the same time the demand for alternative methods and procedures of testing and evaluation is has become clear already. One of the most promising approaches that have gained support over the years in other sectors of education is the Portfolio Method. Coming from the art education the Portfolio evaluation has found it's way into graphics and design and other related areas. This partnership now is most keen to develop Portfolio applications for the informatics-training sector. By it's combination of purely content driven evaluation of skills and knowledge and the abstinence of laboratory-like testing environments this approach seems highly suitable in a context of life long learning and adult education.

An evaluation based on a Portfolio consisting of relevant products and assignments produced by adult students throughout the program seems far more appropriate to establish their knowledge and skills than a set of multiple-choice questions only capable of measuring knowledge of facts.

1.2.2 Aims and Objectives

First year:

- To conduct intensive educational research into the present status and practice of the Portfolio evaluation method in various sectors of education, gathering available and relevant knowledge.
- To develop a sample of Portfolio related test assignments and evaluation procedures for the IT training sector, keeping in mind the specific features and requirements of adult learning.

Second year:

- To instruct teachers and trainers in IT-programmes to use the newly developed Portfolio products and to apply these products in interactive evaluation settings.
- To test the Portfolio method with small groups of students in IT training.

The impact of the project will be to provide the IT field of education with sensible and highly practical alternatives for online multiple choice testing that will contribute to the quality of the learning process. Shifting the accent in adult learning from factual knowledge to relevant competence by introducing Portfolio testing would surely make IT learning programmes for adults more accessible to the target group. In view of their *employability* it would be helpful for adults even more than for young learners to be able to show their full competence in IT by means of a Portfolio consisting of evidence of their skills.

Potential employers will have a far better image of the candidate's skills and knowledge by looking at their Portfolio than by knowing their percentile score on a multiple choice test. Having such a Portfolio will enhance the assertiveness and self-consciousness of the adult learner, which is no less than a major aim of the project in itself.

Innovative aspects

The Portfolio approach has not yet been used in the IT-training sector, at least not on a larger scale. Evaluation in IT-training is restricted nowadays to a PC based measurement of the factual knowledge that the student is able to display. This means that during testing we gather no information on the students' active skills or the capacity to perform certain tasks in practice. That is exactly what Portfolio evaluation has to add to this situation: in fact it is no less than a track record of the students achievements throughout a training programme, showing in as much detail as anyone interested might like to see, what students' *real capabilities* are.

The observed fact that a learner report/Portfolio in any educational context stimulates self-evaluation and reflection by the learner on his or her attitude towards the learning process and the learning content is probably the most meaningful aspect of this innovation.

The innovative aspect of the project is strengthened by the following paradox in reasoning: Multiple choice testing (MC-testing) has benefited from the introduction of automated data collection and data processing and consequently IT-training and MC-testing seem to be natural twins. This project will give a good taste of an opposite development, where IT-training is combined with a rather elaborate approach for testing and evaluation, adding especially to the validity of tests, without giving much in on the aspect of reliability. The present project sets out to transfer these benefits of portfolio evaluation to IT-programmes for adult learners and Life Long Learning environments in general.

Main pedagogical and didactical approaches

With reference to educational and methodological experts like B.S. Bloom, A.D. de Groot and others, one could state that the learning process is a phenomenon of such complexity, that testing results based on only multiple choice questioning falls hopelessly short of measuring the full learning effects of any training programme. De Groot was one of the first to work with something like a Portfolio, calling it a learner report and giving explicit attention to the learning experience and the proceeding of the learning process. His ideas have been elaborated for the art education (Dr. Van der Kamp, Dr. Imelman), but initially only in the USA, the UK and the Netherlands. This early work resulted in the learner dossier or learner file, where the students would gather all relevant materials referring to a certain key issue.

This learner dossier was meant as the underlying material for a face-to-face evaluative discussion between teacher and student. Especially in literary education this approach has gained wide support in Anglo-Saxon countries and the Netherlands during the 80's. The observed fact that a learner report/Portfolio in any educational context stimulates self-evaluation and reflection by the learner on his or her attitude towards the learning process and the learning content is probably the most meaningful aspect of this innovation. Not only is the portfolio-method of evaluation most *valid* in terms of being concentrated on *learning content, learning effects (results) and the learning activity as a continuous individual development process*, in terms of *reliability* of the measurement technique it has shown to produce *consistent* results as well: when asked about the experienced learning effects shortly after completing a training programme and again a few years later, students produced almost similar responses. They apparently knew what they knew.

1.2.3 Target groups

Direct beneficiaries:

Adult learners (and students in other age-categories) will be invited to show their IT-competences in a comprehensive and meaningful fashion by building their personal Portfolio reflecting their achievements and experiences in using computers and specific applications. Especially *adult learners* will benefit, as they face a real disadvantage in comparison with younger learners when testing only focuses on the capability to reproduce massive amounts of facts: the higher the age,

the more difficult that kind of testing becomes. Building their Portfolio gradually throughout a training programme as evidence of their competence will add to their self-esteem and their consciousness of their real capabilities as a future worker in the field. This aspect is relevant for *all learners in IT-programmes*.

Teachers and trainers in IT-programmes will have at their disposal a different approach to evaluation and testing that may be considered as a complementary instrument to MC-testing. Most of them are aware of the restricted value of MC-test results, but since other approaches are lacking, they are obliged to make (exclusive) use of these. Portfolio-evaluation will be helpful as an addition to and a variation on existing testing methods.

Secondary beneficiaries:

Training program-developers (policy and decision makers in education) and national and international counsels for qualifications and certificates will most surely welcome the extension and increasing diversity of testing approaches which for IT-programmes seems to be confined at the moment to multiple choice questioning.

Employers can rely on much more detailed and relevant information on the applicants' qualification for a job, not only with regard to *the level* of knowledge and skills, but also with regard to the specific *kind of skills*. Candidate employees who bring forward their Portfolio, showing achievements and experience, provide much more useful information about their capacities than those only showing their percentile scores on a number of MC-tests.

1.2.4 Envisaged outputs

First year:

As part of the ongoing dissemination process of the proceedings and outcomes of the project a website will be set up with the characteristic of a journal: all relevant aspects and activities will be logged on a weekly basis (web-log and knowledge log or K-log). The web-log will serve as a permanent dissemination facility and will be updated on a daily or at least weekly basis.

- A survey of Portfolio practice in education in general, including an overview of possible applications in IT training.
- Design and production of web based information module to support teachers and students to use the portfolio evaluation method (PEM).
- A set of practice oriented assignments and evaluation procedures for a Portfolio context in IT training, with special attention for the learning process of adults.

Second year:

A manual or set of guidelines including instruction materials for teachers and instructors in IT training, providing them with feedback and support on the use of Portfolio for testing and evaluation. An interactive version of this manual will be made available on the project's website.

- Complimentary to the web-based support module for teachers and trainers a web-based tool for building individual Portfolio's will be produced, serving primarily the learners themselves.
- A report on test results with the Portfolio method used with and by students (adult learners) in IT training, based on active and permanent monitoring of their learning and evaluation process.

Whenever appropriate, materials and reports will be published on the Web, on paper and on CD/DVD.

Users of output

Web-log: To be used by project partners, internal and external reviewers (funding programme coordinators) and all others who take an interest in the project proceedings and outcomes (teachers, curricula developers and decision makers in education). The web log is especially meant for dissemination purposes.

Portfolio practice survey: educational scientists, teachers, curricula developers and decision makers in education

Web tool: students (adult learners), teachers and others involved or interested in daily practice of IT-training programmes

Portfolio assignments: (adult) learners, teachers, curricula developers and decision makers in institutes for professional and vocational IT training.

Manual for using Portfolio: teachers, educational scientists, curricula developers and decision makers in institutes for professional and vocational IT training.

Web tool extension: individual learners, teachers, and curricula developers.

Report on portfolio practice in IT-training: educational scientists, teachers, curricula developers and decision makers in education

Information and communication technology - aspects

As the entire project covers exclusively ICT related aspects of training, the project description is self evident on this point.

1.2.5 Implementation of results by partners

Most partners are actively and on a daily basis involved in IT training for (adult) learners. The general rationale for this project was in fact an innovation of IT training that all of them demanded or needed. Therefore *all results* will be implemented by the partners in their own training programs, right from the moment they become available. In this way also the dissemination process will be effectively supported, by offering demonstration sites for the obtained results.

Monitoring

The partnership has adopted a twofold monitoring strategy to ensure the effectiveness of the work at hand:

Vytautas Magnus University (VMU) in Lithuania will join the partnership not to take an active part in the proceedings of the project, but to monitor them, with special attention for the quality of the produced outcomes. VMU will comment on proceedings as observed, on the web log activity and on the products that will be put forward to them for evaluation. In addition to this also the *Dutch National Vocational Qualification Council* (though especially invoked to support dissemination) will comment on products, especially those directly related to IT training.

All partners will in turn be responsible for subsequent work packages, in most cases chosen for the special interest they take in the outcome of that single work package. WP-leadership will focus on quality assurance and coping with deadlines; in this way the partnership will constantly stimulate itself to live up to it's own expectations.

Evaluation

When products have obtained preliminary consent by the partnership during the coordination meetings or on the web forum, Vytautas Magnus University will evaluate their quality in relation

to the desired standards, be it their scientific value (surveys) or their suitability for educational practice (Portfolio assignments, guidelines, web tool). Work package leaders will apply relevant quality standards for the work package they are responsible, based on their specific expertise concerning that part of the work.

Dissemination

All partners will use their existing national and regional networks to spread information about the project's outcomes, supported by the website making all materials accessible for all interested parties. Special qualities and opportunities of the partners regarding dissemination are detailed in the section with descriptions of each partner institute.

Especially for dissemination purposes the Dutch *National Vocational Qualification Council ECABO* will be subcontracted by Atrium Research & Innovation to ensure spreading of relevant results to all educational institutions that should take an interest in Portfolio evaluation for their training programs. ECABO represents both national employers platforms and labour unions in the Netherlands and it is *a national supervisor of vocational and professional training for the business administration and ICT sectors*. It is a member of many relevant *international platforms*, dealing with subjects like professional qualification, methods of evaluation and testing in education, assessment of learning goals etc.

In addition to this Atrium will spread information on the proceedings and outcome through its regional and international contacts, including several commercial companies, training consultants to large-scale employers and several European partnerships that Atrium is or has been part of. Last but not least contacts with the regional press and regional authorities (City of Sittard-Geleen, Province of Limburg) will be used to attract attention to this line of European development work.

Concerning dissemination, AISTEDA Academic Foundation intends to:

- Set up a web-log (actually, a knowledge log), which will permanently reflect the latest developments in the project, and will include contributions from all the partners, but also from third parties;
- Organize a conference for presenting the project's outcome and for promoting the Portfolio Evaluation Method, where both representatives of the Romanian Ministry of Education and of the educational and IT associations will be invited;
- Co-operate with the Regional Employment and Vocational Training Agencies in implementing the Portfolio evaluation methods (PEM) in companies, and in supporting unemployed people to develop their portfolios;
- Organize, in co-operation with the Chamber of Commerce of Romania, an awareness-raising campaign among HRM executives regarding PEM;
- Present the results at the E-comm-line 2004 Conference, organized by the Romanian Academy of Sciences with the support of the European Commission
- Publish presentations of PEM on the website of leducat.ro portal.

Folkuniversitetet Syd will contribute to the dissemination process in the following ways:

- Arranging courses for teachers and other personnel that can benefit from the concrete results of the project
- Spread the project experiences throughout the entire organization (First Class, our web page)
- Setting up a web-log to continually reflect the developments in the project, which will include contributions from all the partners
- Informing national organizations, like the Swedish Agency for Flexible Learning, The Swedish Agency for Distance Learning and the Swedish National Council of Adult Education about the project and its results, thus realizing a nationwide dissemination.

Klaipeda University will spread information about the project, project results and the products via the institutions that are used to take part in common projects, involving their experts and using the following homepages for spreading the information:

- The IT department of the Klaipeda University (www.ku.lt),
- Labour market Training Centre and Authority in Klaipeda,
- Lithuanian Association of IT teachers (<http://linma.lt>),
- Lithuanian Association of Adult Education (www.laae-lssa.lt)
- Adult Study network (www.adultstudy.net)

CSCS has developed a number of dissemination activities within various European and National projects, and it will ensure a valuable contribution in widening, across Italy, the impact of the project. The organisation is the National Coordinator for Italy of EFVET, the European Forum of Vocational Education and Training.

Via this network of training and research institutions, CSCS ensures a wide dissemination of the project outcome, throughout Italy and Europe (for more information about EFVET, www.efvet.org). The institution ensures the link of the project with a strong network of partners, ranging from vocational training bodies, association of companies, unions.

CSCS co-operates with *Centro Risorse Nazionale per l'Orientamento*, the major Italian authority on vocational counselling and orientation, both for the development of specific projects as well as for the dissemination of the results. CSCS intends to use this partnership, and the existing network covering all regions in Italy, for promoting the information and the dissemination of any project outcomes.

1.3 Presentation of the partners

(P1) Odense Tekniske Skole (in English: Odense Technical College.)

The legal status of Odense Technical College is in Danish *selvejende institution* – the corresponding term in English is private foundation.

Odense Technical College is one of the largest of its kind in Denmark. It covers an area of 90,000 square metres, and is the setting for 630 employees, 3,300 yearly students and additionally 12,000 part-time students. In November 2004, the college celebrated its 160th anniversary.

The craftsman courses of the college cover the theoretical and practical aspects, as well as the latest technology, in five main subject areas:

- Technology and Communication
- Building and Construction
- Crafts and Engineering Trades
- Mechanical Engineering, Transport and Logistics
- Service Industries

At the College of Higher Education, Odense Technical College runs education in the areas of:

- ICT and Electronics
- Building and Construction
- Energy and Installation
- Production
- Media and Communication

Odense Technical College also runs a variety of in-service training for adults from private and public industry and institutions. The main topics are general management, technical middle management, instructor / teacher training, language training and various polytechnic disciplines. Furthermore, Odense Technical College is initiating consultancy within environmental middle management, technical and initiating assistance about entrepreneurship.

Odense Technical College also works in various projects throughout the world, in Western and Eastern Europe, the United States and the Far East.

Odense Technical College capability lies in areas of technical consultancy, guidance, supervision and teaching in the technical field. Our capability, furthermore, lies in the area of defining, analysing and describing issues within governments, public administrations and small and medium sized enterprises.

Odense Technical College has a long tradition of developing and running adult education and training in the vocational area – both as tailor-made courses for public and private organisations and labour market courses for employed and unemployed people. Further, the college is in the process of implementing special vocational training programmes for adults in vocational and higher education.

In an international context, Odense Technical College has a solid experience in building capacity among educational institution and regional authorities in order to develop and deliver appropriate training activities for adults from Latvia, Lithuania, Belarus, FYROM, Azerbaijan, Spain and Portugal.

Odense Technical College has recently (1999 – 2002) participated in two transnational project dealing with training needs analysis for industrial- and senior workers and prepared appropriate approaches for developing and delivering training for adults (Germany, Finland, Norway, Switzerland, Denmark, Spain, Portugal) and a transnational project dealing with development and implementation of pedagogical approaches for adult trainers on a market oriented educational market (Poland, Lithuania, Hungary, Finland and Sweden)

Currently, Odense Technical College is participating in a project mapping ‘best practice’ for adult trainers in the IT certification area (Holland, Sweden, Romania and Denmark) and a project building environmental teaching capacity for teachers in Serbia.

In the PELLEA project, Odense Technical College will provide special expertise in the following areas:

- Coordination and management of the project
- Design and production of web based tool to support teachers and students to use portfolio evaluation method
- Constructing a virtual space (FORUM) for adult educators
- Dissemination of project outcome

(P2) Atrium Research & Innovatie BV (in English: Atrium Research & Innovation Ltd, a private company)

From 1993 on *Atrium Research And Innovation and it's predecessor FASTT* have accumulated experience and expertise in using advanced telematics applications in work and training environments. This includes procedures and technologies for learning and working on distance. In this way the activities contribute to create additional means of employment for people with special needs. *Atrium Research and Innovation provides adapted, individualized training programmes to unemployed disadvantaged people, including disabled, to help them become skilled workers and experienced users of telematics in business administration, general office work and commercial environments.*

ATRIUM (FASTT) originated from an European international exchange and development programme for disabled trainees and tutors, funded by PETRA (PE31/32) and in later years by Leonardo: FLAIR-Placements (NL97/1/44075/E/1.1.2.a). From 1993 on Atrium (FASTT), developed and implemented *specific training programmes for people with special needs*. This resulted among others in the creation of a powerful *business simulation concept: the REALISE-project*. This project was subsequently funded by different EC Programmes: Euroform 91802NL8/53; Horizon NL97/H/007; ESF, objective 2 (97 18 2802).

Over the years *the technological research and development was focused more and more on user oriented applications of information and communication technology*, including technically advanced concepts as digital enterprising and cooperative work in a virtual office. A fine example of the results obtained is the Periphera-project and a very specific initiative coming forth from Periphera: the Information Society (dis)Ability Challenge (ISdAC). The ISdAC-project, involving among others ATRIUM/FASTT, won the European Telework Award 1997. This line of R&D has been funded by the ERDF (EFRO 93304) and the Fourth Framework Technology-programme: TURA (UR1022).

Over the years various projects involving educational research and development were carried out with financial support from various (former) programmes of DG Education and Culture:

FLAIR:	developing E-work related job profiles in administration (NL95/1/0080/PI/IVT)
DELFO:	designing an E-learning environment (P95/1/00069/1.1.1.e/FPC/FPI)
MESTRE:	developing E-learning materials for trainers (E96/1/00095/PI/1.1.1.b/FPC)
ACTIVE:	promoting employment of disadvantaged people using E-learning and E-work (F97/1/24000/PI/III.3A/CONT);
TELNET:	developing specific E-learning modules for Training Programmes in ICT (1999-1718/001-001/INO)
SNOW:	Using business simulation to support employability of disadvantaged young learners (as a subcontractor to CESO-Maastricht)
DIGITAL LITERACY:	ECDL for everyone (Gru.2.01.011).
PACE	Partial Certification for lower and medium level vocational training (NL/03/B/P/PP/157323);
PELLEA:	Portfolio Evaluation in Life Long learning improving the Employability of Adult learners (110510-CP-1-2003-1-DK-GRUNDTVIG-G1)
FACE VALUE:	developing an innovative pedagogical approach for intercultural learning, referring to universal emotional response (113098-JA-1-2003-1-ES-JOINT CALL-ACYP)
PRO-ACT:	Promoting Rural Opportunities And Cultural Traditions (113079-JA-1-2003-1-UK JOINT CALL-ACYP)
SOCIAL RETURN:	developing a holistic and integrated approach for social inclusion, training and employment of disadvantaged people (approved recently, call 2004)

The list of projects gives evidence of Atrium's continued involvement in issues related to educational innovation, user-friendly development of technology and the promotion of social integration of people in disadvantaged positions.

(P3) Fundația Universitară AISTEDA – (in English: AISTEDA Academic Foundation)

AISTEDA is an abbreviation for the Academy for Computer Assisted Technical Sciences, Economics, Law and Administration.

The legal status of the AISTEDA Academic Foundation is in Romanian *fundație* – the corresponding term in English is private foundation.

The AISTEDA Academic Foundation is a provider of both higher and adult education, operating in two main locations: Bucharest and Alba-Iulia. The total number of personnel is 45, including both administrative personnel and academics (the full-time equivalent is about 30). The number of full-time students is 550, and additionally there are about 300 part time students and adult learners every year.

The AISTEDA faculties provide higher education in the following fields:

- Law (Alba-Iulia)
- Management (Bucharest and Alba-Iulia)
- Finance & Accounting (Bucharest and Alba-Iulia)
- Applied Informatics (Bucharest)

The specific expertise of the University covers:

- the use of Information Technology, both for teaching and as training subject
- the study of foreign languages (English and French)
- interdisciplinary research.

The Foundation also organizes adult education in the following subject areas: IT, Management, Business Administration, Environmental Management, for both private companies and for public institutions.

AISTEDA University Foundation has gained extensive experience in organising IT training for adult learners during the last 12 years. In 2002, it became the first accredited centre for ECDL testing in the area. The IT Department also offers web design and web hosting services for NGOs and SMEs in the area, and provides consultancy on IT related topics.

A special attention is given to Adult Education because of the particular needs of the Romanian adult population and taking into account Romania's efforts to become part of the European Union in 2007.

Several new courses are under development, for meeting the demands in Adult Education. These are some of them:

- Project management, with special focus on IT project management
- IT and Change Management
- Quality Management
- Designing and Implementing eGovernment Initiatives
- Designing and Implementing eLearning Initiatives.

The Foundation has a tight co-operation with the regional public authorities and with several agencies such as: the Agency for Regional Development of 7th Region-Centre, the Alba Agency for the Protection of the Environment, the Alba Chamber of Commerce and Industry, the Agency for Employment and Vocational Training.

The AISTEDA Academic Foundation participated as co-founder in the setting up of the Foundation for Small and Medium Enterprises Alba, the PAEM Local Consortium (Program for Active Employment Measures) and the Association for Sustainable Development Alba.

The international co-operation of the Foundation began in 1995-1996, with its participation in the "Business English and Market Economy" project, as partner of Folkuniversitetet Malmö, Sweden. The project was co-financed by the Swedish International Co-operation and Development

Agency. In 1997-1998, the same partners developed the project "Total Quality Management in Education" project, meant to define a management model for AISTEDA. Its tangible result was a Quality Manual for AISTEDA Alba-Iulia. This second project was a PHARE Partnership project, co-financed by the Swedish International Co-operation and Development Agency. Evaluation and certification of the acquired knowledge was one of the main topics discussed.

In 1999, the AISTEDA Academic Foundation participated as partner in the "Human Resource Agency" Project (1999), a Leonardo da Vinci project co-ordinated by the PAEM Foundation Alba, and organised in co-operation with SEMADOUR (Maubourguet, France).

Between 2001 and 2003, AISTEDA acted as coordinator of the Grundtvig2-Socrates project "European Citizens' Access to Digital Literacy", having as partners Odense Technical College from Denmark, ATRIUM Research & Innovation from the Netherlands, and Folkuniversitetet Syd from Sweden, all partners in the current project too. The project's aim was to share best practices in the field of IT training and certification inside a community of practice formed of specialists from different countries, with different backgrounds and belonging to diverse type of organisations. The "ECDL for everyone" project's conclusions provided the insights and the approach for the PELLEA project.

In the PELLEA project, AISTEDA Academic Foundation will provide expertise in the following areas:

- Setting up and maintaining a K-log (knowledge log) on the Internet, dedicated to the project's development;
- Reports writing;
- Research and inventory of present Portfolio practice;
- Development of a manual for teachers and students on using PEM;
- Development of awareness raising products for managers and policy makers in education;
- Instruction of teachers/trainers in using PEM;
- Testing PEM with small groups of students;
- Dissemination of project outcomes.

(P4) Folkuniversitetet Syd

The legal name is *Kursverksamheten vid Lunds universitet* is one of the five foundations in the national federation Folkuniversitetet in Sweden. It has approximately 400 employees and 500 part-time employed teaching staff and an annual turnover in excess of 20 million Euros.

Folkuniversitetet is an educational and cultural institution for adult education. It has been in operation for more than 60 years, entirely independent of political, religious and trade union interests and has some 45 offices in Sweden and several abroad. The main goals are to further adult and popular education in close connection with universities and emphasizing pedagogical innovation and international cooperation. Activities: open courses, advanced vocational education for employees in companies and public administration, labour market education, lectures on a wide variety of subjects, at different levels and for different target groups. The most important topics are language courses, followed by IT, administration, marketing, law, business economics, management and communication.

Folkuniversitetet has operated distance-learning courses for a long time. In our open courses we offer Cambridge Distance courses, Euroolta – Language Teachers Certificates and ECDL – the European Computer Driving License, just to mention a few. As well as arranging distance education, we support and participate in the development of flexible learning. Flexible learning

involves a form of teaching where the student's own wishes and needs are paramount. Flexible learning gives students the opportunity to choose the time, place, pace and structure of their studies. Teaching is centered on the individual and Folkuniversitetet changes their teaching, course structure and techniques to meet the needs of their students.

We have mainly used our own developed learning management system (LMS) based on First Class communicating and collaborating system. We also use other LMSs like LUVIT, Ping-Pong and Aventus coaching.

Folkuniversitetet begun at an early stage to develop and adapt the Portfolio method for adult education. The area of choice was language training because this is one of our core activities. All our work followed the recommendations that the joint work in the Council of Europe has developed.

We actively disseminated the use of Portfolio method in our entire organisation by arranging courses for teachers that we regard as a very good opportunity to expand to other areas of our activity, especially IT. We have also many years experience of validating and evaluating adult education training.

Folkuniversitetet has been/is involved in several co-operation projects – from local to transnational level - concerning distance/open learning and different forms of flexible learning where ICT has been used. These projects were/are financed by the Swedish Agency for Flexible Learning and the Swedish Agency for Distance Learning and the Swedish National Council of Adult Education as well as the European Union (Socrates, PHARE, TEMPUS-PHARE, etc.).

The PELLEA project will bring new aspects of developing the Portfolio method for other areas than language training, especially IT and will be an important complement for us both in specific projects and in daily courses. Many specific areas, from Advanced Vocational Training to study circles, will benefit of the new experiences.

A number of other staff including teachers, controllers, etc. from Folkuniversitetet Syd will take part in the project. Their general profile includes many years of teaching and working experience as well as project relevant academic degrees.

(P5) Klaipeda University, Continuing Studies Institute (Previously - Adult Retraining Institute)

The Continuing Studies Institute (CSI) was established in 1995 as an autonomous department of the Klaipeda University.

The main areas of CSI are: qualification improvement, professional assessment, specialized professional and continuous studies for those who work (or intend to) in spheres of education, culture, medicine and economy.

The aim of CSI is to grow and develop as an important institution providing the high quality services in ongoing studies, obtaining new and improving previous qualifications, making prognosis and influencing changes in education.

Main objectives:

- To form needs for ongoing learning,
- To use ICT for study processes,
- To develop the studies and qualification improvement process considering the European standards (from passive to the active ones).

The main areas of activities:

Professional assessment.

The Institute organizes various activities to help educators (working in kindergartens, basic schools, upper secondary schools, vocational schools, colleges) and those working in social care, culture, and economy spheres to prepare for the professional assessment and take the assessment credits.

Qualification improvement.

In order to improve the educators' professional qualifications, the variety of courses have been prepared and approved by the experts' committees in Ministries of Education, Health Care, Social Affairs and Labour.

The priorities for the qualification improvement are:

- To have better quality in education, using new teaching methods and techniques in practice,
- To develop and update the content of studies,
- To guarantee continuous studies, ongoing studies,
- To develop the feedback model between institutions.

Continuous and specialized professional studies.

In rapidly changing society under the education reforms the majority of specialists are forced to develop their skills, others have to re-qualify, as their previous specialties are not in use any more. Those are pedagogues of different specialties, managers and workers from education, culture, social care, health care, and economy spheres.

The Adult Retraining Institute has investigated the needs for education and in-service training in Klaipeda and Klaipeda region and provides:

- Educology direction specialized professional studies: Didactics of Subject, Didactic of Subject with Specialized Programs, Pedagogy of Ethics, Pedagogy of Primary Education, Pedagogy of Special Needs, Social Pedagogy, Information Technologies, Pedagogy of Physical Culture and Training, Lithuanian Philology, English for Secondary School, German for Secondary School, English for Primary School,
- Basic studies
- Psychology studies (for those who graduate from Klaipeda University Childhood Pedagogy program with the additional specialization of the Psychology Teacher). After the studies, the Bachelor's degree in Psychology is awarded
- Social Work program. After studies, the Bachelor's degree in Social Work is awarded
- Nursery and Rehabilitation (continuous studies). After the studies, the Bachelor's degree in Nursery and Rehabilitation is awarded
- Master's program on the subject of Education Management, awarding the Masters' degree in Educology afterwards
- Form of the studies – extra-mural, duration – 1-3 years
- Vocational education programs are designed for the students sent by Labour Market Exchange Office and who intend to obtain the concrete vocational qualification. The duration of the formal vocational training – 6 months. We also organize open non-formal vocational courses

The Institute actively participates in various *international and local projects*. Together with foreign partners we take part in the INTERREG III A, Socrates Grundtvig 1 and Grundtvig 2 programmes concerning new innovative teaching and learning methods for adults. Our project "Preparation the high qualified ICT specialists with physical decrease to foster their occupation and social integration" was approved by PHARE 2000 programme. In the PHARE 2001 ESC

programme we are implementing two more projects – “Accreditation Net” and “Improving the entrepreneurship skills in rural areas”. Together with our partners from the Labour Market Training Authority we were implementing the Leonardo da Vinci project.

We also cooperate with other departments of Klaipeda University, Ministries and other institutions of education, health care, culture and economy.

Klaipeda University will be represented in the Pellea project by Loreta Staskuniene, deputy director for International relations.

(P6) Vytautas Magnus University

History

The Center for Vocational Education and Research was founded in 1997 as a structural unite of Vytautas Magnus University under the initiative of Ministry of Education and Science and Ministry of Labour and Social Security of The Republic of Lithuania.

The Director and founder of the Center is Rimanas Lauzackas, Phd., prof. habil. dr., also the Dean of the Faculty of Social Sciences, of the Vytautas Magnus University.

Center for Vocational Education and Research is unique institution for VET studies and research in Lithuania.

The Center is official consultant of Lithuanian Ministry of Education.

Structure and personnel

The Centre consists of 4 departments:

- Department of Postgraduate studies
- Department of International Projects
- Publishing Department
- Department of Academic Research

Full time staff:

Rimantas Lauzackas, Prof., habil. dr., Phd., General Director.

Kęstutis Pukelis, Prof., habil. dr., Phd., Deputy Director.

Laima Sajienė, MA, Phd, the Coordinator of the Postgraduate studies;

Lijana Navickienė MA, Director assistant for the projects, Head of continuous non consecutive studies

Tomas Sabaliauskas, MA, Phd. Student, Head of the administration.

Daiva Bukanrtaitė, MA, Phd. Student, Researcher

Izabela Savickienė, MA, Phd. Student, Researcher.

Asta Valaitytė, MA, Study administrator.

Aušra Palinauskaitė, MA, Phd. Student, Researcher.

Vidmantas Tūtlys, MA, Phd. Student, Researcher.

Eglė Kaminskienė, MA, Phd. Student, Researcher.

Eugenijus Danilevičius, MA, Phd. Student, Researcher.

Part time staff: 12 Expert - University Researchers.

32 Researchers in different VET institutions.

The main field of current activities

Training and Research:

To Analyse Actual Themes of Vocational Education Policy and Organisation

To Organize Vocational Teachers’/Trainers’ Training and To Improve Their Professional Skills

To Consult Lithuanian VET Institutions

To Take Part In International Research Projects And VET Development Projects

To Disseminate Results Of Science VET Research

To Develop International Scientific Relations (By Means of Congresses, Conferences, Exchange Programmes, ETC.)

To Accumulate Scientific Literature Corresponding To The Goals.

2. International Projects from year 1997:

Leonardo Da Vinci “Systematic of Continuing Development of VET Personnel”

ETF “Reshaping The Focus and Structure of TTT in Latvia and Lithuania

PHARE VET '97 “VET Programme in Teacher Training”

Phare “Basic Skills for Social Integration of the Disabled People”;

Phare “Increasing Employability Possibilities of Young People in the Context of Strategic Development Needs of Marijampole Region VIA Improvement Vocational School Teachers Qualifications”;

Leonardo da Vinci, “Optimisation of VET Programmes for Employability Enhancement”;

ETF “Comparative Analyses of Vocational Education and Training Reform and the Role of Teacher Training in Latvia and Lithuania”;

Leonardo da Vinci, “Continuous Studies Curriculum Development for the New Image Designer”;

Socrates /Comenius 2.1, “Development of the In-Service Training Course for School Self-Evaluation and Quality Assurance with the ICT Tool Application”;

Phare “Improvement and Implementation of Pedagogical Programme for Teachers/ Lecturers of North Lithuania Region”; Phare, Development of Service Business Program Accreditation Net”;

Leonardo da Vinci, “Meeting the Needs of Employment: European Curriculum Guidelines for Lifelong Vocational Counsellor in the line with the Challenges of EU Enlargement”;

Leonardo da Vinci, “Facilitating Access to Learning Through the Development of Recognition Procedure of Non-formal and Informal Learning”;

Leonardo da Vinci, “Overcoming Intercultural and Linguistic Barriers in Continuously Accessible Vocational Guidance and Counselling”;

Socrates/Grundtvig, “Portfolio Evaluation in Lifelong Learning Improving Employability of Adult Learners”;

Socrates/Grundtvig, “European College In Adult Education and Training”.

Dissemination

The Centre for Vocational Education and Research has published:

Journal: “Vocational Education: Research and Realities” (2 Editions).

Two conference Books: “Processes of Social Change and Development of Vocational Education and Training” and “Social – Psychological Adaptation and Educational System”

Monographs:

Laužackas R. “The Reform of Vocational Education Curriculum: Features of Didactics”;

“System-theoretical Dimensions of Vocational Education Change”;

“Vocational Education and Training reform in Lithuania. Parameters and results“;

Šernas V. “Didactics of Vocational Activity”; “Vocational Pedagogic”

Pukelis K. “Teacher Training and the Culture of the Nation”;

“Teacher Training and Philosophical Studies”

Priority spheres for the development

Research of Training Needs and Curriculum in Organisations

Labour market analyses

Human Resource Development (HRD)

Research of Needs and Development of Curriculum for VET Personnel continuing Training

Evaluation of VET Reform Processes

Development of VET Curriculum

(P7) Gruppo CSCS

Specific Expertise: CSCS is specialised in designing and implementing initial and continuous vocational training programmes. All training activities are based upon a training needs analysis and are accompanied by counselling and orientation. Around 50% of training activities concern the IT sector, including programming, multimedia and technical graphic design, networking.

The production of Open and Distance Learning (ODL) materials and the provision of orientation, counselling and training services is more and more integrated with IT and

Internet based technologies.

CSCS is active in the provision of training programmes for trainers.

In the IT sector CSCS has developed for privates and for public authorities, touch screen applications, CD-ROM, database applications, web animated applications, programming and dedicated software solutions.

CSCS is also active in designing and implementing quality systems in small and medium sized companies, according to the requirements of ISO 9000 and ISO 14000.

Co-operation and communication

The main working language in the partnership will be English, although some will choose to translate the materials for their target into their mother tongue (included in staff costs). All partners are well experienced in working in a European context and most organisations of the present were already partners in the project on “digital literacy”.

Good cooperation and communication will furthermore be ensured by having project coordination meetings at regular intervals (included in the budget) in order to keep track of progress and to do additional planning of project activities. Of course, the web facilities and all other modern communication media will be used to exchange information and ideas on an almost daily basis.

Work package leadership will be undertaken in turn by all partners (except VMU that will be entrusted with monitoring) and this will help to ensure a smooth co-operation and adequate performance of the partners. In the unexpected case that conflicts would arise the partnership will first attempt to settle affairs through internal communication channels (with the process monitoring partner as a counsellor). But, when necessary, the partnership will manage to invoke external advice and perhaps even mediation to resolve the problem (the National Agencies (NA) of the partners in conflict, for instance)

Other institutions involved

When discussing the dissemination activities a fair number of institutions and platforms have been mentioned that will take notice of the project outcome and that sometimes may even contribute to the results indirectly. The work as such however has been divided between the partners as mentioned in the proposal.

The partnership will not depend on contributions that have not been accounted for to accomplish the tasks as outlined in this proposal.

1.4 Definitions and background of Portfolio thinking

1.4.1 Introduction

Parts of this section have been published earlier as (part of) internal documents on the Pellea groupware at www.pellea.org. These “basic documents” have served the project team to come to grips with the complex terminology and various discussions concerning portfolio. Here we try to

summarize the outcomes of the team discussions. Furthermore we would like to develop and describe a notion of portfolio that reflects a consensus within the Pellea team.

This “Pellea portfolio notion” will serve as a framework for the development of portfolio samples for a number of selected IT programmes in the near future, at least (or to start with) during the development phase of the project.

Before entering the section with definitions it seems good to have a look at the following general description presented by The Association for Supervision and Curriculum Development, introducing some key issues related to portfolios:

“(…A portfolio is…) a collection of student work chosen to exemplify and document a student’s learning progress over time. Just as professional artists assemble portfolios of their work, students are often encouraged or required to maintain a portfolio illustrating various aspects of their learning. Some teachers specify what items students should include, while others let students decide. Portfolios are difficult to score reliably and may be a logistical problem for teachers, but advocates say they encourage student reflection and are a more descriptive and accurate indicator of student learning than grades or changes in test scores.”²

1.4.2 Definitions

The first and second definition below were presented by Mr. Ulf Wallin during the first project meeting in Odense where the early steps in the exploration process concerning educational use of portfolios in various European countries were reported.

Both definitions clearly focus on *reflection by the individual student* (apparently students of Food and Nutrition Sciences are female):

“The portfolio is a record of the student’s process of learning: what the student has learned and how she has gone about learning; how she thinks, questions, analyses, synthesizes, produces, creates; and how she interacts intellectually, emotionally and socially with others”³

“A purposeful, selective collection of learner work and reflective self-assessment that is used to document progress and achievement over time with regard to specific criteria (cf. Wolf et al. 1991; Kohonen 1992b,c; 1996; Gottlieb 1995; O’Malley and Valdez Pierce 1996).”⁴

The third definition is almost similar to the second but emphasizes learner responsibility and, by doing so, implicitly implicates *student ownership of the Portfolio*. This aspect is essential to a large number of educational experts, who consequently state that it’s the responsibility of the individual student to decide on what part of the portfolio should be accessible for outsiders and what parts should be preserved for themselves, the teachers and/or peer students:

“A purposeful collection of student work that exhibits the student’s efforts, progress and achievements in one or more areas. The collection must include student participation in selecting

² A Lexicon of Learning (What Educators Mean When They Say. . . Ever wondered what educators mean when they refer to “authentic assessment” or “Bloom’s Taxonomy”?) www.ascd.org/cms/index.cfm?TheViewID=1141

³ Public and Catholic District School Board Writing Partnerships, Social Sciences and Humanities, Spring 2002, Course Profile Food and Nutrition Sciences, Grade 12, University/College Preparation, (the source was retrieved using an Internet search engine and may not be complete or fully accurate).

⁴ Kohonen, V., 1997. Authentic assessment as an integration of language learning, teaching, evaluation and the teacher’s professional growth. In: Huhta, A., Kohonen, V., Kurki-Suonio, L. and Luoma, S. (eds.), Current developments and alternatives in language assessment. Proceedings of LTRC 96. Jyväskylä, University of Jyväskylä: Centre for Applied Language Studies, 7 - 22.

contents, the criteria for selection, the criteria for judging merit and evidence of student self-reflection.”⁵

From this definition it is only a small step to the one proposed by Forgette Giroux & Simon, which has a clear added value as opposed to the previous definitions as it explicitly points at the *competency* of the student *being the ultimate reference point* for portfolio based evaluation.

”Portfolio assessment is defined here as a cumulative and ongoing collection of entries that are selected and commented on by the student, the teacher and/or peers, to assess the student’s progress in the development of a competency”⁶

1.4.3 Pedagogical background and justification of the portfolio

For all who are in favour of using portfolios in education (and they clearly constitute a majority of those actively writing and reporting on pedagogical subjects), the outstanding value of a portfolio is that it enables a more authentic approach to evaluation than traditional methods will allow for. *Authentic assessment* refers to a holistic and competence oriented approach to education. It is based on the assumption that learners should preferably be allowed to demonstrate and proof their abilities in almost real life situations, instead of in laboratory like settings where everyday reality is reduced to an artificial simplification.

According to the advocates of authentic evaluation the fact that someone is able to answer a question is no proof of any valuable competence, whereas solving a problem clearly is. Therefore, evaluation should focus on valid (meaning realistic) measurements or observations of capabilities, instead of looking for the ”right answer” on questions referring to a hypothetical and simplified context.

The following quote from a discussion of authentic assessment by Grant Wiggins may help to bring that view across:

“Assessment is authentic when we directly examine student performance on worthy intellectual tasks. Traditional assessment, by contract, relies on indirect or proxy 'items'- efficient, simplistic substitutes from which we think valid inferences can be made about the student's performance at those valued challenges.

Authentic assessments require students to be effective performers with acquired knowledge. Traditional tests tend to reveal only whether the student can recognize, recall or "plug in" what was learned out of context. This may be as problematic as inferring driving or teaching ability from written tests alone. (...)

Authentic assessments present the student with the full array of tasks that mirror the priorities and challenges found in the best instructional activities: conducting research; writing, revising and discussing papers; providing an engaging oral analysis of a recent political event; collaborating with others on a debate, etc. Conventional tests are usually limited to paper-and-pencil, one-answer questions.

Authentic assessments attend to whether the student can craft polished, thorough and justifiable answers, performances or products. Conventional tests typically only ask the student to select or write correct responses-irrespective of reasons. (...)

⁵ Paulson F.L., P.R. Paulson and C.A. Meyer. 1991. What makes a portfolio a portfolio? (the source was retrieved using an Internet search engine and may not be complete or fully accurate).

⁶ Forgette-Giroux, Renée & Marielle Simon, 2000, *Organizational Issues Related to Portfolio Assessment Implementation in the Classroom. Practical Assessment, Research & Evaluation*, 7(4).

Authentic assessment achieves validity and reliability by emphasizing and standardizing the appropriate criteria for scoring such (varied) products; traditional testing standardizes objective "items" and, hence, the (one) right answer for each.

"Test validity" should depend in part upon whether the test simulates real-world "tests" of ability. Validity on most multiple-choice tests is determined merely by matching items to the curriculum content (or through sophisticated correlations with other test results).

Authentic tasks involve "ill-structured" challenges and roles that help students rehearse for the complex ambiguities of the "game" of adult and professional life."⁷

The portfolio plays an increasingly important role in the debate between the "authentic" and the "traditionalist" in education. Early research already showed that reports of learning results by the students themselves are consistent over time and match the teachers impressions as well.

These findings have provided strong support to the innovators, being the advocates of authentic evaluation and the portfolio to be sure. In some countries the use of portfolios has become obligatory in certain sectors (like in vocational training in the UK). Research supporting the use of learner reports and portfolios (while depending totally on multiple choice tests for assessment purposes constitutes the other extreme of the range) goes back to the days of A.D. de Groot⁸.

This is what we wrote about authentic (valid) assessment in the Pellea project description:

"The importance of reliability is undeniable, but a predominant claim of objective measurement will move the *validity* of testing to the background. An increasing number of tests do not measure the complete set of knowledge and skills that has been defined as the desired outcome of the learning process. For the sake of fitting into a multiple-choice, online context, questions tend to be simple when only the reproduction of learning content is required and tricky when they have to be selective. To be sure: tricky refers to the way of phrasing, not to a higher level of complexity with regard to the learning content. The previous digital literacy project has pursued the investigation of current testing practice, but at the same time the demand for alternative methods and procedures of testing and evaluation had become clear already.

An evaluation based on a Portfolio consisting of relevant products and assignments produced by (adult) students throughout the educational programme seems far more appropriate to establish their knowledge and skills than a set of multiple-choice questions only capable of measuring knowledge of facts and the capacity to reproduce that knowledge in a very elementary format (*choosing* between a limited number of options, knowing that one of these is right or the best one at least)."⁹

These lines could just as well have been written by De Groot or Wiggins (no doubt with a more eloquent phrasing).

1.4.4 Portfolio methodology and classifications

In the available literature the term Portfolio appears to contain different (although related) entities. According to the distinctive aspects that various authors want to stress, subdivisions like the following will be made:

- Formative Portfolio (supporting professional development)

⁷ Wiggins, Grant (1990). The case for authentic assessment. *Practical Assessment, Research & Evaluation*, 2(2). Retrieved from <http://PAREonline.net/getvn.asp?v=2&n=2>

⁸ Groot, A.D. de. (1961). *Methodologie. Grondslagen van onderzoek en denken in de gedragswetenschappen*. 's-Gravenhage: Mouton. ("Foundations of research and thinking in behavioural sciences", JT)

Groot, A.D. de. (1966). *Vijven en zessen: cijfers en beslissingen: het selectieproces in ons onderwijs Groningen*: Wolters-Noordhoff. ("Fives and sixes, scores and decisions: the selection process in our education", JT)

⁹ Extended version of the Pellea Project description (Section 4), May 2004, included as section 1.3 in this report

- Summative Portfolio (for formal evaluation purposes)
- Marketing portfolio (for job acquisition)¹⁰
- The next example of a subdivision looks most similar:
- Learning Portfolio
- Assessment Portfolio
- Employment or Professional Portfolio¹¹

And then there is the rather academic approach of Bland Tomkinson who distinguishes three types of portfolio, of which only the second one describes a valuable portfolio and the other two seem to be defined (or invented) for the sake of the argument. So far no practical experiences with the Meta-portfolio or the Proto-portfolio were reported in any document studied:

Meta-portfolio: A comprehensive, organised, collection of documents or ephemera, or both, arranged such that other portfolios may be drawn from it for specific purposes.

Portfolio: A comprehensive collection of documents or ephemera, or both, collated so as to convey information about the skills, experience or development needs of its author, normally with a covering narrative.

Proto-portfolio: A collection of documents or ephemera, or both, brought together for the purpose of conveying information about the skills or experience of its author, but without organisation or narrative.¹²

This last, threefold definition probably reflects the intention of the authors to be 100% accurate, but that intention apparently leads to over-defining the subject. Nevertheless it is good to keep in mind that just a “cardboard box, filled with documents” is not sufficient to be considered a portfolio, as in that case the necessary element of structuring (and a lot of other relevant educational items like student reflection and self assessment) would be missing.

The structure of a portfolio should make it possible to relate its content to the learning objectives or the expected competencies of the student that need to be assessed and evaluated.

In terms of the definition provided by Paulsen, Paulsen and Meyer: *a portfolio should refer to criteria* (preferably identifiable through an explicit structure).

1.4.5 Conclusion: the Pellea approach to portfolio

For our work in the context of the Pellea-project we could reduce the threefold and even more refined subdivisions of portfolio to the *two aspects that seem to be most fundamental*:

One essential aspect of portfolio is that of *pedagogical methodology*, referring to *competence and learner oriented education* as opposed to *knowledge and subject matter oriented teaching*. In this view the “portfolio” stands in close relation to terms like “authentic assessment”, “meaningful evaluation and testing” and “self organised learning”. These concepts are studied and promoted primarily by those who oppose the idea that the assessment of the educational or professional capabilities of a person is equal to a measurement of one’s capability of reproducing knowledge. Instead of relying solely on the distinctive power of multiple-choice questions, considerable attention will be devoted to other ways and methods of evaluation.

¹⁰ H.C. Barret, as quoted in section 1.8 of this report.

¹¹ PT3 Program at Wisconsin University, as quoted in section 1.8 of this report.

¹² Bland Tomkinson, *Towards a Taxonomy of Teaching, Portfolios*; 1997. Quoted from: <http://www.utep.edu/cetal>

These methods include: reflection on the learning process and self-assessment by the student, cooperative peer evaluations and joint student/teacher evaluations. The intended leaning effects of such an approach include:

- awareness of knowledge and skills obtained, being part of the *summative_evaluation* procedure;
- awareness of learning results to be achieved in the next parts of the educational programme, being part of the *continuous monitoring or formative evaluation* of the ongoing learning process;
- awareness and capability of describing the personal development process that the learner is going through.

Critics of this pedagogical approach will emphasize the “softness” or subjectivity of this way of measuring learning results. According to them assessing the attained level of knowledge and skills requires objective (i.e. context independent and repeatable) tests, for which multiple choice questioning is seen as one of the most appropriate or even the only acceptable instrument.

A well-designed portfolio approach will encourage the student to focus and reflect on his/her learning process in relation to the educational objectives that have been set. Self-assessment, peer assessment and joint student teacher assessment should be endorsed as parts of the learning and evaluation process.

The other really fundamental aspect of Portfolio is that it constitutes *an organised collection of data containing evidence* of the educational level or maybe even the general *personal development level of a learning or working individual*. In this latter sense the portfolio is widely recognized as a highly relevant tool in Human Resources Management and related areas: we might call it an *extended curriculum vitae*, a (set of) document(s) that will evolve in the course of a person’s career or lifetime. But this kind of portfolio may be even more than a CV, providing additional value to the owner and the ones referring to it, especially when using a web based format with links to other documents, websites and especially evidence of someone’s own achievements (like a neatly designed website or a local area network structure). One of the main characteristics and an outstanding value of this kind of portfolio is the aspect of *full documentation and hard evidence* of the development and the self-building process of the individual, it is a reporting tool for the learning outcome.

This view of a portfolio makes it highly suitable for application in programmes for life long learning and in any concept of human resources management, including career planning and job acquisition.

The main risk affecting this approach to portfolio is that it may be restricted to providing structures and methods for systematic documentation and for writing well organised reports, teaching students how to order and visualize information and focusing on presentation issues, rather than on the learning process.

A well designed portfolio will not only serve to show a representative image of the owner at a certain point in time, it will also mirror the process of personal and professional growth over the years.

Any portfolio combining these two main elements will beyond any doubt add essential value to the learning process and to the evaluation and assessment procedure as a part of that process, be it in the informatics sector or in any other sector of education.

To get, once again, a good taste of the subject, we give the floor to one of the protagonists of the early days, Lee Shulman:

“Portfolios are messy to construct, cumbersome to store, difficult to score, and vulnerable to misrepresentation. But in ways that no other assessment can, portfolios prove a connection to the contexts and personal histories that characterize real teaching and make it possible to document the unfolding of both teaching and learning over time”.¹³

It seems the case in favour of portfolio is clear.

1.5 Learning portfolio assessment

Competence Portfolio, still relatively little diffused in Europe, has become a shared practice in Australia, America e Canada.

*“Some Canadian schools in Québec have developed a project on portfolio, with a team of teachers from Roméo-Forbes school from the Educational Commission Saint-Hyacinthe, which is probably one of the most innovative and interesting from the pedagogical point of view”*¹⁴

In the United States and Australia, the use of portfolio is such a consolidated practice that schools are experimenting the electronic version.

The electronic portfolio could look like a simple multimedia collection of students’ works. Actually, it’s a good tool for evaluation and assessment, for students, teachers, parents, tutors in educational and labour environment. In our opinion, electronic portfolio allows a real and effective educational evaluation and assessment.

The evaluation of competence, on the other hand, has often been *quantitative* based and has become so widely used that is now officially certifiable. It is based on actions/performance observations, by the means of *indicators* to measure knowledge and competences.

Process evaluation, as part of the portfolio method, has moreover an educational impact without a public domain as it is focused on individual needs. It allows all actors involved, users and providers, to constantly monitor and evaluate the training program in progress, allowing corrections and modifications, according to needs.

The portfolio method allows therefore an educational evaluation and the opportunity to provide with documentary evidence of those educational processes that cannot be *directly* observed.

Assessing a process often goes through indirect information such as interviews, questionnaires, reports, self-assessment tools etc that does not fit in traditional assessment and certifications.

Process assessment goes certainly deeper than traditional evaluation, focused only on measurement of “evident” behaviour. Process assessment needs to analyse different factors such as, for example, gathering data on a medium-long term and in different situations, comparing data from different sources and observers, collecting and interpreting data while education is in progress by teachers as well as by students.

We can certainly point out that, as portfolio allows a process evaluation, it should be implemented taking into account that the particular conditions and procedures in which the education takes places should be a main focus of the analysis.

Mastering procedures is a key competence in itself and for this reason portfolio should keep a record of it.

¹³ Quoted from: <http://www.utep.edu/cetal> but the real source is hard to pinpoint as Shulman’s statement (consistently referred to as Shulman 1988) is quoted by many but by none with an exact title or further data. And Shulman wrote more than one published document in 1988.

For those who want to sort it out: the statement appears in Wolf, K. (1991), *The schoolteacher’s portfolio: issues in design, implementation and evaluation*. It could however be that Wolf just quotes the statement (on page 129) again without full reference data.

¹⁴ Taken from an article by Simona Baggiani, Indire www.indire.it

As we are concerned, more than the European Council who stated the *educational* value of this tool, more than the *documentation* one, latest experimentations have shown clearly how the portfolio method could have a strong impact, especially in the school system, from the pedagogical point of view¹⁵.

Furthermore, the electronic portfolio allows students to create a clear picture of what they are able to do and moreover, stimulates a dialogue among all actors involved in the educational process enabling a better and more realistic understanding of the knowledge and competences owned by the student.

In this respect, portfolios are not focused on *what* results the student gained, but on *how* each learning goal has been achieved instead, providing traces of progresses made.

We could wonder, what better evaluation method could exist than, in the prospect of a real *knowledge management approach*, to share process of creation and management of students' knowledge?

In our view, the portfolio is a tool for assessment, a collection of data regarding students and/or workers learning phases and an introduction dossier for employers or other actors dealing with the user.

Students or professionals should be actively involved in the process of building their own portfolios. We believe that the assessment system, or better the self-assessment, where the worker is directly involved in the process of building the portfolio, should include the right for the workers to have meetings with own supervisors or employers.

A strong involvement of all actors surrounding the individual is fundamental element to achieve proper and effective assessment, self-assessment and certification of competences.

In this way, in order to gain a proper evaluation with the portfolio it is important to be able to witness the way the individual learn and to recognize progresses, highlight successes, efforts, new challenges and even failures.

The portfolio that involves every actor, in schools for example, should enable parents to complete the evaluation with comments and suggestions and to ask questions to teachers. In the work environment, the portfolio should allow comments and opinions from peers, superiors or colleagues in general.

Tutors, teachers and other relevant actors involved in educational process, by examining the portfolio, will be able to identify strengths and weaknesses and to determine the steps required for the best of the individual.

1.6 Learning portfolio development and failures

After the first year the portfolio method has been used in vocational teacher education, the reflection on teacher's opinions about the advantages and failures of the theoretical studies, the learning process and its evaluation have been carried out. The group of teachers who participated in the *Vocational Pedagogy* programme has prepared their portfolios on their professional development during the programme.

With regard to their comments and suggestions the portfolio evaluation method will be improved, giving it the more precise structure as well as detailed instructions.

¹⁵ Le otto sfide del portfolio - Alcune implicazioni pedagogiche di uno strumento potenzialmente innovativo, from: "Per Voi" - Magazine of Goethe Institute - January-June 2002

It should be first of all mentioned that this evaluation method is not able to cover the full picture of the evaluation object. Portfolio method is purposeful only if used in the system together with another evaluation methods. According to the reflections of teachers one can distinguish three main risks to be reviewed before the use of portfolio in teacher education sphere.

The descriptive character of the portfolio in many situations implies the subjectivity of the self-evaluation. On the other hand, if used together with other evaluation methods, the subjective description of one's activity or learning progress could be compared to the results of other evaluation methods.

The parity and comparability of the inscriptions can also become the weak part of the portfolio evaluation method. As the programme for vocational teacher education consists of the 11 study modules, each of the study modules is followed by the theoretical and practical task, which is evaluated in the portfolio. The mentioned risk can be defined as the challenge for the programme developers and the lecturers of the study modules. There arose the need to prepare more precise description of tasks, foreseeing concrete criteria for its preparation and evaluation.

Having few or no skills for reflection of their own activity and learning progress makes the process of portfolio preparation more complicated for vocational teachers. The summative evaluation has deeper traditions comparing to the formative one in the education system in Lithuania. Therefore learners are not always able to systematically reflect on their own activity or learning progress, to define the weak and strong points. Seeking to acquire more true and relevant evaluation information in the portfolio of teacher education progress, it would be essential to prepare more concrete structure of the reflection and to carry out several trainings on the reflection process. The reflection training could be also included into the study programme.

As the needs for vocational teacher education grows, the need for portfolio evaluation method is obvious for not only identifying the results of professional development progress, but also for developing skills of reflections and self evaluation, which plays an important role in competency-based adult education. The portfolio method will be developed according to the suggestions of teachers, who have already prepared their first learning and activity progress evaluation portfolios.

1.7 e - Portfolios

Technology has rejuvenated the concept of personal portfolios seen as a powerful tool for personal and organisational development. The portfolio can serve at the same time as a tool for learning, assessment career management and knowledge management.

Regarding the term that should be used: digital or electronic portfolio, we found the incidence of the term e-portfolio -or simply ePortfolio (as an abbreviation of electronic portfolio) being much bigger than for digital portfolio.

Though, the term e-portfolio suggests solely a portfolio in electronic format, excluding implicitly all the other types of supports (paper, photos) that could be used.

1.7.1 The e-portfolio in action

An e-portfolio is an extended, dynamic CV, establishing links to an online database, which contains personal and professional achievements, team results, references and all relevant evidence of competence obtained in the course of work and learning. It provides an opportunity to reflect on one's own professional practice and to share the lessons learned with others. Education and training professionals discovered that the e-portfolio could help to enhance:

- Personal knowledge and competencies;

- Continuing professional development;
- Organisational knowledge and competencies;
- Learning communities;
- Education and learning policies;
- Quality of provision.

While the question five years ago was, “should every student and employee have an e-mail?” the question today is: “should every student and employee be entitled to an e-portfolio?” Today we are just at the start of exploiting the full potential of the e-portfolio.

1.7.2 e - Portfolio and other related concepts’ definitions

Portfolio - a personal collection of information describing and documenting a person’s achievements and learning. There are a variety of portfolios ranging from ‘learning logs’ to extended collections of achievement evidence. Portfolios are used for many different purposes such as accreditation of prior experience, job search, continuing professional development, certification of competences. Tens of millions of people across the world have already used some kind of portfolio.

ePortfolio definition

1: a portfolio using electronic media and services;

2: A personal digital record containing information such as personal profile and collection of achievements.

An ePortfolio can be a combination of mixed media and services (e.g. a ‘traditional’ portfolio combined with online services for assessment). An ePortfolio can be either off-line (e.g. smart card, DVD) or on-line (e.g. personal profile repository), or a combination of both. ePortfolios can be either stand-alone media or interlinked through peer-to-peer services. Whatever the format, an ePortfolio is owned by one person, and one person only, who has the complete control over its content and access. What gives ePortfolios the edge over ‘traditional’ portfolios is the considerable increase in the number and quality of services that can be provided to individuals and the community. In order to make these services widely accessible, ePortfolios must comply with interoperability standards.

ePortfolio services — services provided on the basis of the information stored in a personal record. Services range from assessment support (tracking individual achievements) to orientation, evaluation, validation, course finding and registration, adaptive pedagogy, job-hunting, continuing professional development, community building, etc. Services can be provided through learning management systems, human resource information systems, employment agencies information systems, professional portals, etc. Services can be centralised or distributed on a peer-to-peer model.

ePortfolio standards — ePortfolio standards cover a wide range of issues such as document format (e.g. pdf, html, xml, etc.), accessibility (e.g. WAI), data format (e.g. learner profile), authentication (e.g. certificates), access right, etc. IMS specification such as LIP (Learner Information Profile) and content packaging, are some of the elements that could be included in future ePortfolio standards.

1.7.3 Different types of learning portfolios

The support of a learning portfolio in the IT field could be paper, a digital support such as CDs, DVDs, but also the World-Wide Web.

We could easily imagine adult learners using a Spreadsheet processor (for example Excel) for building a balance sheet that they can document with a printout. The same if they designed a 2D logo, or are able to write a letter in a foreign language. Of course, the best situation is when both the adult and the potential employer can access Internet for uploading and browsing the portfolio items. But when this is not possible, a paper portfolio or a CD could also demonstrate the person's skills.

1.7.4 The content of an ePortfolio

Currently, the content of such a portfolio varies very much from case to case, depending on what does the owner aim at.

There are:

- Portfolios built by pupils to illustrate their achievements and work for both teachers and parents.
- Portfolios built by teachers searching for a job (the famous PT3 program in the US)
- Portfolios built by university students as a record of their learning achievements, preparing their job application
- Portfolios held by various professionals, primarily by artists, searching for customers. Categories: photographers, web designers, graphic designers, architects, but also financial advisors, consultants, trainers, who get new orders based on their reputation.

Examples:

Using portfolio instead of resume and references -[http://www.heavenslair.net/ portfolio.html](http://www.heavenslair.net/portfolio.html)

A classic portfolio for a web designer - [http://www.jeffbeeman.com/ portfolio.html](http://www.jeffbeeman.com/portfolio.html)

Such a portfolio could contain:

- homeworks
- projects
- photos
- short films
- slide shows
- URLs
- Graphic images (such as logos, banners etc.)
- List of customers
- Syllabi and lesson plans
- Lists of projects,
- Lists of publications.

A special situation is that of knowledge workers, who keep idea logs, discuss ideas with peers, interact with customers in a transparent way, and this contributes to their reputation.

1.7.5 Current uses of digital portfolios

Portfolios built as web sites using authoring tools

The first try to build online portfolios was based on using authoring tools, such as FrontPage, and Macromedia DreamWeaver.

Portfolios built with the support of specialised software

Other organizations considered a different approach and developed (or commissioned the development) of dedicated software for e-Portfolio development and maintenance. An example is COPE - Curry Open Portfolio for Educators.

Portfolios and blogs

A web-log is a journal on the web, containing short posts including hyperlinks. These instruments are nowadays very easy-to-use, they can show the progress made in time, are public records of achievements and could also host readers' comments.

There usage is wide spread in American secondary schools for maintaining student portfolios, accessible to educators, parents and peers.

Some examples:

- A college in Arizona (<http://eport2.cgc.maricopa.edu/forms/portfolio.shtml>) where they use blogs for developing e-portfolios
- Keeping track of your accomplishments by maintaining a blog <http://community.middlebury.edu/~acogbill/new/portfolio.php>
- Heidi Hesse- Portfolio & Blog of an artist - under coffee & cake- <http://www.heidihesse.com/>
- Portfolio blog of sabomaster - interesting approach - but in Russian! <http://www.livejournal.com/~sabomaster/2003/>
- An art-related blog & portfolio - <http://artrift.blog-city.com/category.cfm?catid=463>
- A mentor's blog - <http://www.edithere.com/eyt/stories/storyReader>

Using wikis for developing portfolios

Wikis are open editing tools usually employed for producing hyperlinked texts in cooperation, while portfolios are usually individual products.

But there is a innovative use of a wiki:

The "Urban Universities Portfolio Project: Assuring Quality for Multiple Publics" is a national initiative aimed at developing a new medium for communicating about the work and effectiveness of urban public higher education. Portland State University, along with five other leading urban public comprehensive universities, are working to create an electronic institutional portfolio that will describe and document how well the institution fulfils its mission. The aim is to do this in a way that speaks to a range of internal and external audiences. The portfolio will have a particular focus on student learning, and on the accomplishments and characteristics unique to Portland State University. For example the Portfolio may examine how Portland's urban environment enriches learning opportunities and how academic offerings are adapted to the diverse needs of urban students. <http://docs.portfolio.pdx.edu/Main/FrontPage>

And a genuine portfolio developed in a wiki environment: CSS wiki zen garden <http://a.wholelottanothing.org>

Some notes on how a wiki was used to develop an ePortfolio project at Texas University <http://wiki.cit.utexas.edu/EPortfolio>

1.7.6 The American experience on ePortfolios

In the USA, national attention is given to e-Portfolios as a potentially powerful learning and assessment tool. Important funds have been dedicated to the introduction of ePortfolios in the so-called schools of education, colleges where the future teachers learn.

E-port Consortium, <http://eportconsortium.org/DesktopDefault.aspx>, a worldwide consortium on ePortfolio, states that it has only just begun to understand the true potential of eportfolios as

conceptual thinking, realized within a software environment called an electronic portfolios management system.

Through the collaborative effort organized by the ePortConsortium, which brought together representatives from university and commercial electronic portfolio projects to provide a discussion of electronic portfolio opportunities and challenges, a White Paper on electronic portfolio was drafted. (http://www.eportconsortium.org/WhitePaper/whitepaperV1_0.pdf)

With funding from the U.S. Department of Education's PT3 grant program, electronic portfolios (<http://www.pt3.org/stories/eportfolio.html>) are being integrated into the curriculum at schools of education across the country.

Feasibility study on e-Portfolios

The University of Wisconsin-Madison conducted between June and November 2002 a feasibility study to determine campus needs for and feasibility of electronic portfolios (e-Portfolios) for students and secondarily, for faculty and staff.

The study was stimulated by national attention to e-Portfolios as a potentially powerful learning and assessment tool, activity by peer institutions, the priority to advance learning within the campus strategic plan, the students' concern with career issues, and the School of Education's portfolio system for teacher education which has received national attention.

The study involved benchmarking with peer institutions, campus interviews, focus groups and consultations with several key persons who acted as advisors for the study. More than 65 individuals were involved in the study through interviews or informational meetings.

Following are the questions posed in the study proposal and the conclusions reached.

A survey on the usage of e-Portfolios in institutions of higher education

Institutions of higher education are using e-portfolios in many ways and have varied strategies for developing electronic portfolios. There are several types of e-Portfolios --student, faculty, course, program and institutional. Portfolios are used for learning, for assessment of learning and for career advancement.

The American Association for Higher Education (AAHE) maintains the Portfolio Clearinghouse. It is a searchable collection of portfolio projects from around the world. This database currently contains information on 51 institutions that have some type of portfolio program. Of the 51 institutions:

19 describe their primary purpose as reflection

13 as student evaluation and grading

8 as career planning

4 as program evaluation

2 as faculty evaluation and tenure

2 as advising

1 as integration of curriculum.

The vast majority of the institutions (44) have web-based portfolios. Only five use paper portfolios. Fourteen of the 51 use multiple formats. The Portfolio Clearinghouse is found at <http://www.aahe.org/teaching/pfoliosearch3.cfm/>.

Websites with information about electronic portfolios and examples of places that are already implementing e-Portfolios in higher education.

<http://wiscinfo.doit.wisc.edu/ltde/ORFI/eportfolio/Links.htm>

The most prevalent use of electronic portfolios appears to be in teacher education due in large part to demands of certification requirements. The National Board for Professional Teaching

Standards (NBPTS) emphasized rigorous standards for teachers and encourages the use of portfolios in assessment. The U. S. Department of Education stated that technology could potentially facilitate the storage and retrieval of student work within the portfolio assessment processes and products.

The best practices

A best practice is generally defined as a technique or methodology that, through experience and research, has proven to reliably lead to a desired result. The study has begun to identify best practices in e-Portfolios through study of the literature, interviews, and review of other e-Portfolio programs.

The best practices list they have developed is considered to be a preliminary one. It is considered preliminary because much remains to be learned about the effective use of e-Portfolios in higher education.

Start small with a period of pilot testing. It is critical in order to get the best fit with the institution's culture and available resources. Several institutions that currently run e-Portfolio programs have invested considerable time in planning and pilot testing. Given the complexity of implementing a campus-wide e-Portfolio program at a large institution, it seems evident that the program would be developed incrementally and carefully studied along the way.

Agreement at institutional level on the definition and purposes of e-Portfolios. Faculty involvement in developing the institutional vision for e-Portfolios.

Portfolios mean different things to different people. Portfolios have different audiences and purposes. They can be used for learning, assessment, advising, and career planning. Many different philosophies are used as guiding frameworks. In some disciplines, such as art, interior design, architecture and education, portfolios have well-established uses. For others, portfolios are a new concept. In order for e-Portfolios to have significant impact on student learning, there needs to be a shared vision of what role e-Portfolios can play in an institution of higher education.

Connection of e-Portfolios in schools and colleges to some guiding educational goals and framework (student outcomes for the major, accreditation standards, etc.) This framework is the element that distinguishes e-Portfolios from personal web pages.

Faculty involvement to identify the educational goals that provide a framework for e-Portfolios and in designing the templates. Faculty should also be supported to help them integrate the use of portfolios in their courses.

Academic and Career Advisor involvement in creating the e-Portfolio elements and processes. Advisor involvement in creating the e-Portfolio elements and processes will be key as e-Portfolios can be a resource to assist advisors. If one of the main purposes is to assist students in their path through the university and into the work world, it is important to have advisors involved in the definition of an e-Portfolio initiative. Academic and career advisors currently do this work and are well suited to define the questions that could help students better reflect on their goals and experiences.

Generic but flexible format(s) designed for e-Portfolios that colleges, schools and departments can adapt to their learning goals and culture.

Reflection by students as a key activity necessary to make connections between and among courses and out of class experiences.

Introduction of students to e-Portfolios as they enter the university. The earlier they are introduced and used, the more effective they can be in improving learning. The earlier e-Portfolios are introduced the more students can use them along the way to shape, guide, and document their learning. E-portfolios introduced early in an educational career can be viewed as a formative evaluation of a student's educational career.

An e-Portfolio initiative should be seized as a means to teach students the technology and communication skills they need to be effective in today's learning and work environments. This contextualised real world learning provides an important way to help bridge the digital divide in both computer and information literacy skills.

Support for students in all phases of e-Portfolio development—in guided reflection and feedback as well as in assessment and development of computer technology skills

Feedback mechanisms built into the e-Portfolio process. Depending on purpose, feedback can be provided by peers, faculty, academic and career advisors, or potential employers.

Required Human and Technological Resources for e-Portfolios

At a minimum, three kinds of support are required for an e-Portfolio system: access to web space, assistance for using the technology, assistance selecting and reflecting on items in the e-Portfolio. Currently resources appear to be available to support e-Portfolio pilots. An initial investment in various template designs may also be needed.

Study Recommendations - Excerpts

The authors of the study recommend to start small with a period of pilot testing, and to work with interested parties in developing a variety of e-Portfolio pilots including in and out of classroom learning, advising and career development. Faculty members who already use portfolios for assessment or who have indicated an interest in e-Portfolios should be approached first. Available resources will determine the size, type and number of pilot projects. Identification of an appropriate cross campus advisory group that would help to define and monitor pilot projects should be continued, a vision should be articulated, links with school and college Academic Planning Councils should be developed, and broad institutional goals for e-Portfolios should be defined.

A web-based approach to portfolios that allows flexibility and additional capacity beyond paper portfolios is recommended. Although the traditional literature of paper portfolios recommends that a portfolio be designed to serve only one of those purposes, the authors of the study believe that students can use an e-repository of artifacts for different purposes at different times throughout the course of their university education.

Promotions and events both to disseminate lessons learned from pilots should be developed and gathering of comments and suggestions from stakeholders should be continued.

National developments in standards and the custom system software approach that would integrate with other campus systems should be followed. Careful attention must be paid to interoperability with other campus software such as portals, learning management systems, registrar services and human resource databases as well as to the issues of sustainability and portability.

Types of Electronic Portfolios

Electronic portfolios are much more than innovative resumes or scrapbooks, says Dr. Helen C. Barrett, an assistant professor of educational technology at UAA. A national expert, Barrett also cautions that e-portfolios are "not a scrapbook." Neither of those can show reflection, evolution of thought, and professional development, she says. "A solid portfolio not only shows that you have met the teaching standards. It demonstrates, with powerful evidence, how you have come to know it."

According to Barrett, e-portfolios can be used to present any manner of material or purpose. She has identified three main types:

- Formative portfolios, which occur on an ongoing basis to support professional development
- Summative portfolios, which occur within the context of a formal evaluation process

- Marketing portfolios, which are used to seek employment

Whatever the type, these portfolios typically include "hard copy" writings such as:

- Statement of teaching philosophy
- Reflections and refinements of that philosophy
- Statement of teaching standards and personal goals for meeting them
- Resume
- Lesson plans
- Subject writings - for example, an English teacher may include his own review of children's literature.

E-portfolios are helping student teachers at the University of Wisconsin at River Falls (UW-RF) gain recognition

"Last year, a group of faculty from Japan visited to observe our use of the multimedia portfolios and the integration of technology in teacher training. They were amazed at the level of responsibility and leadership demonstrated by our students. This is a direct result of our PT3 program.

A quick literature review yielded a short white paper on portfolio use and procedures for developing electronic portfolios. This process envisioned the use of each of the three types of portfolios most often called out in the literature:

The learning portfolio, which promotes teacher reflection and ownership over the learning process. This portfolio can be very inclusive and contain large quantities of material. It is most akin to the type of portfolios that were being developed by the teachers in the first year of the project.

The assessment portfolio, which presents educational institutions with information about a teacher's effectiveness. This portfolio would provide more selective content more like the traditional portfolio that the supervisors were accustomed to grading.

The employment or professional portfolio, which provides prospective employers with information about a teacher's suitability for a position. This portfolio can be a formal document with resumes and examples of the teacher's best work.

At the GateWay Community College (<http://www.gwc.maricopa.edu/class/e-portfolio/index.html>), the e-portfolio is considered a first and foremost a tool for students to store their work and select their best work to document what they are learning. The benefit for students is that they can keep track of their learning each semester and see which of the six areas they have worked on and which they still need to work on. The six areas are:

- Communication
- Problem-solving
- Critical thinking
- Computing
- Humanities
- Math and science

e-portfolio can help the students identify their likes and dislikes about their educational and professional life, and also allow faculty to assess how well students are meeting the learning outcomes.

In the area of computing considered to have influenced the economy, careers, and culture of America, the students need the ability to work with computers and a commitment to life-long learning to continue to be knowledgeable as technology changes. It is important for community college students to clearly understand that being computer literate is no longer an option, but it is a personal and professional necessity.

As new computer technology is created or updated, the definition of computer literacy itself continually changes and expands. Computer literacy could be defined as using the computer as a tool to access and disseminate information, as well as to communicate. This definition includes using a computer to solve problems, make decisions, and manage information. In their eportfolios, the students are required to post their best examples from any class that demonstrates their ability to perform various tasks, such as trouble-shoot problems, use telecommunications, and organize and manipulate files; knowledge about legal and ethical computer issues should be also demonstrated.

1.7.7 The European experience on ePortfolios

While it is possible to find an increasing number of ePortfolio initiatives in Europe - some of them extremely innovative - the fact remains that these initiatives are not coordinated, are not interoperable, are not fully exploited and recognized, and in turn are not the source of new ePortfolio initiatives at a level comparable to what is happening in some countries beyond Europe.

EPICC (European Portfolio Initiatives Co-ordination Committee) is an initiative dedicated to making Europe a world leader in the field of ePortfolio activities in all sectors of education and training. Europe has had extensive experience with using the 'traditional' paper based portfolio for assessment and accreditation of prior learning and is now in advance in using the electronic portfolio for continuing professional development purposes beyond the education sector – the UK and the Netherlands are particularly strong in this respect. A professional body, the Royal College of Nursing (UK), provides an ePortfolio to its members for re-certification and continuing professional development, while the Welsh government will offer a type of ePortfolio to its 3 million citizens. This demonstrates the willingness and the ability of some European actors to understand the huge potential of this powerful technology to transform current practice and improve the quality of education, lifelong learning and continuing professional development.

It is our view that the activities proposed in this project will allow Europe to become the leader in this field, bringing the coherence, rigor and inclusiveness that is currently lacking in the diverse initiatives worldwide.

Key objectives

A European ePortfolio vision and strategy statement – through the signature of a Memorandum of Understanding by all concerned stakeholders, to lead future development and practice and make Europe a leader in ePortfolio technology and practice

A network of professionals and organisations involved in ePortfolio *initiatives* – a European ePortfolio Consortium to promote collaboration and harmonisation of approaches among ePortfolio stakeholders.

A Definition of European ePortfolio functional requirements – globally, but also for the different communities and language groups through the collection of profiles.

Interoperability standards – ensure the interoperability of ePortfolio and ePortfolio-related initiatives with the range of information systems and services, public, corporate, communities, etc.

Demonstration platform(s) – to demonstrate how ePortfolio standards can be implemented to provide ePortfolio services, leading to future reference platform(s), Open Source.

ePortfolio White papers – addressed to governmental, policy, and adopter groups to help promote the take up of ePortfolio efforts in education, lifelong learning and social inclusion.

Approach

EPICC will be analysing current projects, practice, tools and policies in order to produce white papers for implementing portfolio initiatives at the organisation, at local, regional or national level. The project will support peer-review of current initiatives. Through an extensive network of professionals and organisations EPICC will collect ‘profiles’ from diverse communities of users (education, training, corporate sector, etc.) to feed the requirements for technical standards that will lead to a demonstration platform.

EPICC partners represent the whole spectrum of potential portfolio stakeholders, from individuals to public authorities and cover a large number of European countries. Partnership will be extended through the signature of a Memorandum of Understanding (MoU).

Expected results

Beside the tangible outcomes, such as the Memorandum of Understanding, the European ePortfolio Consortium, interoperability standards, demonstration platform(s), white papers and an ePortfolio web site, EPICC is expected to have also intangible outcome, such as :

- A European vision leading policies and practice;
- A network of practitioners and organisations;
- Greater awareness of policy makers.

The organisation co-ordinating EPICC is the European Institute for E-Learning, and the current partners are Stitching IMS GLS - Europe, CETIS, European Schoolnet, Giunti Interactive Labs, University of Maastricht, and Helsinki University of Technology.

Europortfolio (www.europortfolio.org) is the name of the European Consortium for the ePortfolio, which was constituted following the ePortfolio 2003 conference held in Poitiers, France on 9 and 10 October 2003. 130 delegates representing 22 countries participated in the conference, providing lively testimony to the fact that the ePortfolio represents one of the most significant manifestations of how we shall be learning and developing in a knowledge economy and society.

The conference made it clear that, far from being a simple ‘paperless’ portfolio, the ePortfolio opens new learning horizons. Schools, universities, professional associations, cities and countries are providing ePortfolio services to their pupils, students, workers and lifelong learners.

On February 6th, 2004 EIFEL has organised a workshop that took place in Paris, France. Topic for this first workshop was, "Implementation of an e-portfolio for individual or organizational purposes: how?". EIFEL workshops are open to everyone and propose physical (IMI – Paris) or online attendance. <http://www.eife-l.org/portfolio/>

The ePortfolio 2004 Conference will take place on 28-29 October 2004 in La Rochelle France. Participation is open to any organisation.

In order to provide the means for the ePortfolio to achieve its highest potential, Europortfolio will promote innovative practice and technology, and encourage the adoption of technical standards that will enable interoperability, between various ePortfolio systems (centralised or networked),

and between ePortfolio systems and other information systems in order to maximise the number and quality of services that can be offered to ePortfolio owners.

The mission of Europortfolio is to:

- Promote innovative practice and technology – use of the ePortfolio as one of the foundations of a learning economy and society, a link between the different dimensions of learning: individuals, organisations, communities, territories (learning cities and regions) and society.
- Contribute to the definition of technical standards ensuring interoperability between ePortfolio and ePortfolio-related initiatives.
- Establish a reference platform implementing state of the art standards in order to provide a benchmark and a test facility.
- Update current occupational standards to promote the use of ePortfolios for forward-looking practice in the field of education, training, human resource management and development.
- Co-ordinate European initiatives with other national and international initiatives.

In order to achieve its mission, Europortfolio is established as a consortium of partners representing a broad range of stakeholders, from schools to lifelong and life wide learning, from publishers of learning technologies to policy makers.

1.7.8 e-Portfolios as an alternative evaluation method for Adult Education in the IT field

The idea of this project was to study the possibility of using the Portfolio Evaluation Method as an alternative to the ECDL certification. The ECDL certification method has proven its usefulness in some organizational environments (big companies, public institutions), where a standard is very important. On the contrary, for SMEs and NGOs the ideal employee must not have exhaustive IT&C competencies, but must be able to combine them with competencies in other fields (accounting, correspondence, contact network maintenance, promotional material design etc).

1.8 Lifelong Learning digital portfolios

1.8.1 Lifelong Learning

Although it is mentioned very often today, lifelong learning (LLL) is not a *new* concept. It was introduced by UNESCO (United Nations Educational, Scientific and Cultural Organization) in 1972 as a global perspective focusing on the needs and the rights of individuals to lifelong learning, promoting an integrated approach between formal and informal contexts, emphasizing the need for adequate funding for both, covering all from the youngest to the oldest and searching for democratisation of access to learning.

One year later another international organization, OECD (Organization of Economic Co-operation and Development) presented its approach to LLL in a report on *Recurrent education: A strategy for lifelong learning*, where the focus was on the needs of the global economy and competitiveness.

The interest for lifelong learning has always been big and broad, but it has increased in the nineties, as it reappears in policy debates in the context of economic crisis and increase of unemployment. A special mention should go to all the considerable work that has been done on lifelong learning in the last three decades: reports and studies have been written; seminars conferences and fora have been held, all contributing to the continuous development of the concept. We are talking not only of the above-mentioned organizations but also of many others, such as the ILO (International Labour Organization), universities, research centres or private initiatives.

It's clear that the lifelong learning message is relevant for all countries in the world, as they are involved in the globalisation process and in particular in the process of developing ICT based activities as an engine for growth and preparation for the knowledge based economy, although focus is different according to different levels of development and specific regional context. As it is expressed in a recent ILO report, "lifelong learning is now the guiding principle for policy strategies concerned with objectives ranging from a nations' economic well-being and competitiveness to personnel fulfilment and social cohesion. Moreover, the concept applies to all peoples and nations regardless of their level of development, and is therefore increasingly backed by governments, funding bodies and international organisations, with the view to equalizing cultural and human capital".

1.8.2 European Union and Lifelong Learning

As our project is financed by a European Union programme it's both compulsory and natural to focus more on the lifelong learning concept from a EU point of view. And, as we shall see this approach is also a broad one, encompassing and linking many important and yet different areas.

In 1995, the European Commission published the white paper "Teaching and Learning: Towards the Learning Society", as an introduction to the lifelong learning year in 1996.

Few years later, lifelong learning became a key element in the strategy set up by the European Union at the Lisbon European Council in March 2000 in reference to the goal of becoming the most competitive and dynamic knowledge-based society in the world.

The European Commission presented in 2001 – at the invitation of the Feira European Council in June 2000 - a communication on "Making a European Area of Lifelong learning a Reality", with the view to identifying coherent strategies and practical measures aimed at fostering lifelong learning for all. And in June 2002, the Council of the European Union adopted a resolution on Lifelong learning where it considered that "education and training are an indispensable mean for promoting social cohesion, active citizenship, personal and professional fulfilment, adaptability and employability".

In the above mentioned Communication, Lifelong learning is defined as "*all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective.*"

Lifelong learning is therefore about:

- *acquiring and updating* all kinds of abilities, interests, knowledge and qualifications from the pre-school years to post-retirement. It promotes the development of knowledge and competences that will enable each citizen to adapt to the knowledge-based society and actively participate in all spheres of social and economic life, taking more control of his or her future.
- *valuing* all forms of learning, including: formal learning, such as a degree course followed at university; non-formal learning, such as vocational skills acquired at the workplace; and informal learning, such as inter-generational learning, for example where parents learn to use ICT through their children or learning how to play an instrument together with friends.

The Commission communication is structured in six building blocks aimed at supporting coherent and comprehensive strategies. These are:

- *Partnership working*, not only between decision-making levels (e.g. national, regional and local) but also between public authorities and education service providers (schools, universities, etc.), the business sector and the social partners, local associations, vocational guidance services, research centres, etc.

- *Insight into the demand for learning* in the knowledge-based society – which will entail redefining basic skills, to include for instance the new information and communication technologies. Analyses should take into account foreseeable labour market trends.
- *Adequate resourcing*, involving a substantial increase in public and private investment in learning. This does not only imply substantially increasing public budgets, but also ensuring the effective allocation of existing resources and encouraging new forms of investment. Investment in human capital is important at all points in the economic cycle; skills gaps and shortages can certainly co-exist with unemployment.
- *Facilitating access to learning opportunities* by making them more visible, introducing new provision and removing obstacles to access, for example through the creation of more local learning centres. Special efforts are necessary in this context for different groups such as ethnic minorities, people with disabilities or people living in rural areas.
- *Creating a learning culture* by giving learning a higher profile, both in terms of image and by providing incentives for the people most reticent to opt for learning.
- *Striving for excellence* through the introduction of quality control and indicators to measure progress. In concrete terms, provision must be made for standards, guidelines and mechanisms whereby achievements can be recognised and rewarded.

It also provides the following six priorities for action:

- Valuing Learning
- Information, guidance and counselling
- Investing time and money in learning
- Bringing together learners and learning opportunities
- Basic skills and
- Innovative pedagogy

They are closely related to the building blocks, each contributing to fulfilling the four broad objectives of personal fulfilment, active citizenship, social inclusion and employability/adaptability.

These priorities have now been integrated in both processes concerning:

- *enhanced cooperation in Europe in Education* - through the 2010 work programme on the follow up of the objectives, which covers as priority fields: teacher training; foreign languages; ICT in education; mathematics and sciences; funding and resources; mobility; open learning; making learning attractive; as well as specific activities linked to quantitative indicators.
- *vocational education and training* - through the so-called Copenhagen process which covers as priority fields: quality insurance; recognition of qualifications and competences; transparency, information and guidance; and the European dimension.

As expressed in many EU documents, lifelong learning is central not only to competitiveness and employability but also to social inclusion, active citizenship and personal development.

Lifelong learning encompasses learning for personal, civic and social purposes as well as for employment-related purposes. It takes place in a variety of environments in and outside the formal education and training systems. Lifelong learning implies:

- raising investment in people and knowledge
- promoting the acquisition of basic skills, including digital literacy *and*

- broadening opportunities for innovative, more flexible forms of learning.

The aim is to provide people of all ages with equal and open access to high-quality learning opportunities and a variety of learning experiences on an ongoing basis and throughout Europe. In practice this should mean that citizens each have individual learning pathways, suitable to their needs and interests at all stages of their lives. The content of learning, the way learning is accessed, and where it takes place may vary depending on the learner and their learning requirements. Education systems have a key role to play in making this vision a reality. Lifelong learning is also about providing "second chances" to update basic skills and also offering learning opportunities at more advanced levels. All this means that formal systems of provision need to become much more open and flexible, so that such opportunities can truly be tailored to the needs of the learner, or indeed the potential learner.

1.8.3 Lifelong Learning Digital Portfolios

Researching on lifelong learning and Portfolio, one may be struck by the fact that the development of both seems to have the origin. The lifelong learning concept was developed in the beginning of the seventies mainly in reference to the crisis of education systems. Although portfolio has a longer history, the learning portfolio idea has begun spreading in the educational sector also in the 1970s as schools at all (educational) levels became more and more disgruntled with the poor outcome of their students.

Continuity in the learning process is one of the most important features of Portfolio as pedagogical methodology. It will consequently contribute to a learning that lasts and in this respect becomes one of the best methods to implement lifelong learning strategies. As one known Swedish Portfolio expert put it¹⁶: "portfolio stands for a dynamic and proficiency furtherance learning, a learning with lifetime as a yardstick, with a "then", a "now" and a "future"".

The portfolio methodology will also help students to understand that learning in schools is not the end of the learning process but merely the beginning to a lifelong learning.

It's therefore vital that students, becoming professionals after graduation, to be able to develop the digital portfolio in the new periods of their lives. Many of them will want to continue their studies in different forms and learning communities while keeping contact with their alma mater other. Digital portfolio development will be a big help for them even if usually they will not be so organized and probably look more like personal web pages.

Lifelong learners on the other hand are centred around their own learning development, and less around career and presenting nice CVs. Fortunately in the last years we saw the appearance of tools to support advanced digital portfolios and help them in the process.

An interesting example is the project E-PAL (Electronic Portfolios and Autonomous Learning), initiated by the Stoas Corporation in the Netherlands and devoted to reflecting lifelong learning in multipurpose electronic portfolios. (Other members of the E-PAL project were: the Dept of teacher education at Uppsala university, SLU-kontakt at Swedish agricultural university Uppsala and the Dept. of teacher education at Malmö university college, Sweden, Bundesinstitut für Berufsbildung in Bonn, Germany, and the CITO group, Arnhem, the Netherlands).

Submitted to the EU Commission in 2001, the E-PAL project raised the bar high by aiming to develop a standardized international qualification and competency database of electronic portfolios.

To quote from a 2001 memo¹⁷:

¹⁶ Roger and Brigitta Ellmin, Att arbeta med portfolio, 2002.

¹⁷ From Emiel van Pufflen, Stoas corporation (www.stoas.nl), Wageningen, Netherlands, 2001 (as quoted by Jan Sjunnesson in "Digital learning portfolios")

“Ideally creating and maintaining electronic portfolios will motivate students to learn in a more active way as they can store and display their results. This can be achieved better if students feel that their electronic portfolios are valuable in life and not just something required by teachers in a limited phase of education. Electronic portfolios can become more valuable in lifetime perspective if they:

- 1. supply prove of competencies to potential employers*
- 2. supply prove of quality for potential customers with regard to services supplied by, or products made by the person described in the portfolio*
- 3. document personal growth in life on the web; many people feel the need to show parts of their life to themselves, their relatives, friends and the world in the form of personal web pages. Not everyone has this need, but those who have often shown a strong motivation in doing this, and it is likely that these people have a strong intrinsic motivation to maintain an electronic portfolio as well. Moreover if ad hoc created personal homepages contain parts showing personal growth and proving competencies than those parts might be regarded as an electronic portfolio.”*

An application combining several or all these functions into one lifetime electronic portfolio might bring motivation during education, eliminate the need of building a series of different portfolios in lifetime and support longer term reflection.

Stoas Corporation tried to get the *Folio*, an electronic portfolio application developed by ePortaro to be used as the standard within E-PAL.



From: the home page at <http://www.eportaro.com/>

According to the website, the application enables the sharing of a diverse collection of digital items amongst students, colleagues, advisors, employment contacts and family members, with full access control. Folio supports career planning, advising, collaboration, reflection, academic assessment and other student and faculty development programs. Folio enables students to collect and share items with individuals, groups and organizations internal or external to your educational institution.

Designed to support reflection, growth, accomplishment and collaboration, the ePortfolio system:

- enables portfolio owners to demonstrate their skills, competencies, personality and mastery to third parties, over the internet;
- organizes diverse vocational and educational experiences;
- helps portfolio owners reflect on connections between apparently different accomplishments; and,
- supports work with counsellors, advisors, and mentors

- fully supports multiple languages in a single installation.

“Att arbeta med portfolio - teori, förhållningssätt och praktik” by Roger and Brigitta Ellmin, published at Förlagshuset Gothia 2003.

“Digital learning portfolios: inventory and proposal for Swedish teacher education” by Jan Sunnesson, published as a report from Uppsala Learning Lab 2002.

1.9 Portfolio for teachers and managers in educational institutions

To develop a portfolio in a pedagogical context takes a lot of courage. It takes some serious considerations on objectives, values and directions.

The modern learning environment has focused on the responsibility of learning – and placed on the learner. To adopt this responsibility takes a scholar. It takes a person that knows the infrastructure of learning. It takes a person that is innovative and a person that can identify learning resources.

For the students to work in open learning it is crucial that the learning resources are more or less transparent. In a modern learning environment, the teacher is going to “brand” herself as a learning resource – reveal herself as a resource for personal or professional development. And more than that, the teacher is going to be a role model in using tools for lifelong self-development. In the vocational area in Denmark the Ministry of Education has supported an IT-platform (called "staff plan") to stimulate the portfolio for teachers and managers. The rationale is: If you – as teacher - think portfolio is the medicine for life long learning for the students it is crucial that the same medicine is taken by the staff in educational institutions. (www.medarbejderplan.dk)

To implement a portfolio in an organisation takes a consensus between the different groups of employees. The whole idea of developing the staff-portfolio application started in the joint councils at a number of colleges – and it had to start here. It is necessary that the staff as a whole agree to in the values underlying the work with staff portfolio – the concept of

- *life long learning*. The portfolio is a tool for constant setting of new learning objectives, defining learning activities, evaluating the results of the efforts that you do and self-reflexion.
- *sharing of knowledge*. In the staff portfolio context the idea is that you share your personal development with your colleagues. The portfolio gives the individual the opportunity to create networks based professional interest
- *open dialogue*. The it-web-based portfolio offers the individual to work with his or her network – it gives the students, the colleagues and your manager an opportunity to work with you on a collaborate learning platform: your personal portfolio.

The teacher's portfolio in the vocational area is (in a Danish context) going to reveal her profile visualized in the following set of competencies:

- Competent in the given professional area (nurse, carpenter, architecture...)
- Competent as a pedagogical communicator
- Net worker – that is; work out her or her profession as teacher and professional in a “real life” network – both internationally, nationally and based on research and practical relations
- Institutional developer – that is be competent in working with development of the educational quality

1.9.1. Teacher portfolio – building criteria

These parameters will be crucial in building up the portfolio as a competent teacher. The “Staff-plan”-application offers a platform where the teacher can document and develop his or her profile according to these parameters.

"The staff plan" will work within the framework of a handbook where it is stipulated how to set up the criteria for being competent (not what the criteria are). The handbook offers a set of roles that the organisation (department, team) can perform in building a profile relevant for a given education - a given teacher/manager or a given team. The criteria for being competent "institutional developer" or "net worker" might look different if you are a teacher in health care or in welding.

Example:

A team of teachers can build up a set of criteria

Being a good *net worker* means that the

- It shall be evident for students and partners that each individual teacher works consistently on developing the education in collaboration with

Being a good *institutional developer* means that

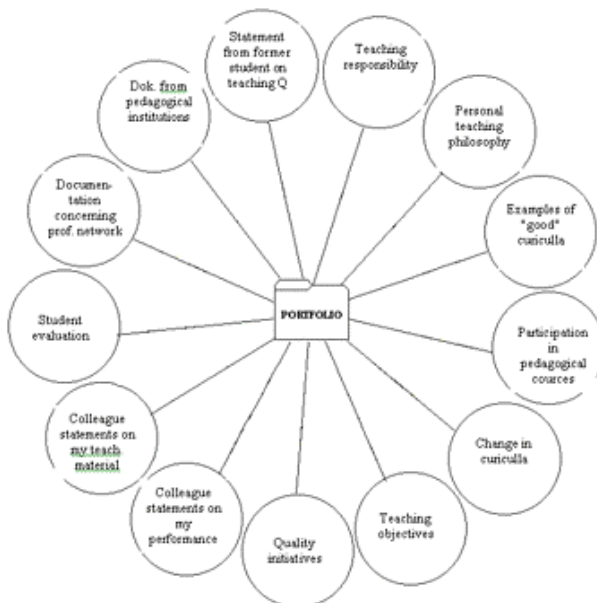
- The individual teacher takes active part in developing the quality around the education industry and relevant research institutions
- The individual teacher works on elaborating professional networks
- The individual teacher is involved in pedagogical research
- The individual teacher participate in developing procedures that contribute to the quality of the education
-

Being a competent professional means that

Being a competent pedagogical communicator means that

1.9.2. Teacher portfolio – building documentation

The portfolio would then build up documentation around these criteria and documentation would be:



Source: Brian Kjær Andreasen, Videncenter for Læreprocesser, Aalborg Universitet
Anette Kolmos, Pædagogisk Udviklingscenter, Aalborg Universitet
<http://www.puc.auc.dk/publika/portfolios.ak-ba.htm>

In the context of "Staff Plan" the documentation is part of an overall self-assessment tool. You will be able to work out surveys (360°-feedback surveys etc.) to create documentation and reflection material to stimulate your own personal self-development. The documentation is private – you work on it as a working portfolio – and develop it for presentation.

1.9.3. Teacher portfolio – building development plan

The philosophy of the teacher portfolio is that you reveal – present your own professional development plan. The different institutions or even teams may have different politics regarding publishing.

The idea of creating the presentation portfolio is that it reveals your competencies so the student has a notion of what learning resources you represent.

1.9.4. Teacher portfolio in a knowledge society

The portfolio is going to

- create a platform for communication between manager and employee about the strategic development of the education and the individual
- establish a way to share knowledge between different interested parties (parents, industry, colleagues, managers, professionals...) around the study environment.

1.9.5. Examples of teacher portfolio

www.multimediedesigner.ots.dk/users/tlh

<http://www.multimediedesigner.ots.dk/users/Lise%20Agerbaek>

2 Portfolio inventory in the partners countries

2.1 Portfolio inventory in Denmark

The use of the e-portfolio in education is not very widespread in Denmark – and especially not in the environment around IT education. There have, however, been several attempts and practices with portfolio throughout Denmark spreading through the educational system from kindergartens to universities. This article is an attempt to look into a few of the resulting discussions and experiences, and the issues they have raised.

Preschool institutions and big brother

During February 2004, a serious discussion took place in Danish media. It turned out that portfolio or logbooks actually were widespread in Danish preschool institutions – primarily in kindergartens.

Many kinder gardens are actually keeping record of the children's learning abilities – using the records in dialogue between different learning support institutions (psychological, physiotherapeutic, audio logical etc.)

In preschool, the portfolio is designed to record the pupils learning abilities – to convey the individual pupils learning skills from preschool to elementary school and further on to youth education.

The discussion in the media was concerned with “*the big brother*” issue - the individual child being caught in a continuous surveillance and a web of control. Record of learning as a society-controlled protocol to make the child's learning more efficient has a bad ring to it.

The discussion in the press focused on the unfortunate ethical issues of portfolio

- *Control.* Portfolio is in the context of preschool used as a record of child behaviour that is not in the control of neither the child nor the parents. The preschool portfolio is a learning record that is measuring the child against the notion of an ideal development.
- *The notion of learning being a continued process to be planned.* Many children experience the joy of changing study environment – to start on a fresh by changing school, institution. The portfolio as institutionalised record of learning rests on an idea on learning as a continued process. You start out in the first grade setting objectives and you end out achieving these goals. Learning flows as a continuum not in unplanned leaps. In a sense the learning record keeps the individual stock on history.
- *Society, efficiency and control.* The overall goal of the portfolio is perceived as a tool to create a financial coherent system. The child's potential is fixed in an early age and refined through institutionalised nourishing.

In this sense, the portfolio has been introduced for the first time in Danish public with a severe focus on its ethical bias. The portfolio does have these angles to it. In the following, we will try to give a picture of some of the trends concerning the use of portfolio in Danish educational institutions between self-assessment and control.

In the following survey, I will try to give a brief picture of what is going on in the different educational institutions in Denmark relating to the use of e-portfolio and e-log-books.

It is complicated to get a comprehensive picture of the experiences with e-portfolio primarily because the different levels of education has been subject to reforms and large R&D¹⁸ projects where e-portfolio is only a small topic supporting a general change of school systems. Both in elementary school and secondary school the national R&D projects “IT Medier og folkeskolen” (IT media and the public school) and “Det virtuelle gymnasium” (The virtual gymnasium) is still undergoing evaluation.

Learning as an individual responsibility

The philosophy of educational praxis in Denmark is currently based on the notion of letting the individual student, pupil or trainee take responsibility of her own learning objectives, learning means and processes.

In a sense, it is about stimulating the innovative potential of the individual learner - making him or her able to work consciously and reflectively with own learning objectives and processes.

The development speed of the information society – the rapid development of technologies and production paradigm – has put focus on the ability of individuals to manage own learning.

The institutional authority over learning objectives needs a turn. The focus should be on the student's ability to manage own learning processes – in a life long perspective.

In this sense, the educational institutions in Denmark have been focusing on the portfolio as a vehicle for different learning and assessment strategies. The notions of the individual as manager of own learning is the agenda.

The hope is that the portfolio might give a tool to convey the student's innovative and self-managerial skills (“innovation” and “self-management”).

The portfolio method is seen as a tool that returns learning to the individual –that lets the individual be master of his or hers own learning objectives, means and processes.

The program for modernization in the public sector also had an influence in the way the processes of evaluation was carried out in the period 1980 – 2000. The vocabulary of modernization includes terms such as site-based management, decentralization, economic framework-administration, client influence, de-bureaucratization, quality management and interdisciplinary cooperation.

There is a turn from implicit into explicit quality definition. Evaluation, both the internal and the external evaluation, are increasingly a part of documentation needed for the so-called ‘control of quality’. In this period the amount of components of evaluations increases considerably. Portfolios are introduced in all the Nordic countries. The Danish Ministry of Education exposes an internet based quality- and evaluation program, and an Institute of Educational Evaluation is established. But most of all in the pedagogical discourses, instead of regarding the teacher as responsible for learning, *the learner herself is brought into focus*. As an example of this can be seen a number of publications from The Danish Ministry of Education bringing to focus methods and techniques of individual learning processes thought of as technical operations.” Carsten Bendixen (from <http://frode.ruc.dk/paed/summer2001/carsten.pdf>)

2.1.1 The portfolio in elementary school

The shift in focus in “the program for modernization” has lead to a new approach to setting up organizational or institutional mission statement or guidelines.

The following is a translation of how a typical school in Denmark interprets the focus on learning. It is a value statement of a school in Odense, DK:

2. Learning

Learning is considered as an active process where the individual pupil can develop intellectually, physically, socially and emotionally. The development processes are going to stimulate the pupil with a variety of tools for life long learning.

This means that the study environment is going to build on the notion of individual development as stimulated by individual learning style and multiple intelligences.

¹⁸ Research and Development

- The pupils have room for analysis, experimentation and learning
- The pupil's works on a through general knowledge and abilities
- The pupils learn to reflect, choose and act
- The pupils learn to act on difference, interpret and make sense of it
- The pupils experience that learning at the school is guided by understandable objectives
- The pupils experience formative evaluation and constructive feed-back with the use of portfolio and log-book

From

[http://www.odense.dk/ODENSE/cfg.nsf/files/Skole_2004011310575901.pdf/\\$file/Skole_2004011310575901.pdf](http://www.odense.dk/ODENSE/cfg.nsf/files/Skole_2004011310575901.pdf/$file/Skole_2004011310575901.pdf)

The value statement works as guidelines for good practice at the school. The guidelines are typically used as internal and external evaluation criteria for the early self-evaluation process at the school.

In Denmark, the new learning paradigm is present in almost every value statement of every learning institution. The stress is on the individual pupil – and the development of his or her potential.

At “Noerremarkskolen” in Vejle, the value statement is unfolded to a set of practical uses of the portfolio:

We have chosen to use the portfolio method because we find that it is a good way

- To document the child's progress
- To stimulate the communication between pupil and teacher, between pupil and parent, between school and parents.
- For the pupil to set new learning objectives

It is an easy way to see the pupil's progress. The portfolio becomes a tool for the child and the grown ups around the child to set new objectives and goals.

We experience that the kids get more concerned and pleased with their work when they work in a portfolio context. They know that their work has a function beyond the specific task.

From: <http://www.noerremarksskolen.dk/portfolio.htm>

The following is a guideline or a practical scenario for working with portfolio in the elementary schools published at a sub site of the Ministry of Education.

Three practical examples of portfolio use

A 4.grade is working with portfolio in Danish

The teacher decides that each pupil is going to work out a portfolio in relation to a reading course.

The pupils choose what books they want to read and they propose how they want to work with the books. The pupils that do not read well are encourages working with book and tape and the good readers are encourages writing short book reviews.

In every pupil portfolio it is stated what work process the pupil has chosen and what objectives the pupil and the teacher have set for the reading course. The objectives are described in a way so they support the common criteria that teacher and pupil have set up: What are the signs that you are fund of reading? / That you feel happy about reading? What is the difference between a book review and a story? What does it mean that Kristina or Jacob has improved their reading abilities?

The pupil Christina decides that she wants to work with a presentation portfolio connected to the reading course. Her portfolio will contain the following

- A list containing the objectives and criteria Christina has set up together with her teacher
- A list of books that Christina has read in the period
- The best book review that Christina has written
- An audiotape where Christina dramatises a selected text
- Christina's final self-assessment

As part of the evaluation, Christina discusses her portfolio with Camilla who has worked with a presentations portfolio in a similar way.

The teacher brings Christina's presentation portfolio to the next meeting with Christina's parents.

The pupil Jacob decides to make a working portfolio. This means that he during the reading course – together with his teacher – is going to evaluate his own work. During the course, the objectives are discussed and revised. Jacobs working portfolio will contain

- A list containing the objectives and criteria Jacob has set up together with his or her teacher – the list is revised during the course
- Jacob's weekly self-assessment and the teacher's assessment
- A list of books that Jacob has read in the period
- All the book reviews and work notes that Jacob has produced
- An audiotape where Christina dramatises a selected text
- Jacob's final self-assessment

The teacher files Jacobs portfolio, to make it the starting point of next years reading course.

The pupil Michael works with a working portfolio just like Jacob, but he chooses to use IT. He scans his reviews and selected text, illustrations. Michael wants to work on his portfolio at home – that why he has chosen to make it on an IT-platform.

From:

<http://www.kig.uvm.dk/misc/toolsdetail.asp?TID=20&DOC=53>

Examples (in Danish):

<http://www.itmf.dk/itm237/projekt/portefolie/index.htm>

Teacher's reflections regarding the examples (in Danish):

<http://www.itmf.dk/itm237/projekt/portefolie.html#portefolmidt>

The elementary schools in Denmark have been working with IT and media within the framework of the ITMF-program. ITMF is an R&D program that set out to establish experiments with IT in vital pedagogical processes in the elementary schools.

Research resume: The research will focus on the processes of change when IT is integrated in education in the elementary school regarding the teacher, the teaching and the open classroom.

The processes of change is concentrated on its tools for pedagogical documentation, that can support the open classroom in relation to the other classes, teachers, the school and the parents.

The objective is to understand the factors that influence change of praxis and culture in the elementary school – and get an understanding of the role IT and media plays. The focus will be on the actual change that have taken place exemplified in class homepages and on the future regarding the change that IT and media can enforce on the perception of teaching, pedagogic visions of learning culture for the schools.

From: <http://www.itmf.dk/soghentid.asp?Id=290&Kategori=Undervisningstilbuddet>

A list of 32 elementary schools have been working with implementing portfolio as part of

- Pupil assessment and self assessment
- Formative pupil assessment
- New formats for parent-school dialogue
- New learning strategies involving the pupils differentiate learning styles

The conclusion in the form of a report about the work in the network of elementary schools has not yet been published.

Another network has been working with the following:

The aim of the project is to develop and test a web-based portfolio. The development and testing are carried out in a network comprising a number of schools, Vordingborg College of Education and the private company Skolemedia. The web-based portfolio will form the basis for a dialogue between pupil, parents and teachers, a

dialogue that is expected to have a positive effect on the pupil's responsibility for his or her own learning process as well as the sense of quality in relation to his or her own work effort.

The portfolio enables a continuous dialogue between the parties important to the pupils' education. A continuous virtual exchange of experience is taking place between the project partners. This exchange forms the basis for the product development of the virtual portfolio.

The research activities focus on investigating possible learning potentials offered using digital web-based portfolio tools in the school education as well as possible barriers to the use.
<http://www.itmf.dk/info/english/371.htm>

Generally, the portfolio in elementary schools is seen as help and a tool, when it comes to having the pupil understand, formulate and eventually personalise the goals of the education. It is seen as means to make the goal of the education your own.

In addition, it is used as a tool to better communication between parents and the school about the child. If the child formulates and reflects on his or her own learning in the portfolio, it is easier for the parents and the teachers to have something concrete to talk about.

Last but not least portfolio is used to document learning. Danish elementary schools rarely use grades before 5th or 6th grade, so there is a great need for alternative ways of showing the results of learning.

2. 1.2 The portfolio in Secondary school

The portfolio in secondary school is primarily seen in the context of new ways of evaluation. The past 100 years we have been evaluating based on students ability to reproduce exact knowledge. Knowledge has another position in the new economy/ in the information society. The individual represents value not because she possesses knowledge – but because she represents a network and is able to produce or find knowledge.

The idea is to create evaluation that:

Makes the assessment as authentic as possible, to make documentation an integrated part of the development of knowledge and competencies – and to make sure that the evaluation has maximal feedback on the teaching process.

A comparison of the test-oriented assessment with portfolio shows how the two types of assessment have different orientation:

From: <http://us.uvm.dk/gymnasie/udvikling/haefte46/haefte46.pdf>

Exam priorities	Exam using portfolio documentation priorities
Internal validity	External
Standards	Public
Objectivity	Communication
Reliability	Formative aspects

From: <http://us.uvm.dk/gymnasie/udvikling/haefte46/haefte46.pdf>

This turn in focus is only very poorly represented in the way we evaluate competencies in the secondary school in Denmark.

A teacher at "Kongsholm Amtsgymnasium" in Albertslund has been working with portfolio assessment specifically in her own teaching in the subject "Danish"

"Marianne Juhl Jensens work with portfolio assessment contains the following elements:

In the process portfolio, the student collects different items that show her progress, work and achievements within the specific subject.
The students take part in selecting the types of work to go in the portfolio; they take part in the selection of criteria for selection of work and criteria for quality of the work they select – all evaluated against the national objectives concerning the subject.

The specific items that the student has selected for the process portfolio is “stored” until they (if chosen) are put into the presentation portfolio – still open for improvement. The items selected for the presentation portfolio is not evaluated with a specific grade – but the teacher and the fellow students comment on the drafts that the individual has presented – these comments become part of the portfolio.

The students reflect in the portfolio on products, learning and work processes – these reflections are also represented in the portfolio.(.....)

The students are trained in self-assessment through response writing, rewriting, and development and through use of assessment criteria for writing, discussion with peers and the teacher about the selection of texts and reflex ion notes. At the final presentation-/assessment portfolio, each student gives a reflected suggestion for a grade.

An overall assessment is made of the portfolio based on the assessment criteria that is developed through the teaching period ...”

The portfolio in this sense is not designed to meet the student’s individual learning styles or level of learning. The focus is primarily to develop new ways of student assessment that is more in accordance with the overall learning objectives in the information society.

The underlying values are dialogue, democracy, involvement and innovation. As it is put by the foreman of the student union:

“... I don’t think you learn very much from working at an assembly line. I had to produce 3 written essays a week when I went to secondary school- that was working like numb brain.....It would be more relevant to design learning environments where you discussed how to analyse and how to structure your essays” From Nanna, Westerby, Politikken 6-03-04

Some schools are working with the European Language Portfolio. But maybe not very surprising some of the critics find that the very fixed structure of criteria, formats and instructions for assessment can actually damage the processes of stimulating the individual learning processes (<http://us.uvm.dk/gymnasie/udvikling/haefte46/haefte46.pdf> p .54)

2.1.3 The portfolio in Vocational education

Portfolio in the vocational educations equal “ElevPlan” for youth education. “ElevPlan” is a web based planning tool for students in the vocational educations. They can work their own individual education plans:

“To day the student is going to work out the personal study plan together with a counsellor and a teacher. The student is going to be active through the whole education – discussing objectives and design activities to match the objectives. It is no longer the responsibility of the teacher to design the specific learning module. It is a joint responsibility between teacher and student. The student and the teacher are going to plan activities that corresponds the national objectives for the education with the students individual learning objectives. Not all the students are going to participate in the same teaching process. The students are going to participate in a learning environment, where the teaching is designed according to the individual needs....

“Elevplan” is designed to facilitate this process for the vocational colleges...”

From <http://eud-it.emu.dk/Modulm/index.shtml>

“ElevPlan” was introduced for the vocational area in 2002. The Ministry of Education to support the pedagogical vision that students should be able to design more or less “their own” education given the national framework of objectives financed ElevPlan. “ElevPlan” was not officially compulsory for the colleges but in practice all the vocational colleges have decided to use it. Many colleges designed a comprehensive study programme for the teachers and the counsellors. It was a drastic pedagogical turn for both teachers and students. The idea of working together on individual design of learning activities was a complete novelty. And doing this in a digital format like “ElevPlan” was almost too radical.

The student can actually build up his or her own plan by “shopping” in learning modules, projects and teaching activities. The student creates in this sense a portfolio as a trail and planned learning activities.

The portfolio as documented learning activities is in this sense integrated in the way vocational training is designed in Denmark.

The “ElevPlan” is implemented very different in the Danish colleges. The pedagogical turn has turned out to be more radical than expected. The turn towards individual learning activities, dialogue with students on learning style and individual planning has been a big problem both for students, teachers, counselees and for college’s strategic management. “ElevPlan” has had impact on IT-strategy, pedagogical praxis, administrative routines, college competencies and job profiles.

At some colleges, in specific educations the portfolio works in an individualized study environment for both vocational students and people on retraining courses.

The adult students are working together with the young students.

The student portfolio process is started by an interview performed by the consular/teacher. The result of the interview is:

- Record of prior learning – experiential and formal
- A test – stipulating the IT-level of the individual
- Test of learning style
- Plan for *how* to work in the open learning environment and *what* to work with (what test to pursue)

The portfolio is subsequently a list of tests that the individual has passed. The counsellor/teacher discusses the learning outcomes every fortnight – on the basis of the test result. (*Based on an interview with Villy Therkildsen at the FlexLearn Center (eod.ots.dk) at Odense Technical College*)

In other parts of the college the presentation portfolio is used to stimulate a discussion between the other structures of self-assessment. A personal website is offered to the student (<http://www.vrc.ots.dk/users/mthh>) to present learning style, professional experience, profiles, competencies and related documentation.

The portfolio is developed and expanded together with the student in a well-defined set of student – teacher dialogues. The student defines whom she wants to talk to – depending on what learning, social or professional problem she has. The student records whatever documentation, project work that he or she finds fit for boosting his or her profile. He or she can establish closed working groups together with her fellow students, teachers or industrial/professional partners.

The digital platform (StudyPlan) for this portfolio is developed specifically for the short cycle educations at Odense Technical College.

The portfolio in the vocational area is well supported with digital platforms. They work as vehicle for individualized training and study in some areas – primarily where there is a team of teachers that agree on pedagogical and social values. The successful implementation of the portfolio rest in many respects on the common understanding between teachers on objectives, purpose and pedagogical orientation.

In the vocational context, the student presentation portfolio is used to establish contact and visualize learning content across borders.

The various mobility- and exchange programmes have been and will be a great platform for giving students a global experience. The exchange-programmes will in the coming years be

established in a virtual or a semi virtual context where the student will be connected to foreign study-programmes or to companies only partly by being present.

The success of the various programmes has – at least for the Danish partners - largely been depending on the fact that the study programmes have been described within the European Credit Transfer System (ECTS). The ECTS-system offers a simple transfer system that gives guidelines for exchange programmes (level of study) – and the student could adjust the objectives and their goals, discuss learning style and special interests by being present at the foreign College.

The virtual environment for learning can still rely on the ECTS-system for stipulating the level of study – but what is needed in the virtual exchange context is a “media”, a common ground for stipulating specific objectives and goals. The common ground between student and “exchange” College is not mediated by physical presence but must be established by virtual presence.

The project focus is to establish a web-server that the exchange student can use telling the narrative of his or her learning. In that sense it is going to offer the possibility to contain different data: video, assignments, cad-drawings, animations etc. The portfolio is also going to offer a set of tools and standards that offers criteria of assessment at American and Danish universities. These standards and guidelines will be designed as tools that help the student in the reflection and self evaluation process – inspired by the methodologies around on-line peer assessment and 360°-feedback systems (applied in learning organisations/management training).

The Global portfolio will ultimately allow the partners to obtain a better understanding of the involved programmes, the exit skills and consequently provide a more smooth exchange in the future.

Examples of these portfolios: http://www.multimediedesigner.ots.dk/elevListe_dtml

2.1.4 The portfolio in Higher Education

The presentation portfolio has been very common in the academic world – at least among professors that want to show their list of publications.

In Denmark, it has been an issue that these presentation portfolios apart from having a presentation of the professional side of the lecturer also should have a portfolio that documents the teaching skills. The portfolio is seen as a tool for developing teaching skills.

The portfolio could contain:

Own documentation
Documentation of teaching responsibilities. For instance curricula, syllabus etc
The personal teaching/learning philosophy. Reflex ions that illustrates your teaching strategies, - objectives and methods
Representative examples of curricula that show how your teaching philosophy is put into action
Documentation of participation in pedagogical courses, seminars, workshops
Description of work on change of curricula
Description on your future objectives as teacher
Description on how you work on quality in you teaching self-assessment..

Others documentation
Statements from colleagues that have experienced your teaching
Statements from colleagues that have worked with your teaching material, tests and assignments
Data from student’s evaluations.
Recognitions
Documentation from the person/organisation responsible for pedagogical development
Statements from students about the quality of your teaching

From: http://www.puc.auc.dk/publika/portfolios_ak-ba.htm

To our knowledge there is not any universities in Denmark that are working with portfolio in this respect – the papers and reflections are to be seen as ideas for good practice.

2.1.5 The portfolio handbook ambitions in a Danish context

The portfolio takes many shapes and forms in the different educational establishments. The agenda is different in the different institutions even though the general focus is more or less the same.

A handbook in managing the portfolio will have to answer many questions from the student, from the teachers and from the supporting organisation and administration. The portfolio needs to be surrounded by a coherent organisational structure that is evident both for the learner and for the teachers.

The portfolio handbook will answer questions like:

How does the teaching team organize the portfolio dialogue? Is one teacher responsible? How does the team support the student's portfolio work? The student portfolio can potentially create classes with few students in each class – how do we support?

In the following, I have tried to stipulate a set of questions for the different processes in the implementation of a learning portfolio for students. This approach is not to give exact guidelines for implementing a learning portfolio – but only to pinpoint some of the difficulties that is obvious when you glance through some of the portfolio literature and study cases.

2.1.6 The decision process

The work with portfolios in a learning context has a very crucial precondition:

You actually promise the student that you will take him or her seriously.

By setting up a portfolio – either a presentation portfolio, a working-/process portfolio or a competence portfolio – you have as educational institution promised that you would design the learning environment according to individual learning styles or intelligences.

The first questions you have to ask are: Are you and your colleagues actually ready to work with students that build up individual expectations and learning preconditions? Do the institution and the curricula have the necessary flexibility to create room for individual sets of objectives and learning styles? The students tend to work across professional borders – can we handle that?

In Denmark, this creates many different problems. From the design of the buildings, we offer as study environment – to the way our union approved agreement on working hours is designed.

Are the students actually ready to work with portfolios? In different study environments, the students have a very conservative view on learning. They expect teaching to be controlled and managed by the teacher – aimed at an exam. The whole idea of being self reflective and active in setting up criteria and objectives for own learning is perceived as pedagogical gibberish by some students.

Given that the teachers work consistent as a team, and given that the learning environment is designed to work with different learning styles and the students can work as innovative self-governed learners – the next questions arise:

What is the specific objective that we want the student to address in the portfolio? Is it assessment? What competencies is it that we want them to access? How will we design the assessment process? Is it presentation or validation of prior learning? In that case, what are the relevant competencies in focus? Is it a container of documentation of competencies? – What then do we consider as documentation?

2.1.7 The portfolio organisation

In fact, how will you organize the portfolio process? How will you manage the communication – between the student and the team of teachers – and in the team of teachers regarding the individual portfolio?

Some teachers feel very intimidated by the fact, that a portfolio will give students, colleagues, parents and everybody else access to information about themselves. They tend to see the teacher's role as one of conveying a specific subject – a role in which the individual is of no importance. What will you do to address these issues before or when they become a hindrance for a portfolio based learning environment. The question you have to ask eventually are 'is it necessary for everyone in the learning environment to participate?', who will have access to the portfolio content of the individual student? Students often start out by being afraid that their individual content will be "stolen" or copied. The issue of shared knowledge or common achievements have to be taken into consideration.

2.1.8 The portfolio design

The portfolio serves many different purposes. To start out working with portfolio it is crucial to work out a set of declarations concerning the content. The declarations can guide the students in the specific use – portfolio as presentation, portfolio as tool for self assessment/ reflex ion or portfolio when they are using the portfolio either as portfolio for presentation or portfolio for self assessment.

The portfolio might look different if it is a portfolio covering IT and software development or if it works with a curricula on pedagogic.

Reference:

[http://www.odense.dk/ODENSE/cfg.nsf/files/Skole_2004011310575901.pdf/\\$file/Skole_2004011310575901.pdf](http://www.odense.dk/ODENSE/cfg.nsf/files/Skole_2004011310575901.pdf/$file/Skole_2004011310575901.pdf)

<http://www.noerremarksskolen.dk/portfolio.htm>

<http://www.kig.uvm.dk/misc/toolsdetail.asp?TID=20&DOC=53>

<http://www.itmf.dk/itm237/projekt/portefolie/index.htm>

<http://www.itmf.dk/itm237/projekt/portefolie.html#portefolmidt>

<http://www.itmf.dk/soghentid.asp?Id=290&Kategori=Undervisningstilbuddet>

<http://www.itmf.dk/info/english/371.htm>

Evaluation and assessment in modern school by/ Carsten Bendixen, Ph.D. Student. Roskilde University, Department of Education

<http://frode.ruc.dk/paed/summer2001/carsten.pdf>

Portfolioevaluering by Ellen Krogh og Marianne Juul Jensen Published at uddannelsesstyrelsen 03

<http://us.uvm.dk/gymnasie/udvikling/haefte46/haefte46.pdf>

[eod.ots.dk](http://www.vrc.ots.dk)

<http://www.vrc.ots.dk/users/mtth>

Undervisningsportfolios på højere uddannelsesinstitutioner by/ Brian Kjær Andreasen, Videncenter for Læreprocesser, Aalborg Universitet
Anette Kolmos, Pædagogisk Udviklingscenter, Aalborg Universitet, 1999
Published at Pædagogisk Udviklingscenter og Videncenter for Læreprocesser Aalborg Universitet

<http://www.puc.auc.dk/publika/portfolios.ak-ba.htm>

2.2 Portfolio inventory in the Netherlands

2.2.1 Portfolio in general

Sources of information

After surveying the educational field by taking information from various sources on the internet and from various books and booklets, and after talking to one of the leading Dutch experts on Portfolio, dr. Jan van Tartwijk of the University of Utrecht, a first conclusion may be presented almost beforehand: portfolios are all over the place! Especially when looking at higher and academic education, one will soon discover that almost every self-respecting institution is or has been involved in the development of some kind of portfolio for educational purposes. But also on the other extreme of the educational spectrum, in primary education, good examples of the use of a portfolio for (and by) young learners can be found.

This survey revealed no explicit reference or text on the website of the Ministry of Education, nor in any other document, to specific legislation dealing with the use of a portfolio in education. In fact, this seems not to be necessary in the Dutch educational system. The freedom of education guarantees the right of people to set up educational institutions, reflecting their religious, social and specific pedagogical views. There is a wide variety of schools following the educational theories of Freinet or Montessori, to name just two. Other schools have been established to educate pupils in accordance with the rules of (for example) the Roman Catholic, the Protestant Christian or the Islamic religion. The educational institutions are free to select their methods and learning materials, provided they comply with a number of quality standards and give access to accredited qualifications. The quality and qualification standards are preserved by a national supervisory board, called the Inspection of Education. Their supervision methods include research within the educational field, visits to educational institutions and thorough checks on examination procedures and qualifications.

Apart from mentioning the *Digital University* as a developer and provider of a digital portfolio, the Ministry of Education makes no explicit reference to specific portfolio initiatives. The Digital University received funding for their work from one of the Ministries' funding programmes for ICT-based innovation. The Ministries' search engine relates portfolio foremost to the theme of *previously acquired competences* (in Dutch abbreviated to EVC). In this area, as well as in the fields of *adult education* and *life long learning* special relevance is contributed to the portfolio. The portfolio is considered by many experts to be most helpful in providing a well-documented track record of the individual's learning progress over time and in facilitating the presentation of one's competences in much more detail than by just showing certificates.

From this point a clear line leads to the area of employability in which portfolios are being promoted and used more often by the day. The national network of employment agencies (Centres for Work and Income) as well as companies offering specialised services in outplacement, temporary employment and secondment, already started to point out the necessity of a portfolio for applicants as an instrument for job acquisition. They even present training courses on how to organise a good portfolio.

However, in the typical case this approach to portfolio will not emphasize the aspects of reflection and self-assessment, but will focus on documentation and presentation (the pre-structured, pre-formatted portfolio or "extended CV", see *types of portfolio* below).

In October 2003, the Inspection Board produced a report on portfolio evaluation in higher education, giving general directions for its proper implementation and use in education. The portfolio itself is presented as a phenomenon and described in neutral terms: for the Inspection Board the issue is apparently *not* whether we should or should not make use of a portfolio, but,

given the fact that educational professionals are using it, how to develop policies to ensure that this usage is most effective and adequate. In accordance with that intention, their report addresses policy makers, political platforms and leading staff in educational institutions with comments and advice.

Another preliminary remark should be made at this point: there is no way an overview of portfolio related initiatives or applications in the Netherlands could be complete and this report does not come with the claim of providing a fully representative summary of these initiatives, a fair impression is the best one can do. Whether a portfolio application will be discovered is highly dependent on how and where information is presented: some institutions simply fail to communicate about their work and results, while others will use any suitable platform for dissemination.

In order to avoid that the approach would become fully coincidental, it seemed best to enter the field through two channels:

- Search engines on the Internet were prompted with a combination of the terms “portfolio” and “education”, on which they yielded long lists of interesting items.
- Websites of a number of well-known Dutch educational research and development centres were visited, looking for information on portfolio applications. These centres include universities and general educational expertise and service centres”. Almost all of them made reference to ongoing portfolio development projects and practice applications in which they were involved.

Important links

A non-limitative *list of institutions and hyperlinks related to portfolio* may look as follows, different links may lead to the same portfolio application. Unfortunately, a number of these websites present their information only in Dutch:

[Educatieve Faculteit Amsterdam](#) (Educational Faculty of Amsterdam)

[Educatieve Faculteit Amsterdam](#) (sub-site with publications)

[Hogeschool van Utrecht: Faculteit Economie en Management](#) (Further and Higher Education)

[Hogeschool Holland](#) (Further and Higher Education)

[Universiteit van Amsterdam](#)

[Universiteit Utrecht](#)

[Vrije Universiteit Amsterdam](#) (page related to teacher portfolio)

[Wageningen Universiteit](#) (workspace portfolio-project) (Agricultural University of Wageningen)

[Taalportfolio](#) (the European Language portfolio with Dutch version)

[CPS](#) (formerly the Christian Pedagogical Studycentre, nowadays a general educational R&D centre)

[KPC Groep](#) (formerly the Catholic Pedagogical Centre, nowadays a general educational R&D centre)

[SLO](#) (formerly the Stichting Leerplan Ontwikkeling, nowadays a general educational R&D centre)

[CITO-Groep](#) (formerly the Centraal Instituut voor Toets Ontwikkeling, nowadays a specialised R&D centre on educational issues related to testing and evaluation)

[Cinop](#), Centre for the Innovation of Education

[STOAS](#), expertise centre on educational innovation

[Apollo consortium](#)

[Digital University](#)

[SURF](#) (higher education and research partnership for network services and ICT)

Even universities and research centres that are not listed here separately will most probably be involved in an initiative concerning the development and/or use of portfolio. A good example of this is the Apollo consortium, consisting of the following institutes:

[Hanze-hogeschool Groningen](#) (Further and Higher Education),

[University of Tilburg](#) (<http://www.uvt.nl>),

[Avans Hogeschool](#) (Further and Higher Education, www.avans.nl),

[State University of Groningen](#) (www.rug.nl).

Together they constitute a partnership engaged in research and development projects aiming at educational innovation. Another example of a consortium uniting a number of institutes for academic and higher education is the Digital University, involving:

The University of Twente (www.utwente.nl) ,

The University of Amsterdam (www.uva.nl),

Vrije Universiteit (The Free University of Amsterdam, www.vu.nl),

Hogeschool Utrecht (Higher Education Institute of Utrecht, www.hyu.nl)

Hogeschool van Amsterdam or HVA (Higher Education Institute of Amsterdam, www.hva.nl)

Fontys Hogeschool (www.fontys.nl)

Open Universiteit Nederland (Open University NL, www.ou.nl)

Ictus Hogeschool / Hogeschool Delft (www.ictusnet.nl)

Saxion Hogescholen (www.hen.nl/saxion)

Portfolio types

In various contributions to the ongoing discussions on the development and use of portfolio in education, authors appear to be referring to different concepts of the portfolio. Moreover, these authors distinguish various types of portfolio according to different criteria, for instance a division between portfolios primarily promoting reflection by the learner and those focusing on documentation and presentation of products, or between teacher owned and student owned portfolios.

Using some kind of classification will help to structure the rich variety of portfolio related initiatives, ranging from running research and development projects to existing training modules and programmes, in each of which some form of portfolio has been introduced, applied or developed. For this inventory of portfolio in the Netherlands we would like to use a very simple division of portfolios, one that seems to be easy to apply and one that produces a meaningful distinction between portfolios, at the same time reflecting the pedagogical ideas and concepts of the developers and teachers or institutions promoting and using them.

For a number of developers/teachers it is important that the portfolio contains exactly that information that they need for the evaluation and validation of the student's learning results. In the typical case the student will receive a portfolio format that is pre-structured in detail, containing tables that need to be filled with data by the student and checklists for the completion of tasks that enable the teacher to keep track of the student's progress effectively and quickly. The student will also be instructed on how and where to store the documents and other products that may serve as evidence of his/her learning achievements. We could refer to this kind of portfolio as a *closed structure portfolio*. In most cases this kind of portfolio will be controlled (owned) by the teacher.

The other is the *portfolio with an open structure* (or sometimes hardly any structure at all): students or pupils will receive general instructions on how to set up their own portfolio. Teachers may suggest the kind of materials that could be part of the portfolio and maybe even a format to give the student an idea of how to set it up, but the format will not be compulsory. The main goal is to inspire students to be personally involved and maybe creative as well. In any case the student will be the owner of the portfolio and decide on what will be open to the public. The teacher will use the portfolio primarily for joint evaluations with the students of results and progress. This kind of portfolio reflects the intention to give this instrument a more important role in the learning process than just that of a checklist of completed task.

Digital Portfolios

The following websites are specifically dedicated to web based Portfolio-systems or digital portfolios (including international products available in the Netherlands):

- *Digital University portfolio log-in-page,*
- *Edugolive (STEPort).*
- *Eportaro (Folio), licence holder in the Netherlands is STOAS*

- [Interfolio](#)
- [FolioLive](#)
- [NuVentive iWebfolio](#)
- [The Open Source Portfolio Initiative \(OSPI\)](#)
- [Personal Development Planner](#)
- [Portfolio4u](#)
- [Instructions for teachers and pupils on using the portfolio](#)
- [Treeships N@tschool](#) (follow link N@tschool)
- [True Outcomes](#)
- [WebFolio builder](#)
- [Digitaal Portfolio \(Edusite\)](#)
- [EVC-online@, ORO-HvA, Q-conference](#) (all three leading to the same log-in screen for Digitaal Portfolio of Edusite, giving access to students of these different institutions).
- [Onlineportfolio](#) (for secondary education, see example below)
- The earlier mentioned Apollo partnership conducted a comparative study of a number of digital portfolio systems, including an in-depth study of: BSCW, Blackboard 5.5-6.0 (more specifically the Blackboard portfolio) and the Folio system of Eportaro. A “quick scan” was performed on Projectplace, Quickplace, Personal Development Planner (PDP), the E-portfolio system of the Digital University, [N@tschool](#) and the portfolio of Rovict.

Although the review was criticized for giving unfair judgements based on outdated documentation, the mere existence of the project and the report shows again that the portfolio principle has been adopted throughout the Dutch educational system. For more details about Apollo, please refer to the [publication list with summaries at Edusite](#) or directly to the [Apollo platform](#). One of the most critical reactions on the Apollo comparison of portfolio applications came from the Digital University. In their comparative research the following portfolio-applications or systems were studied:

- Digital portfolio (DPF) of the Digital University (their own!)
- Folio by ePortaro – Stoas
- Blackboard content system / E-portfolio
- ePortfolio manager by Concord
- Anymeta by Mediamatic

Probably the whole set up originated as a response to the Apollo research, (ignoring their product entirely, just to get even). In a quick scan also the [N@tschool](#) portfolio and the Portfolio System of the Educational Faculty of Amsterdam were taken into account, leading to the comparative table of characteristics on the next page, quoted here for it’s potential relevance to other partners participating to the Pellea-project (translation from Dutch by Josst Thissen)

University Foundation, December 2003	Comparative research Portfolio systems						
Characteristics	DU-DPF	BB-CMS	E-folio	Concord	AnyMeta-CMS	EFA-PFS	N@
Student is the owner of his/her portfolio	Yes	Yes	Yes	Yes	Yes	Yes	Yes
System can be used anywhere (web-based, no specific web-browser)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
User may adjust the "look-and-feel" of the portfolio	Yes	Yes	Very limited	Yes, many possibilities	Yes	Yes	Limited
Functionality within the student's portfolio	Yes	Yes	Very limited	Yes	Yes	Yes	No
Functionality covering public pages of a group of portfolios	No	No ¹	Limited	Not known yet	Yes	No	No
Open learning/work environment	Not yet	Yes	Yes	Yes	Yes	No	Yes
Open cooperative environment	No	Yes	Possible	Yes	Yes	No	Yes
Open educational administration system	No	Yes	Possible	Only by customizing	Partially	No	No
Portfolio space for unchangeable feedback and judgments	Yes	Yes	Yes	Yes	Yes	No	Yes
Ownership of portfolio at institutional level	No	Yes	Yes	Yes possible, but not obligatory	Yes	Yes	Possible
Ownership of portfolio at educational level	No	Yes	Yes	Yes possible, but not obligatory	Yes	No	Possible
Access after authorization by owner	Yes	Yes	Yes	Yes	Yes	No	Yes
Use of open standards, incl. Metadata	Yes ?	Yes	No	Yes	Yes	No	Yes
Deliverable at time of research report (January 2004)	Yes	No ²	Yes	Yes	Spring 2004	Yes	Yes
Reliability of supplier sufficiently guaranteed	Yes	Yes	Yes	Yes, but vulnerable (small company)	Yes	Yes	Yes
Implementation without specific/expensive support	Yes	Yes	Yes	Appr. US\$ 10.000	Yes	No	Yes
Cost structure (per student per year; <u>without</u> implementation costs)							

Learning Blocks enables building such functionality to be added to the system implemented in the 1st quarter of 2004

2.2.2 Portfolio use in schools

There are a few examples of portfolio applications in *primary education*, far less than the almost abundant diversity of portfolio introductions, manuals and digital versions that could be found for secondary, higher and academic education. This is most probably due to the given situation that schools for primary education are much smaller than educational institutions for secondary and higher education. Traditionally universities and institutes for higher and further education (hogescholen) are fairly large, serving each 5000 students and more.

During the last decade almost all institutions in secondary education went through a painstaking process of merging into even larger entities, resulting in the rise of the so called ROC's (Regional Educational Centres) institutions with often more than 10,000 students. To a lesser extent (as most institutes were fairly large already) the same process occurred in further and higher education. As primary schools are supposed to give full attention to the individual child and as they also have to be located close to where the children and their parents are living, the merging operation in education has left these almost unaffected.

The power of ROC's to develop and apply innovative methodology seems to be sufficient, whereas primary schools with less than 1000 pupils often lack the staff capacity to indulge in any kind of innovation. Their need for new methods, learning programmes, materials and tests has to be and will be met by a number of specialised research and development centres, like the CPS, KPC Groep, SLO, CITO, CINOP (all mentioned above with hyperlinks) and others.

Besides these centres, the universities and institutes for teacher training will offer R&D services to primary schools, often in exchange for their participation in field research as a testing environment. Furthermore, the teachers in primary education (as well as in special, secondary and adult education) have a couple of (web based) networks at their disposal, where they will find information and products designed and developed by their colleagues in other schools:

- [Kennisnet](#) (*Knowledge Net*)
- [Toetswijzer](#) (*a specialised sub site on issues related to testing and evaluation*)
- [Score](#) (*dedicated site of HVA on subjects related to testing and validation*)
- [Educatief partnerschap](#) (*institutions for teacher education*)
- [Samenwerkingsorgaan Beroepskwaliteit Leraren](#) (*platform for teachers and educational experts*)

Portfolio example 1

The CPS is involved in a prize-winning initiative called Leerlingportfolio (pupil's portfolio, only in Dutch), praised by the jury for being based on solid research and innovative ideas. The website offers abundant information on how the portfolio experiment was set up and conducted, quoting teachers and pupils on their experiences, giving practical advice and providing a testing environment for those who want to try it out. It combines both varieties outlined above (closed and open structure) by making use of a *work portfolio* (for ongoing activities), a *presentation portfolio* (a careful selection by the pupil of best results) and an *evaluation portfolio* (pre-structured for measurement of progress and adjustment of the learning programme).



Portfolio example 2

As stated above, examples of portfolio applications in *secondary education* are abundant. The links below lead to two portfolios on the website of the educational expertise centre Cinop, primarily active in the area of vocational and professional education (secondary and higher level). The portfolios were developed and implemented in their training programmes by Leeuwenborgh College, an ROC in the region of South Limburg, the same area where the Dutch Pellea partner Atrium is located. They are similar with regard to structure and content, probably originating from the same development department. The pre-structured documents for the students to use are most elaborate and detailed, covering 30 pages and more. Some representative parts or pages were taken to show here (translated from Dutch).

<http://www.cinop.nl/projecten/kse/docs/toetsing/Portfolio%20Sleutelvaardigheden4%20december-bijgesteld.doc>

<http://www.cinop.nl/projecten/platformportfolio/docs/PORTFOLIO%20basisjaar%202002-2003.doc>

The core part of the portfolios consists of tables and checklists to be completed by the student and to be checked by the teacher, as a kind of registration or simple justification that certain tasks and assignments have been accomplished. The way students would have to use the tables is explained in texts at the start of each chapter, in which the portfolio is subdivided. There is no reference to the products made by the student, the learning content is apparently not considered to be part of the portfolio. Products are listed to enable progress monitoring by the teacher or external reviewers:

The portfolio consists of the following parts:

- Personal data
- Overview of learning experiences
- Overview of work experiences
- Motivation of programme choice
- Recognition of key qualifications
- Assessment and self assessment of key qualifications
- Overview of experiences in practice placements
- Personal development plans
- Overall overview, (final) validation of key qualifications
- Evidence

The first four chapters are more or less equivalent to a CV with an application letter, in this case pre-formatted by tables that have to be filled in by the student. Pre-formatted tables to complete and to be checked by the teacher appear throughout the portfolio, as in the following examples, taken from the chapter on previous work experiences (for future teachers of sport) and from a learning module:

Name of School	Sector	Certificate Evidence no.	
		<input type="checkbox"/> yes	<input type="checkbox"/> no
Period	Subject	Level	Score /rating
	1 (e.g. Math)		
	2 (e.g. Biology)		
	3 (e.g. Dutch Language)		
	4 (e.g. Team sports)		

301: Basic competences	Relevant experience	Choice of activities from:				Time planning	Score from teacher
		Competence test	Paper based test	Practical task	Report		
General learning objective 1: The student is capable of describing the relevant background of sports and movement and the human body							
General learning objective 2: The student is capable of describing the background of sport and movement activities							
General learning objective x:							

One might discuss if this is what we consider to constitute a portfolio or “just” a package of checklists, although in the sport teacher portfolio considerable attention and space is given to:

- the student’s comments on his/her personal development,
- the motivation to become a sports teacher,
- expectations,
- strong and weak points, et cetera.

This culminates in a personal presentation for which (again) a structure or format is given:

<i>Period 1: PRESENTATION (week 4)</i>		
My motivation	My expectations	My position / view

	My strong points:	My weak points:
Knowledge		
Skills		
Professional attitude		

I will work on:	With: mentor	Help from: Teacher	Ready on:	Signed/ checked

Somehow the pedagogical principle according to which students have to take responsibility for their own learning process (by means of self assessment, reflection and by documenting and assembling their learning results and comments in a portfolio), seems to be in conflict with the over-structuring of the portfolio as shown in these examples. Of course, other less pre-structured examples are available.

2.2.3 Portfolio use in Higher and Academic Education

The portfolio has acquired a firm position in higher and academic education, although this does not mean that every department of every university or other institute for higher education will be using it or will even be familiar with the phenomenon. Quite often websites do not reveal easily their information and documents on portfolio. When trying to locate within the University of Utrecht the coordinator or developer who was responsible at a central level for the implementation and use of the digital portfolio, the same mechanism was at work. In some institutions people and things can only be found through intervention by others when the exact name is known, otherwise the right person (or document) will not be identified as the one being looked for. And that brings home one of the strongest arguments in favour of web based search engines: as the description of the search item becomes more vague, the number of search results increases.

Not because it was hard to find the expert we were looking for, and not even because he is a leading expert on portfolio, but simply because his approach is very practical, easy to use and combinable with a paper based as well as a web based portfolio, a presentation of his version of the portfolio seems justified. Instead of relying on an elaborate and fully pre-structured portfolio, Van Tartwijk prefers a more open and flexible approach.

At the website of the University of Utrecht the page link below gives access to HTML versions of a portfolio developed and used in the teacher training department (IVLOS) of the university. The whole set of HTML-pages can be handed out to students on CD or even a floppy. A student's portfolio can be uploaded to the Internet as a personal website, during the learning process (being under construction) or afterwards, when completed.

<http://portfolio.uu.nl/surf-efolio/Voorbeelden/UU-lerarenopleiding/index.htm>

There is an example in English as well (click on [Portfoliosjabloon UK](#)), although some of the supporting documents for students, like the handbook, are available in Dutch only. When clicking on the link, the following screen appears:



Clicking on the start button will produce the same page again, clicking on Reader's guide will make the following instructions pop up:

“Reader's guide

In this section, write instructions to the reader of your portfolio about how to read it. Do you guide the reader by using hyperlinks, or do you suggest they read something first, or last? Maybe you want to include some questions for your reader. Rewrite this guide each time you prepare for a portfolio discussion with your mentor. The reader should be able to get a good idea of your portfolio within an hour or so”

Clicking on the next option, Action plan and conclusions, gives access to another instruction:

Action Plan and Conclusions

Here you formulate your learning goals during your learning process.

- At the start of the course, include your "wall" and your first action plan (set of aims) which you want to work on until Christmas
- Around Christmas, write a conclusion about what you have learnt during the first period at the IVLOS and on teaching practice, as well as what you have learnt through making your portfolio. One useful form of an analysis of your strengths and weaknesses. Related to this, revise your wall and formulate a new action plan for your foreign internship. Do not eradicate your original work - it shows your development!
- At the end of the course, write a new conclusion and make a new action plan (e.g. a wall) for your future career and write a new conclusion. Reflect, too, on how your learning goals have changed throughout the year.“
- The profile screen looks as follows:



But most interesting is the section Roles (of the teacher), clicking this text leads to following list of “teacher roles”, all clickable and in fact referring to the circle diagram above where the same teacher roles appeared already:

“Teacher roles

- [Reflective teacher and researcher](#)
- [Cross-cultural teacher](#)
- [Teacher in English](#)
- [Subject teacher](#)
- [Planner and coach](#)
- [Classroom manager](#)
- [Guide and counsellor](#)
- [Teacher beyond the class ”](#)

Clicking on any of these options will lead to a selection from the pie, with a short explanation of the term, but more important here is the option *tips*, that leads to a rather detailed set of comments related to the different teacher roles.

The correspondence of the comments with each teacher role is indicated by the background colour used in the table cells.



“Prompts and illustrations

Here are some examples of general illustrations, which are often appropriate for each role.

- Journal entries

- Feedback from learners, fellow students or your teaching practice mentor
- Videos, audio cassettes, photos
- Completed IVLOS tasks
- Observations
- Selected lesson plans "

<p>When you write about reflective teacher and researcher you can think about these aspects:</p> <p>Your reflective skills Personal development Giving and receiving feedback to/from peers Carrying out (classroom) research related to your subject (<i>this will be illustrated separately from your portfolio</i>)</p>	<p>Here are some practical ideas for illustrations for the role of reflective teacher (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> • Journal entries (e.g. about how a lesson went, what went well, what didn't go so well, what you might do about it) • Feedback from or to another BITEP student about their lesson
<p>When you write about cross-cultural teacher you can think about these aspects:</p> <p>Working with international/foreign educational systems Intercultural aspects of education Awareness of the cultural spectrum in your classroom/school Differentiation in the classroom related to culture</p>	<p>Here are some practical ideas for illustrations for the role of cross-cultural teacher (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> • Information gathered, reflection showing knowledge and insight about what you have learned related to this role • Completed ICE assignments • Lesson material showing awareness of cultural diversity in your classroom • Account of your own acculturation process
<p>When you write about teacher in English you can think about these aspects:</p> <ul style="list-style-type: none"> • Language acquisition • Your own English skills & improvement thereof • Classroom English Content Learning in Language (CLIL) • Problems learners have with your subject in English 	<p>Here are some practical ideas for illustrations for the role of teacher in English (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> • Completed TIE assignments • Materials showing awareness of or taking into account the language difficulties of your learners • Material you made in English • Products in English demonstrating your development (e.g. some writing) • Reflection on your own language learning • Feedback to your learners about their English
<p>When you write about subject teacher you can think about these aspects:</p> <ul style="list-style-type: none"> • How you teach your subject • Skills in your school subject • Theories related to your school subject and transfer of this into learning • Personal views about your own subject and its place in school and society 	<p>Here are some practical ideas for illustrations for the role of subject teacher (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> • Learner work • Material you made yourself for a class • Subject-related methodology tasks from the IVLOS

<ul style="list-style-type: none"> Up-to-date knowledge about your school subject (e.g. in bavo, Tweede Fase, IB, exam systems) 	
<p>When you write about planner and coach you can think about these aspects:</p> <ul style="list-style-type: none"> Planning, giving and evaluating individual (and series of) lessons; short-term and long-term planning Using course books and multimedia (e.g. video, ICT) Different ways of evaluating learningLearner differences (learning styles, levels, personalities, pace, etc.) Learner independence Motivating your learners Giving feedback 	<p>Here are some practical ideas for illustrations for the role of planner and coach (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> Long-term plan (e.g. series of lessons, year plan) Account of how you coached a group or individual Ways in which you differentiated learning (e.g. making extra material, grouping the class) Tests (including your feedback or marking scheme) or other forms of assessment & analysis Examples of tasks you made for learners to help them learn to learn How you motivated a class/individual Examples of feedback you gave to learners or received from others

<p>When you write about classroom manager you can think about these aspects:</p> <ul style="list-style-type: none"> Influencing classroom atmosphere (e.g. discipline, praise, stimulation of learners) Organising classroom learning Handling group processes Body language, voice Questionnaire Teacher Interaction (QTI) 	<p>Here are some practical ideas for illustrations for the role of classroom manager (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> QTI results & reflection Account of discipline problem with a student or class and how you solved it Your own classroom rules Photographs of you and/or learner at work
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<p>When you write about guide and counselor you can think about these aspects:</p> <ul style="list-style-type: none"> Your view on bringing up children Creating a safe learning environment Your relationship with your learners and their teachers and parents Working on norms and values with your learners Awareness of adolescent psychology/development 	<p>Here are some practical ideas for illustrations for the role of guide and counselor (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> Account of how you guided or counselled an individual child with a problem & reflection Ways you tried to create a safe working environment Feedback from learners or teachers on the point above Ways in which you worked on norms and values related to your subject Lesson material
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<p>When you write about teacher beyond the class you can think about these aspects:</p> <ul style="list-style-type: none"> Participation in school activities (teacher and pupil) other than teaching (e.g. extra- 	<p>Here are some practical ideas for illustrations for the role of teacher beyond the class (remember also the general illustrations at the top!):</p> <ul style="list-style-type: none"> Accounts on activities/events related to a
--	--

- | | |
|--|--|
| <ul style="list-style-type: none"> • Your position as staff member: member of a department, of the whole school • Awareness of the role of a mentor and other experts working within (or outside) the school • Awareness of working with learners with learning difficulties, e.g. ADHD, dyslexia, highly gifted children | <ul style="list-style-type: none"> • Letter about or account of extra-curricular activities you participated in • Account or minutes of meetings attended • Account of parents' meeting • Interview with a class mentor <p>Information you have gathered about, e.g., teachers' union, teachers' organizations</p> |
|--|--|

Finally the option CV leads to a set of instructions and suggestions to help the student to set up a personal presentation document, being at the same time a record of his/her personal development:

In your Curriculum Vitae, first of all you introduce yourself by giving some personal facts about yourself and about your career and hobbies. It is nice if you include an appropriate photo, too. Your CV is, at the start of the teacher-training course, an account of relevant experiences you have had which have shaped you. Examples of things to include here are experiences you have had as a leader (e.g. scouting, leading a group on a trip) as well as other aspects of your life, which have influenced you as a person (e.g. independent travelling, work experience, hobbies).

We distinguish between other relevant experience (for example as a coach or trainer of a sporting team, or as a researcher or teacher at the university or elsewhere) and experiences within the IVLOS teacher education programme.

Of course, this structure is only a suggestion. Please feel free to change this structure to tailor it to your specific situation.

Other relevant experience

IVLOS teacher education program

Research assignment

Teaching practice 1

Teaching practice 2

Atrium is planning to amend and extend this portfolio set up to be used by experienced students taking part in a so called mini-company offering ICT-related services and website productions to the market. The mini-company represents an essential stage in the EdYcate-project, funded by the Leonardo da Vinci Programme of the European Commission (project website located at <http://edycate.atrumbv.nl/tiki18/tiki-index.php>).

2.3 Portfolio inventory in Romania

In Romania, the usage of the Portfolio Evaluation Method is not very wide spread. Though, there are several cases of teachers and institutions using it for different disciplines, and recently, the changes brought to the Law of Education included a reference to portfolios. The term "portfolio" is widely used, but with different meanings: an institution portfolio (projects or contracts with specific clients), a list of studied disciplines (which does not mean necessary that specific competencies were acquired) etc.

2.3.1 Portfolio in general

The new Romanian Law of Education¹⁹, issued in June 2003, contains important reinforcements regarding the portfolio usage at different levels of education. The changes brought by the law to the education system in Romania are significant: Compulsory education includes 10 grades (4 years of primary education, 4 years of secondary education and 2 years either the lower cycle of high school or vocational education in a so called "school of arts and vocations"). All the graduates of different types of compulsory education are entitled to receive at graduation, besides a graduation certificate, a personal portfolio for lifelong learning. The same goes for the graduates of the upper cycle of high school (12th or 13th grade). The law stipulates the categories of students entitled to receive it:

- Graduates of the lower cycle of high schools
- Graduates of the schools of arts and vocations
- Graduates of the higher cycle of high schools (theoretical, technological and vocational high schools)
- Students who leave school before graduation – for every completed school year.

This personal portfolio for lifelong learning is not a student portfolio, in the sense the PELLEA project is using the term. It is just a list containing the disciplines studied in school, a short description of their content and the corresponding number of classes, together with a CV. This is seen as a first step towards a list of competencies.

The changes brought to the Law of Education are also presented on the Teachers' Union web site²⁰:

¹⁹ The Law no.268 from 13 June 2003 changing and supplementing the Education Law no. 84/1995, published in the Monitorul Oficial nr. 430/19 June 2003

²⁰ http://www.sinv.ro/lege_modificari.htm – in Romanian

The fundamental changes brought to the 84/1995 Law regarding the Romanian system of education are meant to result in the enhancement of professional and educational performances of the young people attending schools.

The new legal framework stipulates school attendance at 6 years, 10 years of compulsory education, and study opportunities in the languages of national minorities. Most of the courses will be organised during daytime, and with compulsory attendance. For extraordinary cases, evening courses, courses with infrequent attendance, distance courses, and home delivered courses can be organised.

The admission of the secondary school graduates in the inferior cycle of high school or in the schools of arts and vocations is made based on a selection and repartition procedure complying with the Ministry of Education methodology that must be made public before the beginning of every school year. This procedure is based on the assessment of the competencies acquired during the secondary school studies.

The graduates of the inferior cycle of high school receive a graduation certificate and a personal portfolio for lifelong learning. The graduates of the superior cycle of high school also receive a graduation certificate and a personal portfolio for lifelong learning, but they can also pass through a graduation exam giving them the right to continue their studies in a university. The graduates of the schools of arts and vocations receive, beside the graduation certificate and the personal portfolio, a vocational competencies certificate level 1, if they pass the vocational competencies certification exam. The schools of arts and vocations courses have the same duration as the courses of the inferior cycle of high school (2 years), but in order to continue their studies with the superior cycle of the high school and later on, with academic courses, their graduates have to study one year more and to obtain a vocational competencies certificate level 2.

These changes are frequently criticised. Even if they are an attempt to align the Romanian education system to the European ones, the way selected to do it raises several problems. In a newspaper article²¹, an experienced teacher and well-known writer, Liviu Papadima, lists some of the pitfalls of the current law. Lowering the age of primary school entrance from 7 to 6 years without major changes brought to the primary school curriculum seems a risky enterprise, several children being unable to keep the pace. The same attempt was done in Romania during the communist era, and it failed. Another problem is the selection procedure for entering either the lower cycle of high school or an arts and vocational school. Usually, this is based on the grades collected during the former school years, and on an exam at few core disciplines. If their grades are not good enough, or if their exams grades are not high enough, the students miss the opportunity of continuing their studies in a high school and later on in a university. Even if, in theory, this opportunity exists, by entering an arts and vocations school and attending one year of complementary courses, in practice this happens only seldom. The author of the article mentions portfolio assessment among other alternative evaluation methods to be used for the selection procedure. Another problem is the selection procedure being subject of changes every year. This means the students entering a study cycle cannot be aware of the assessment methods to be used for selection at the end of the cycle, these methods being decided only one year before graduation.

In 2000, the Ministry of Education and Research has issued the Order 3546/06.04.2000²² regarding the practical stages of university students. In its introduction, the order contains critics on the low level of acquired competencies and on the lack of portfolio usage for documenting the practical stages of students.

²¹ <http://www.observatorcultural.ro/arhivaarticol.phtml?xid=8842> - in Romanian

²² <http://www.edu.ro/om3546.htm> - in Romanian.

The practical activity in their future speciality is an essential element of the professional socialisation of students. The success of the graduates on the labour market highly depends on their professional standards awareness.

In Romania, for a long period of time, the focus was on acquiring theoretical knowledge and on reproducing their content, not taking into account the practical abilities required by the real world.

This way, in present, in several cases, just a few of the graduates can affirm they learned something during their practical stages, this unfortunate situation reflecting the lack of an acquired competencies portfolio, portfolio that could reflect and prove their professional competence level acquired through the mastering of the two components of learning: the theory and the practical activity.

It is necessary to:

- increase the proportion of practical activities in the curriculum, for aligning them at European standards;
- organise the practical stages taking into account the ECTS;
- use new tools, that allow a more flexible organisation of the practical stages.

Even if the public institutions active in the employment area do not seem to pay much attention to portfolios, they began to be listed more and more as job requirements by private and public employers. Several employers are pretending that the job candidates produce some evidence of their abilities by portfolio means. Portfolio is considered as a means to prove the personal achievements listed in a CV.

2.3.2 Portfolio use in schools

The Usage of Portfolios in Primary and Secondary Schools

Even if the cases are still isolated, the Portfolio Evaluation Method is used in Romanian schools. Last year, an education magazine²³ in the Alba County published a paper presenting the case of a primary school teacher that employed the portfolio method for evaluation in several disciplines. The teacher used this method for several taught disciplines, such as mathematics and history.

²³ Universul Scolii, no.4/2003

In the school year 2002-2003, Mrs. Lupea proposed to her class to create a group portfolio on the topic: "Alba Iulia, the town of the Great Union". Its content was discussed and decided with the pupils. It was meant to include a collection of new and old postcards representing important monuments in town connected to the selected topic, short essays written by the pupils after their visits to the Hall of the Union and the Museum of the Union, pupils' drawings on this topic, the results of the tests and of the contest organised on the same topic, old objects and materials, poems written by the pupils.

Ten of the pupils volunteered to participate. All showed great commitment and passion, they worked as a team, and their result was further used for teaching the same topic to other students. The portfolio was elaborated in three months.

Before starting, the teacher picked up a set of concrete and measurable criteria able to reflect the acquired knowledge and skills, corresponding to the age and skills of her pupils.

The decision to include or not a particular contribution in the portfolio was taken in group, the teacher and the pupils discussing on the quality of the contribution and on its conformance to the chosen criteria. The portfolio was also presented to the pupils' parents.

Other isolated cases come from secondary and high schools, where the portfolio method is used for teaching foreign languages, chemistry or physics.

At the "Avram Iancu" secondary school in Alba-Iulia, the portfolio method was used during the period 1998- 2000 by the chemistry teacher to document the work of her pupils. The teacher provided at the beginning of the semester a list of assignments. Every pupil had to pick up a number of 15 assignments, to follow their indications and to do the indicated experiments in the chemistry laboratory, under the teacher's supervision. Afterwards, the pupils had to describe the result of every experiment in writing, adding drawings, diagrams and whatever other illustration they considered necessary. The teacher discussed with each pupil the experiment, and often discussions took place among pupils. Even if no written reflection on the way of learning and on the progress made was recorded, and there was no record either of the teacher's evaluation, this was a genuine application of the portfolio evaluation method.

A web site dedicated to "Co-operative Learning"²⁴ - a co-operation project between a Romanian school and The College of Education at the University of Northern Iowa, focuses on the method of cooperative learning. Among other assessment procedures envisaged for co-operative learning, such as tests, compositions, presentations, projects, observations, interviews, questionnaires, learning logs and journals, portfolios are also mentioned²⁵. The following statement on portfolio is made on the web site: "A portfolio as an assessment procedure is a collection of a student's work in an area, showing growth, self-reflection, and achievement. Portfolios can also show a cooperative group's progress." The site also contains explanations on the content of the portfolio, on the cooperative group portfolio, and a checklist intended for individuals or groups to be used in compiling a portfolio. This checklist can be used to set up the criteria for portfolios. An interesting issue is that the rubrics to assess and evaluate the portfolios can be developed either by the faculty or the students themselves.

CHECKLIST

1. Who will construct the portfolios:

- Individual students with teacher input and help
- Individual students with the input and help of cooperative learning groups.
- Cooperative base groups (whole group work and individual member's work) with teach input and help.

2. What type of portfolio do you want to use?

- Best works portfolio Process/growth portfolio

3. What are the purposes and objectives of the portfolio?

- a.
- b.

²⁴ <http://fp.uni.edu/rac/col/index.html> – in English

²⁵ <http://fp.uni.edu/rac/col/8-assessprocedure.htm>

- c.
4. What categories of work samples should go into the portfolios?
- a.
 - b.
 - c.
5. What criteria will students or groups use to select their entries?
- a.
 - b.
 - c.
6. Who will develop the rubrics to assess and evaluate the portfolios?
- _____ Faculty _____ Students

Unfortunately, the web site does not contain any references to the results of the project and to the application of this approach in the Romanian school involved in the project.

2.3.3 Portfolio use in Higher Education (University level)

In Higher Education, the usage of portfolios is much more frequent than in primary and secondary schools.

A PhD thesis on Education Science defended at the Bucharest University in 2003, titled “Pedagogy. Interactive Methodology Alternatives” and signed by Crenguta-Lacramioara Oprea includes a whole subchapter dedicated to the Portfolio Method seen as one of the possible Alternative Evaluation Methods²⁶. The author categorises the evaluation methods in quantitative, qualitative and alternative methods. The alternative evaluation methods have the merit of evaluating the results in connection with the learning process and simultaneously with it and of taking into account the attitude toward learning and the progress in acquiring new skills and competencies. Beside the portfolio evaluation method, cognitive maps, interviews, projects, case studies, the 1-2-3 Method and investigation are also mentioned.

At the 2003 annual scientific session of the Institute for History “George Barit” Cluj-Napoca, Institute belonging to the Romanian Academy research network, at the section of Socio-Humanistic Research, a group of researchers from the History Faculty of the Cluj-Napoca University, presented a Student Assessment Guide Book based on portfolio²⁷. The abstract is presented below.

STUDENTS ASSESSMENT GUIDEBOOK BASED ON PORTOFOLIO, IN EDUCATIONAL PSYCHOLOGY

C. Blaga, A. Brihan, R. Cercei, G. Ciot, L. Filimon, C. Hanga, A. Hodişan

The goal of this work is to offer support for students in assimilate the essential concepts of educational psychology. Practical application in different area of educational psychology (personality assessment, research methods of scholer individuality, data analyse modalities, improving pupil creativity, pupil group study, communication, assertivity, etc.) contributes to complete future teachers knowledge.

At AISTEDA University, the portfolio evaluation method was used for the first time during the academic year 2000-2001, for the study of Office Automation involving the infrequent students of the Finance and Accounting Faculty.

²⁶ <http://www.unibuc.ro/eBooks/StiinteEDU/CrengutaOprea/cap8.pdf>

²⁷ <http://www.history-cluj.ro/SU/Simpozion2003/Rezumate2003/Pedagogie/Blaga.htm>

Infrequent students are usually persons employed by different companies, already having some work experience, and a working environment where they are eager to apply what they learn in academia. Infrequent students have 12 to 24 lecture hours for each discipline/semester, and are also required to attend laboratories, seminars and workshops. Because the number of practical work hours were very small, and because the students had the motivation and the necessary background to learn by themselves, the portfolio evaluation method was selected for this group of students.

A list of assignments was provided at the beginning of the semester. For example, for the Spreadsheets chapter, it contained 5 types of documents for which spreadsheets are appropriate to be used: a balance sheet, an invoice, a payroll, a budget and an order. Each student had to pick up 3 of them and to use the provided models for elaborating spreadsheets for their own companies. During the semester, there were two face-to-face meetings where the students were given the opportunity to show their work and to ask questions. Several of the asked questions were answered by peers. At the exam, the students were required to provide printed copies of their spreadsheets, and they were asked to re-create one of them, picked up by the tutor. Discussions on the progress made by the students during the semester and on the way they learned took also place during the exam, influencing the final grade.

Several faculties have introduced portfolio requirements for the admission exams organized in their institutions. But here, portfolio is mostly understood as nothing more than a collection of works.

A portfolio is required for the candidates to the admission exam at the University of Architecture “Ion Mincu” Bucharest. The candidates have to present in front of the commission a portfolio of own works (drawings in black and white or coloured) to prove their interest and skills for architecture²⁸.

At the Music Academy in Cluj-Napoca, for the admission exam, the future musicians must provide a portfolio containing the titles they are able to play²⁹. The same faculty requires from the distance students to send a portfolio of recorded interpretations to their tutor.

2.3.4 Portfolio use in Adult Education

Several Adult Education institutions, and especially these providing continuing education to teachers, offer courses or lectures on the Portfolio Evaluation Method.

At the Iasi University, the syllabus for the continuing education for Romanian literature teachers contains applications of the portfolio method³⁰. The teachers are supposed to maintain an own portfolio for self-evaluation purposes.

The curriculum for teachers' training in psychology, pedagogy and educational methods at the “Stefan cel Mare” University in Suceava also includes the Portfolio Evaluation Method³¹. The curriculum was enforced by the Order of the Minister of Education no. 3345/25.02.1999 supplemented with the Explanations No. 39076/22.10.2001, starting with the academic year 2001-2002. Every teacher attending the training is required to maintain a portfolio containing a selection of papers written for each of the studied disciplines and a pedagogical project.

It looks like the use of the portfolio evaluation method in adult education in Romania is limited to few training programmes intended for teacher education. No other evidence of this method's usage could be found.

2.3.5 Portfolio and ICT/IT

ICT/IT were mainly used for developing digital portfolios on web design and photography, and even so, there are not many digital portfolios on the web belonging to individuals in Romania. An example is the one of the photographer Lucian Brandus³². This opportunity is used to a much

²⁸ <http://www.iaim.ro/admitere/REGULAMENT.htm> - in Romanian

²⁹ http://www.amgd.ro/colegiu_main_cum_org.htm - in Romanian

³⁰ <http://letters.uaic.ro/default.php?t=site&pgid=69> - in Romanian

³¹ http://dppd.usv.ro/discipline/body_discipline.html - in Romanian

³² <http://www.efoto.ro/portofoliu/index.php>

greater extent by companies, which introduce as their “portfolio” either a list of former clients³³, or a list of links to websites designed by them³⁴ or both of them³⁵.

The only example of using the portfolio evaluation method in teaching/acquiring IT skills we are aware of is the one provided by the AISTEDA university itself. The method was used in 2 consecutive academic years to teach Office Automation to infrequent students.

The use of alternative evaluation methods – and especially of the portfolio evaluation method – is not yet widespread in Romania. Even in the small number of situations when its application was intended, the gathering of material was over-emphasised and its reflective part neglected. None of the mentioned situation made reference to learning logs contained in the portfolio, or to self or peer-evaluation.

³³ http://www.adpixel.biz/ro/portofoliu_web.php

³⁴ <http://www.itcnet.ro/site-itcnet/romana/portofoliu/portofoliu.html>

³⁵ <http://www.mc.ro/portofoliu.html>

2.4 Portfolio inventory in Sweden

2.4.1 Portfolio in general

Portfolio methodology (the learning portfolio idea) began spreading in the educational sector in the 1970s in USA, New Zealand and some West European countries. It was the poor learning results in the of primary school pupils, high school graduates and university students that urged incited educational institutions in the Western world to find new and better learning methods and other ways of evaluation than regular tests.

Howard Gardner from Harvard University, had between 1970s and the summer of 2000 the overall responsibility for the project Zero. One of the goals of the project was to develop new methods to help individuals, groups and institutions learn how to learn best. In some of the part projects, focus was on how the use of portfolios influences the students' learning.

New Zealand often cited as a pioneer, has portfolio included in the curricula and did a remarkable work in this field.

In the 1970s in Great Britain children started first with paper portfolios in elementary schools. Secondary schools and higher education institutions such as teacher colleges soon followed the trend and portfolios took concrete forms like paper folios, binders, files and videos.

In Sweden the spreading of portfolio made its real breakthrough in the second half of the 1990s in connection to the economic crisis and the crisis of the education system. It was caused by dissatisfaction with the poor outcome in schools and the results of standard testing, especially in higher education. These led to pursuits of alternative assessments, an effort most welcome by the Swedish government and the Ministry of Education in several declarations regarding the new initiatives in assessment and evaluation in higher education.

Today digital portfolios are widely used at all educational levels from pre-schools to universities. In the beginning New Zealand's experience influences the use of portfolio in Sweden. Both teachers and school classes travelled there to learn about portfolio, see its application in schools and exchanging information.

In the last years, as the use of digital portfolios in Western European countries increased and the European Union recognized its importance, new organizations have emerged and many projects began to be developed with these countries.

A special mention should go to the considerable role played by **ITiS** (IT in Schools, The National Action Plan for ICT) for the Swedish educational system in general and for the extensive dissemination of portfolio use at all educational levels.

The biggest school development programme in Swedish history, *ITiS* was launched in 1999 on the Government's initiative and represented the most ambitious in-service training programme ever introduced in Swedish schools.

The programme covered the pre-school class, compulsory school, special school, sami school, upper secondary school, municipal adult education and, during 2002, folk high schools. It reflected an integrated view of skills development, bringing together both the technological and educational aspects and it focused as much on the development of schools as on ICT.

The initiative took the form of an extra government grant offered to the country's municipalities for a limited period to encourage and facilitate their efforts to promote development in schools. In all, 1,700 million SEK have been invested in the ITiS programme over a four-year period (1999-2002).

Background

“No part of the everyday lives of children and adults remain unaffected by Information and Communication Technologies (ICT). Working life has in the course of a few years been dramatically transformed as a consequence of ICT. Today the flow of information and data is much greater in scope and accessibility than ever before. This development has an immense effect on the school and thus its teachers. It creates new opportunities, but also provides new challenges. The tasks of the teacher become both more stimulating and at the same time more demanding. The new technology will not replace teachers, textbooks or the classroom. It will supplement them by creating new combinations of opportunities and help to put pupils’ learning in the very centre.”³⁶

Responsibility for schools in Sweden has been decentralised to the 289 municipalities (local authorities). This responsibility extends to staffing and the provision of further training for teachers as well as to buildings and investments in new technology. Schools are partly financed out of state funds and partly out of municipal tax revenues. The municipality itself determines the specific distribution of funding between different activities. This means that different municipalities may allocate different amounts to their respective areas of operation, which include school education. At the national level, curricula, objectives and guidelines for education in Sweden are defined by the Government and the Riksdag (Parliament). Within these goals and framework each individual municipality is free to decide how its schools are to be run. Teachers are given 104 hours of in-service training per school year as part of their work. An agreement between the employers and the teachers’ unions states that teachers’ working hours are not synonymous with teaching hours. This means that work in the school can be organised in a variety of ways.

Task

The Delegation for ICT in Schools is responsible for planning and implementing the programme that consists of the following seven components:

1. In-service training for 75,000 teachers in teams
2. A computer for participating teachers
3. State grants to improve the school's accessibility to the Internet
4. E-mail addresses for all teachers and pupils
5. Support for developing the Swedish Schoolnet and the European Schoolnet
6. Measures for pupils with special needs
7. Awards for excellent pedagogical contributions

Guiding principles

Four guiding principles have underpinned the planning of the action programme and shall be applied to its implementation in the municipalities:

1. Equal standards between schools and quality for pupils
2. School development
3. Supplementing and reinforcing programmes planned and already completed by the municipalities.
4. Increasing the school's accessibility to the Internet and e-mail

ITiS mad many of the projects presented in this chapter possible, examples of possible use of digital learning portfolios, not only financially but also from a pedagogical point of view. Through ITiS many teachers saw the possibilities to create better prerequisites and possibilities for their school, partly for students to achieve the curricula’s and syllabuses’ goals and partly for them by working *goal-oriented* to develop their roles as educationalists and widen the concepts knowledge and learning:

³⁶ Ingegerd Wärnerson, former minister for Schools and Adult Education

- By increasing the *motivation*, the lust to learn and thus strengthening the students' self-confidence
- By increasing students' *responsibility* for their own learning – through giving concrete form to goals, planning, documentation, presentation, thoughts and reflection.
- By getting ourselves more *knowledge* and *learning* and thus giving the students access to varying learning methods and helping them to develop individual strategies for learning.

Many teachers feel that taking over students with poor documented school activities is one of schools' biggest problems. They are putting a lot of time in mapping out these students and feel they are lacking the "red thread" ("main theme") that should have giving them a lot of knowledge and information about these students.

For many teachers digital portfolio has become the ideal tool to use because:

- It *increases self-image* - the student see his or her own development and consequently get motivated to strive ahead.
- It *leads to development* - the student becomes more aware of his/her learning through concrete goals
- It *leads to increased learning* – as one work consciously to get out how the student learns best and in this way can find more learning strategies.

2.4.2 Portfolio use in Pre- schools

In Sweden municipalities have an obligation to provide preschool activities for children aged 1 to 5 (or until they start school), whose parents work or study or for children with a particular need for such activities. Preschool activities may be run in three forms:

Preschool: an educational group activity for enrolled children between the ages of 1 to 5 years. As a rule, preschools are open year-round and for most of the day. Open hours are adapted to the work- or study hours of the parents or to the needs of the child.

Family day-care: is a form of in-home care where a childminder takes care of enrolled children while their parents work or study. Activities are generally located in the childminder's home. Children placed in family daycares should also have access to open preschool activities or supplementary preschool programs (open preschool).

Open preschool: Provides stay-at-home parents and childminders an opportunity to develop, together with preschool staff, educational group activities for the children in their care. No enrolment is required. In many municipalities, open preschools work together with social services and/or child- and postnatal care centres.

Preschool curriculum (Lpfö 98)

As of the fall of 1998, preschool has its own curriculum in the form of an ordinance thus emphasizing the importance of the preschool as the first step in life-long learning. The curriculum is meant to act as a guide for family daycares and is complemented by a set of general recommendations for family daycares and open preschools drawn up by the National Agency for Education. The educational principles of the preschool curriculum build on care and education going hand in hand.

Preschool

The preschool class is a non-compulsory form of education within the public school system. As of 1 January 1998, municipalities have an obligation to offer children a place in a preschool class from the fall term of the year the child turns 6 until the child starts compulsory school. The preschool class programme shall comprise a minimum of 525 hours per year. The preschool class is a part of the public school system and shall be regarded as education in the same sense as other

types of school. As of the fall of 1998, there is a new, nationally approved curriculum for the preschool class and compulsory school (Lpo 94). The curriculum shall promote the integration of preschool class, compulsory school and leisure-time centre. The preschool class is a part of the school system and the first step toward implementation and fulfilment of curriculum objectives.

Today portfolio is used at all educational levels but pre-schools are considered by an increasing number of teachers as the best place to begin documenting children's learning process using digital portfolios.

Göran Svensson, a teacher that worked many years with digital portfolio, is convinced that portfolio methodology should be put into practice at an early age. He says:

"Portfolio is a behavioural pattern rather than a learning method and one should start as early as possible. It's an awareness method that aims at helping pupils learning to learn"³⁷.

His view gets support from Ingegerd Sahlström, special investigator at the Ministry of Education and Science that in 2001 presented new thoughts about portfolio, which strengthen its importance as a tool for future career choices:

"Already in preschools (the pupils) can take the first steps in a process that can lead to forthcoming choices regarding studies and other activities. Together with their fellows they can go on study trips or achieve group work with a clear direction on the shaping of the near community and the business world future labour needs"³⁸.

During the students' school time the use of digital learning portfolios must be adapted to the students' age and will consequently have different focuses. In pre-schools the focus is on³⁹:

- *The ability to communicate and co-operate*
- *The creative ability – the desire to learn*
- *The emotional competence, self-confidence and security*
- *A positive self-image: I can, I'm someone, etc.*
- *Social skills, brotherliness, to care about*
- *Lay the basis of good working habits*
- *Lay the basis of knowledge in basic subjects*

Teachers at two preschools in Södertälje built children's digital portfolios by using digital cameras to take pictures of them playing in- and outdoors, at gatherings, developments in drawing and speech, parental communication etc. Each child gets its own (portfolio) file on the preschools computer that parents can view at the preschool or take home on a disc. Selected pictures can also be put together as Power Point presentations of special themes or occasions and some have been published on Internet.

The school Sledstadsskolan used the project "ICT and portfolio – tools in education" to create digital portfolios aiming at following the pupils' learning development. Pre-school pupils (the school has also compulsory school classes) made nature books by studying the seasonal changes of the oak. Using a digital camera they took each other pictures in front of the oak and made drawings of the oaks in chalk that were later documented with the camera. The teachers later used the digital imaging program Photo Express to edit the pictures and both teachers and pupils used Word to document the nature books.

³⁷ "Året vid mossen"

³⁸ (SOU 2001:45, s 108).

³⁹ Ellmin & Ellmin – Att arbeta med portfolio, 2003

The results were very positive and fulfilled everybody's expectations. The pupils had fun, were all the time involved and enjoyed developing the digital portfolios. Their interest on nature and computers has increased despite some difficulties in the beginning. The digital portfolios were also used as communication channel between the school and the parents. Parents can, via a PC and an Internet connection, log in and see their children's digital portfolio develop. This brought positive reactions from the parents so the school decided to use digital portfolio as a tool in the personal development dialogue as well as at the pupils' handing over to new teachers.

2.4.3 Compulsory school

In Sweden, all children between the ages of 7 to 16 must attend school. There are nine forms or grades in all, divided into three levels: the junior level (forms 1 to 3), the intermediate level (forms 4 to 6) and the upper level (forms 7 to 9).

The compulsory school system comprises compulsory school (*grundskolan*), Sami school (*sameskolan*) for Sami-speaking children in the north of the country, special schools (*specialskolan*) for children with certain handicaps (children with impaired hearing, vision or speech disabilities) and compulsory school for the intellectually disabled (*särskolan*). Only the *grundskola* will be treated under the following headings of this chapter.

Most schools in Sweden are municipally run, and most children attend a municipal school near their home. However, students and their parents do have the right to choose another municipal school or a privately run (independent) school. Independent schools are open to everyone and must be approved by the National Agency for Education. The independent school receives a grant from the municipality in which the student resides, the amount of which is determined by the school's enrolment and the needs of its students.

The education at independent schools shall have the same basic objectives as municipal schools, but may have a profile that distinguishes it from the municipal school. Independent schools often have a specialization that differs from municipal compulsory school, e.g., a particular educational approach (such as Montessori or Waldorf), linguistic or ethnic orientation, or have a specific religious character. The municipalities are obliged to provide pupils with all the materials necessary for schoolwork. All compulsory schooling is co-educational and provided free of charge.

From the school year 1998/99 compulsory school and the pre-school class share a common *curriculum*. The curriculum is also applied to the after school centre. The aim is to support integration of activities. The curriculum contains binding regulations for the school and thus steers its activity. The curriculum sets out the basic values of the school, its tasks and provides objectives and guidelines for the school. In the curriculum emphasis is placed on the conveyance of knowledge, norms and values as the primary objectives of the school.

Every municipality shall adopt a local school plan showing how the schools in that municipality are to be organized and developed. The curriculum, syllabi and school plan then allow the principals, teachers and students of individual schools the flexibility to adapt content, organization and work methods to local conditions. The planning of these elements is laid out in the school's work plan.

There are a minimum number of guaranteed teacher-directed instruction hours for subjects in compulsory school. For example: Swedish 1490, English 480, mathematics 900, arts 230, etc.

The number of hours for a subject or group of subjects may be reduced by at most 20 percent to accommodate school options. This enables the school to give its education a distinctive profile or specialization.

In compulsory school the portfolio methodology is focusing on⁴⁰:

- *Strengthening and deepening essential knowledge and skills in basic study subjects*
- *Putting the finishing touches to the learning tools – basic learning strategies and techniques for reflexive thinking and learning*
- *Group maturity, co-operative learning social skills*
- *Communication ability – to be able to represent oneself and reach other*

The school Ekenässkolan (<http://utbildning.stenungsund.se/norr/ekenas/>) was a pioneer when it begun working with a digital learning portfolio project back in 1997. Their work started in connection with a reorganization of their activity and aimed at finding both a better way to work theme-focused as well as better forms to follow the pupils' development.

The project, called “Digital portfolio”, has been going on for three semesters and has been financially supported by The Knowledge Foundation (KK-stiftelsen). One of the basic ideas was that digital portfolios would make pupils' development more visible for the pupils themselves, the teachers and the parents. The school uses digital portfolios in all classes (ages 6 to 12) but above all at junior level and in topics like Swedish, mathematics, English and crafts.

Louise is a 6-year-old pre-schooler whose personal portfolio looks like below. She has a recording of the alphabet as well as other materials like letters, music, art, math, etc.



From: the content of Louise's portfolio at <http://utbildning.stenungsund.se/norr/ekenas/portfolio/multimedia.htm>

Anders is 5-grader whose required portfolio, shown below as a regular Windows folder on the hard drive, includes subjects like English, mathematics, home economics, music, etc.

⁴⁰ Ellmin & Ellmin – Att arbeta med portfolio, 2003



From: Anders portfolio as folder at <http://utbildning.stenungsund.se/norr/ekenas/portfolio/amnen.JPG>

The project was evaluated by The National Agency for Education (Skolverket). The results showed that:

- Communication with parents became better
- Metacognitive thinking helped pupils to take responsibility for their learning
- Technical development in ICT sparked new innovations and
- Presentations in the portfolios and teaching became more related to the pupils' needs⁴¹.

Among the mentioned drawbacks were lack of time, especially for the younger children's documentation work and trouble with computer technology.

Every classroom in the school has now 3 networked connected computers, a printer, a scanner and a digital camera. There are also CD-burners, digital video cameras and computer projectors as joint equipment. Each student that leaves the school has all his/hers work schoolwork documented on a CD

Although only in Swedish, their Internet site is worthwhile looking at for teachers interested in developing similar projects, for school reformers and scholars alike.

2.4.4 High school

Upper secondary education is free and a non-compulsory form of school. Every municipality in Sweden is required by law to offer all students who have completed compulsory school, an upper secondary education. In principle, students also have a right to receive their first choice of program. Almost all compulsory school students continue on directly to upper secondary school and the majority of these complete their upper secondary education in 3 years.

As of 2000 upper secondary education is divided into 17 national 3-year programs, all of them offering a broad general education and basic eligibility for studies at the post-secondary level.

Every program comprises 2 500 upper secondary credits. The guaranteed number of instruction hours varies from program to program. For Natural Science, Social Science, and the Arts, the total is 2 180 hours, and for other programs 2 430. All of the national programs include the eight core subjects of: English, the Arts, Physical Education and Health, Mathematics, General Science, Social Studies, Swedish (or Swedish as a Second Language) and Religion. Together, the core subjects add up to 750 credits.

⁴¹ Henningson – Yousif, 1999, and Skolverket 1998.

Every program gets its character from its subjects specific to that program. These program-specific subjects comprise a total of 1 450 credits. Included in this sum is project work worth 100 credits.

Alongside the national programs are also a number of specially designed- and individual study programs. By combining specific subjects from different programs, a municipality can put together specially designed upper secondary programs to meet local and regional needs. A specially designed program also includes the eight core subjects and project work, and corresponds to a national program in terms of the level of difficulty and number of hours. Special programs can also be designed to meet an individual student's specific learning needs.

In upper secondary school, subjects are divided into courses. Courses may comprise 50, 100, 150 or 200 credits. Every course has a syllabus stating the objectives to be achieved. There are also grading criteria for every course stating the required level of achievement for the grades of Pass, Pass with Distinction and Pass with Special Distinction. There are both national courses with nationally approved syllabi and grading criteria, and local courses with syllabi and grading criteria approved by the municipality.

Upper secondary education for the learning disabled offers vocational training in the form of national-, specially designed- or individual programs, similar to those of regular upper secondary. The national programs for the learning disabled are however fewer in number and specially oriented to vocational training. Upper secondary programs for the learning disabled are 4 years in length.

In upper secondary school portfolio methodology is focusing on⁴²:

- *Deepening the knowledge about different subjects' own distinctive character and structure*
- *Increasing specialisation and interest choice*
- *More independent, experimental and problem-based learning – to take part and solve problems, learn to learn*
- *The ability to work in teams, raising the quality in the communication*
- *Something to strive for – keep the ultimate objective clear (further studies, choice of career, etc)*

Hälsogymnasiet (the Health (care) high school) is part of Westerlundska high school (Westerlundska Gymnasiet) in Enköping and has 35 students in a 3-year study program.

The number of applicants to the health care study program has decreased steadily during the 1990s. The problem has been discussed with the school management and the program council and it was decided to:

- Change the name of the study program to better reflect the concentration towards health care
- Introduce new working ways that would stimulate the students' engagement and responsibility for their own learning.

During autumn of 1999 the foundation "Företagsam" (Enterprising) in co-operation with the Swedish Association of Local Authorities started the pilot project "*Digital Portfolio – a step towards an effective subject integration*" that aimed at renewing the health care program.

The project comprises eight schools and was going on between 1999 and 2001.

Teachers' interest for portfolio was awakened by a lecture about the portfolio methodology organized by the above-mentioned foundation and held by Roger Ellmin, PhD at Örebro University and the following course "*Learn to learn through portfolio and personal development dialogue*". Both gave them a good theoretical basis on the eve of their further work within the

⁴² Ellmin & Ellmin – Att arbeta med portfolio, 2003

project. The reasons for choosing portfolio as the new working method and a possible solution to the students' previous learning problems were:

- Portfolio is working as a development image of students' ongoing efforts, development and achievements under a limited time period
- Portfolio is a systematic, goal-oriented and meaningful record of students' work in school.

The project's aims were:

- That teachers and students in the 1st school year will together build a digital portfolio based on the model hammered out by students in the 3rd school year
- To test digital portfolio's usefulness for subject integration, that, in the long run, will make easy to increase the integration between the core subjects and the programme specific subjects
- To train the students see the PC as a useful learning tool

The purpose with the 1st portfolio – a document folder in paper - was to teach the students to take responsibility for their own learning, work, development and successes as well as develop their social skills. The portfolio had six sections:

1. Self-portrait
2. My goals
3. The school's goals
4. My reflections
5. My work
6. Miscellaneous to save

The students had, at different moments, evaluated their work with portfolio and as a result some changes in content, design and function have been made. The original document folder has been replaced with a folder for the work in progress and a document case in hard plastic as "show portfolio".

The next logical step - working with digital portfolio - has emerged as students' wish in all the evaluations. After extensive discussions with the students', weighing the pros and cons as well as the role of different parts it was decided that the digital portfolio would have 10 parts:

1. Self-portrait
2. The school's goals
3. My goals
4. The best way to learn
5. Diary
6. Important events
7. Ongoing work
8. My work
9. My reflections
10. Personal development

Results

The main drawback was, as almost all the similar projects, trouble with computer technology. Old, low performance computers, problems with computers accessibility and intranet capacity and lack of other technical equipment made it sometimes hard for students to work with digital portfolios.

But this disadvantage was outweighed undoubtedly by the positive experiences of the project. Using digital portfolios proved to have many practical advantages for both teachers and students:

- The students have learned to work with digital portfolio, realized its learning potential as well as computers as a learning tool.
- Accessibility has increased. Work in the programme specific subjects can be saved in the portfolio where any (subject) teacher can comment and assess the work from his/hers perspective. It is timesaving and a good integration of different courses thus contributing to an overall picture of learning.
- Digital portfolio can contain sound- and picture recording of practical moments in the health care field that can be studied later. Oral presentations can also be recorded, saved and analyzed as well as students' development in oral communication. This is valuable for both students and teachers as they get new possibilities to follow and assess students' working process and success.
- Teachers got a closer contact with each other and thus the premises for at future co-operation over the subjects boundaries have strengthened.

2.4.5 Portfolio use in Higher Education

In Sweden the state – through the Parliament (Riksdag) and Government - is ultimately responsible for higher education in Sweden and decide what regulations are to apply and how resources are to be allocated.

Universities and university colleges are *individual authorities* that are directly answerable to the Government. Sweden has 13 state universities and 23 state university colleges.

Fundamental goals

The main duty of universities and university colleges is to *organise higher education* based on a scientific or artistic orientation and on proven experience and research, artistic and other development work. These institutions are required to *collaborate* with the surrounding community and disseminate information regarding their activities. *Equality* between the sexes should be observed in their activities at all times, and an understanding of other countries and international conditions should be promoted.

In addition to imparting knowledge and skills, the objective of all basic higher education is to teach the students to conduct **individual, critical evaluations**, independently solve problems and follow advances and findings within the area targeted by the course.

Basic Higher Education

Swedish higher education includes both undergraduate studies and research training. The undergraduate studies also include continuing and further education.

All higher education takes place at *universities and university colleges*. Swedish higher education essentially consists of a number of courses that can also be combined to make up various programmes.

Each university and university college establishes the syllabi and educational plans for the various courses and programmes.

Admission and qualifications

To be entitled to study at a Swedish university or university college, a student must meet certain basic knowledge requirements. These requirements are divided into:

- a *basic eligibility* - established by the Government - which is the same for all higher education courses, and
- *specific eligibility*, if a particular course requires further prior knowledge.

Degrees

The Government determines which degrees are offered within higher education. A special *degree regulation* indicates the requirements, orientation and scope of the various degrees.

The *general degrees* available within basic higher education are:

1. *University Diploma* (Högskoleexamen), obtained after achieving at least 80 credits (two years of full-time study). The institution of higher education decides which subject combinations may be included in the degree.
2. *Bachelor degree* (Kandidatexamen), obtained after achieving a total of at least 120 credits (three years of full-time study). Requires specialised studies in the main subject at a level of at least 60 credits (three semesters), and an individual project totalling at least ten credits.
3. *Master's degree* (Magisterexamen), obtained after achieving a total of at least 160 credits (four years of full-time study). Requires specialised studies in the main subject at a level of at least 80 credits (four semesters) and an individual project totalling at least 20 credits or two projects of at least 10 credits each.

Malmö University College was founded in 1998 as Sweden's newest venture in higher education. It combines both tradition and renewal as some of the faculties were established in the middle of the 20th century, and some are quite new academic units.

In its Teacher Education field, Malmö University College offered in a single subject course in "Distance education and net-based learning" (5 credits / 7.5 ECTS credits, http://utbildning.lut.mah.se/frist-kurs/distnet_vt02/portfolio.htm). It aims at helping students to lay the foundations at a technical, theoretical and practical level in order to plan and carry out distance- and net-based education as well as understanding the role of distance education from different social perspectives. It is a net-based course using mainly problem-based- and collaborative learning as working methods.

During the course the students create a digital portfolio. The purpose is to gather all the documents related to the tasks to be performed during the course. These documents can be Word or PDF files, links to websites, etc. By gathering all their work in this structured manner the students get a general view over his/hers studies and can in an easier manner make assessments in relation to the examination.

The students can use the template below as the 1st page of their web-based portfolio.

**Portfölj
Name**

Distance education and net-based learning 5p

<i>Updated, date</i>	
Course purpose	Own commentary
Bibliography seminar 1	Own commentary
Bibliography seminar 2	Own commentary
Site seeing	Own commentary
Project, websites	
Project, description of the website	Own commentary

Under the “Course purpose” the students will write their own description of how they understand the course, both expectations, interpretation of the syllabus and own reflections.

Under “Bibliography seminars” the students will account for the reports with reflections they open the seminar with. Even if these are sent as attachments (e.g. as Word file) to the discussion forum they will be put in the portfolio as well.

Under “Site seeing” the student will summarize the sites he/she visited and reviewed during the course.

Finally, the student will link to the website created during the project work. A description of the website will also be put in the portfolio. A commentary will be added to the different works done during the course. It will contain the student’s view on the task, its relevancy and what it meant for him or her, strength, weakness, etc.

At the end of the course the students will:

- be able to plan and carry out a distance- and net-based course
- be able to create a simple website for a distance- and net-based course
- be able to use electronic communication in education
- have knowledge about the pedagogical consequences of distance- and net-based learning
- have knowledge about the role distance- and net-based learning play in education

2.4.6 Portfolio use in Adult Education

Adult education in Sweden is wide-ranging and based on a long tradition. It is provided in many different forms and under many different auspices, ranging from national or municipal adult education to labour market programmes and personnel training and competence development at work. Popular adult education has a long history in Sweden. The public sector school system for adults includes municipal adult education (*komvux*), adult education for intellectually handicapped (*särvux*), Swedish language teaching for immigrants (*svenska för invandrare*) and National Schools for Adults (*Statens skola för vuxna*). The Adult Education Initiative (*kunskapslyftet*) is a five-year programme, launched in 1997 in order to boost adult education and training in Sweden. A pilot project involving qualified vocational education (*kvalificerad yrkesutbildning*) is also currently carried out. Only one form - Popular Adult education - is briefly presented here, as it has relevance in the context of our project.

Popular Adult Education - Folk high schools and adult education associations

Sweden has a long history of a popularly based system of decentralised education and course activities (*folkbildning*). Study associations and some 150 Folk High Schools work with these activities in close co-operation with a variety of NOGs (Non-Governmental Organisations).

Popular education is available to everyone and aims at reaching groups who often remain outside other educational systems: those who only have elementary education, the disabled, immigrants and the unemployed. The goal is to reduce the education gaps among people and to reinforce democracy by stimulating the individual citizen's participation in society. People meet to learn more together, to strengthen their opportunities for influencing their own situation in life and often times to influence and change social conditions.

There are 147 folk high schools in Sweden providing both long-term and short-term cycle courses. Some courses can qualify students for university studies. Tuition is free of charge but the students pay for their own board and lodging. State assistance can be payable. The Council for Popular Adult Education is responsible for the allocation of state grants and for evaluation of these forms of education. The Study Associations' activities consist above all of study circles, but the associations are also able to organise studies corresponding to those offered by the school system and within higher education.

- In adult education portfolio methodology is focusing on⁴³:
- Confirming the present situation (present situation)
- Confirming own learning needs
- Drawing up an objective that corresponds both the training goals and the goals for the personal development
- Making visible and follow your own development
- Reflecting over your own knowledge in a way that contributes to further competence development
- Confirming the need for support
- Contributing to the development of the training

Aventus

Aventus (www.ventus.nu) is a private Swedish company whose business approach is to coach people in different change stages in their life thus helping them to achieve new goals. They focus on three main business areas – *Outplacement, Rehabilitations, Health and lifestyle* and development within kindred areas called *Other services*. The latter are *Training, e-coaching* and *Distance job-counselling*. Their starting point is that adults have motivation and a lot of experience. Education, lectures, physical training, practice and network building will help them lay the foundation to achieve new goals in life. During this process they are “coached” (i.e. helped and supported in governing their own learning process, so they can develop their own potential, skill and performance).

The job coach process

The job coach process is divided into four parts:

The first part – *Insight* - starts with self-assessment. The purpose here is to answer questions like Who am I, What are my skills, What am I doing and What do I want.

In The second part – *Market* - the participant examines the job market to get a general picture of the demands, needs and possibilities. The purpose here is to get a completeness of the job market and to establish a personal goal.

⁴³ Ellmin & Ellmin – Att arbeta med portfolio, 2003

In The third part – *Activity* - the participant makes an “activity plan” of how to achieve his or her goal (i.e. his or her future work). The plan can for example be a list of potential employers or a study plan.

The fourth and last part, which is named *Tactics*, consists of both formal and informal ways to find and influence future employers in order to achieve a job. In this part the participant learn how to influence the market in the most efficient way in order to seek a job in a successfully manner.

The Portfolio

To make the process easier to adapt, Aventus has developed a web-based program – a portfolio. The participant can together with the coach and/or interactive assessment tools in the portfolio assess themselves and work through the job coach process described above.

Integrated with the portfolio is a “writer tool”. That program is integrated with the portfolio and anyone with a little knowledge of html can develop tailor made courses to students.

Flexus

Background

Since September 2002 Aventus is owned by Folkuniversitetet association attached to Stockholm University. Flexus is a development of Aventus e-coaching system and Folkuniversitetet Syd owns the right to use this e-coaching system. Folkuniversitetet Syd has since, by initiative of Ulf Wallin, made further developments in the design and the educational and supportive functions of Flexus.

A brief description

Flexus is a collaboration environment. As a starting point groups or classes with common educational objectives make the base of the systems functionality. Through a coach or a teacher you can maintain the quality of the system. The course material can be adjusted to the target group and the objective of the course.

In the Flexus system you can make individual assessment and educational plans as well as course portfolios and coach portfolios. The student interacts with a teacher/coach and/or other students in the group during the entire learning process. Every student is assessed during the learning process and his/her results will be presented in a portfolio.

There are three administrative levels – Student – Writer (Coach or teacher) – Administrator. The writer can shape and adjust the course material because the interface is easily operated with html. Links can be integrated directly into the course material and questions can be asked and sent to the coach/teacher. The administrator handles statistics, surveillance and support functions.

Flexus has the following features:

File galleries	Presentation of teacher/coach
Featured links	Personal maps
Comments	The students' personal diary
Forums	The coach diary
FAQ	Trackers
Quizzes	Portfolios

Summary

There are three important parts in Flexus: the *target group*, the *coach- or learning process* and the *course material*. A good result is obtained when these three parts will cooperate to their full extent. As the name implies, Flexus is a flexible tool with great potential that can be used in a wide variety of educational situations.

2.4.7 Portfolio and ICT/IT

Swedes are, and have always been, open to new technology and the Swedish society today is permeated by Information and Communication Technology, ICT. We illustrate this with the following statistics from both Swedish and European Union sources 2001 and 2002:

90% of the Swedish households with children in school have computers. 70 % of all Swedish households have at least one computer – and a majority of these are connected to the Internet.

56% of the Swedes aged 15 or more have a computer at home and 54% of the Swedes 15 yrs or older surf the Internet from home

Computers in compulsory school

3 teachers share one computer

8 pupils per computer

Over 75% of the computers used in teaching situations are placed in premises other than computer classrooms.

Approx 75% of computers in the schools are connected to the Internet.

Computers in upper-secondary school

Approx 1 teacher per computer

4 students share one computer

Over 50% of the computers used in teaching situations are placed in computer classrooms

Over 90% of the computers are connected to the Internet.

Previous experiences of ICT in Schools

Earlier computers had been introduced on a small scale in the schools in the mid-80s. These were manufactured specially for schools, but they were not a success. E.g. the means for communication did not exist. For several years computer-science was a subject in its own right teaching pupils and teachers a lot about programming and computers. In 1994 there was a major shift in focus from teachers teaching to pupils learning - the new curricula and syllabi stated that computer literacy was important and that all subjects should integrate the use of computers as a tool whenever appropriate. And parallel with this the Internet was introduced in Sweden.

During the 90's teachers were given courses in software programmes and interactive courses had been offered for free. However, in the ordinary work of enhancing the learning of pupils, not all understood how ICT could be a useful tool. Many teachers feel inhibited, as they often know less about computers than some of their pupils do. Investments in training pathfinders - who share their experiences with colleagues - have not been as successful as we hoped. This was mainly because many teachers are unfamiliar with acquiring professional skills in this way.

Another important factor was the lack of technical support in the schools. Teachers most often would only use tools they knew would work. And they had to work every time.

According to a survey made by the Delegation for ICT in Schools autumn 1998 close to 75% of Swedish teachers had then participated in one or several courses in using the computer and 10-15 % have completed a pedagogically oriented course.

Even if portfolios have been around for a few decades in Western education, they were just recently transformed with the use of ICT (Information and Communication technology). Using multimedia tools, sound recordings and digital cameras we get a more comprehensive than earlier picture of students' development and learning, talents and strong points.

ICT has brought new, powerful and innovative ways to develop the work in school. More and more schools have chosen to work with digital portfolios, a positive but not always entirely

unproblematic development. Digital portfolios require the same responsible preparations as paper portfolios as they have their share of “teething troubles”.

ICT also means that large amounts of information – like students’ work - can be saved and processed. Computers’ saving capacity increases day by day, which naturally raises the question of how the digital documentation can be limited to avoid *data overkill*, a extensive and difficult to survey documentation.

The general, well-trying rule is that when methodology (Portfolio) and technology (ICT) support each, the focus will always be on the student’s development and not on technology.

Frontier

Frontier (www.fronter.no) is a Norwegian company that provides Virtual Learning Environments (VLE) for schools, colleges and universities. The VLEs has been developed in close cooperation with educational experts, teachers, students and course participants as the company works uniquely with its customer base. The Classfronter Reference Group, consisting entirely of users, takes key decisions about development priorities. Continually throughout the year, Frontier launches improved versions of Classfronter, reflecting the latest developments in technology and modern education. The VLE is used in Norway, Sweden, Denmark and the Netherlands and has recently penetrated the UK market in the North of England.

The company has developed a flexible and highly effective framework for web-based learning. They have divided their VLOs, or program, in six different products.

Classfronter is, from our (project) point of view one of the most interesting. Classfronter is for learners of all categories, in every phase of life. Classfronter is used by learners and teachers on campus, and in part-time and vocational learning contexts. It complements traditional teaching and lecturing with resources that strengthens collaboration, inspiration and the joy of learning.

Classfronter is used by companies and organizations and allows them to generate additional value by organizing in-house courses and other competence-building measures in a Lifelong Learning context. It offers advanced features such as portfolio tracking and learning paths. This makes Classfronter one of the best solutions designed to support Problem-Based Learning (PBL) and group collaboration.

Classfronter may be seen as a virtual building with different rooms. Each room has a different function - classroom, discussion room, library, etc. Users are given access keys to the building and to designated rooms where they may collaborate with others.

It satisfies all international standards for e-Learning (IMS, SCORM, AICC) and as a result, can be integrated with systems for student administration and personel. It can also integrate content from different providers of Web-based courses.

Softogram (www.softogram.se) is the biggest Swedish company that develops educational software for schools. It has 8-10% of the market and it has launched about some 20 titles since 1987. Over half of compulsory school in Sweden uses their programs, which have been translated into many languages.

One of their programs is *Digital Portfolio - My Works*, a tool for easy revision of digital data in portfolio-based work situations. The student creates an individual portfolio with text, images, sound and video clips. The learning process is visualized and an overview of the student's work is presented.

The program creates a separate folder for each student, which can be used for organising and storing his/her work. Since each student logs on with a password, students will not be able to see

each other's work. Teachers have access to all folders and can in this way follow the students' progress.



From: screenshots at <http://www.softogram.se/digitalportfolio.html>

Students create themes and projects in which their works can be saved in the shape of pages. Each page contains a text frame for entering text, for instance a story or essay. Images can be added to every page, like a painting the student has made in art education, or a photo of a group project or something made in handicraft.



From: screenshots at <http://www.softogram.se/eng/digitalportfolio.html>

Furthermore, students can record songs, poems, music, spoken English or other languages, and so on. These sound files can be several minutes long. It is even possible to import video recordings of for instance open-air activities or excursions. All of this material can easily be transferred to a CD-ROM. In this way a working portfolio is created that can be taken home and shown to parents before parent-teacher meetings. The CD-ROM is easy to install on a home computer. When a student finishes a school year, or leaves the school, the entire portfolio can be burnt on a CD-ROM for filing or future use.

Portfolio Manager 2, or PM2, is another software for inspiring work documentation with both graphics and text. With its pedagogical interface PM2 gives an irreplaceable support for both teachers and pupils in the documentation work. *Portfolio Manager 2*:

- handles an endless amount of pictures in most formats, the pupils can insert pictures of their work. The program adjusts and rotates the pictures if desired. There is also a database with a search function to create an idea database or instruction material.
- contains documentation models to make it easier for the pupils making the written documentation. There are also models for evaluation. The interface gives the teacher an irreplaceable support before for instance development encounters and grading.
- is completely network adapted with possibilities to upload user profiles.

The design of the program is divided into two password-protected areas, one for the teacher and one for the pupils.



http://www.mpa-trading.se/pm/screen_main_en.html



<http://www.mpa-trading.se/mpa/pm2002.htm>

*From:
screenshots
at*

and

The Pupil login

Every pupil has got his/her own password. The pupil manages his/her own pupil protocol and has the possibility to insert pictures with picture text of his/her work in unlimited amount. The pedagogical design of PM2 gives the pupil a unique possibility to follow and document his/her own progress during a short or long amount of time, and possibilities to find inspiration or instructions in the database. Pupils can easily e-mail a digital picture of their work home to themselves. Forgotten pupil password can easily be recreated with the teacher's help.

The Teacher login

From the teacher login the teacher has got total access to all pupils' pupil protocols, pictures and evaluations. The fast browsing function between pupil protocols and picture pages gives a good survey. From the teacher login the teacher can administrate his or her notes about certain pupils, marks, and more. If you wish, every pupil can have an own front picture, which is good if you are new in the school, and have many new names and faces to learn. There are also models for easy information handling used for Personal Development discussions and marking. Everything can be printed for each pupil or for a whole class, including class lists suitable for tables of presence. This makes it easy to keep pace with the rest of the teaching staff, even though you may be teaching three times as many pupils in your subject. The first time a pupil logs in, he/she enters address, telephone number and e-mail address. This information can also be accessed in the teacher program.

When the teacher has opened a pupil, the teacher can by clicking different flaps swap between pupil information, where you also can insert a picture of the pupil, personal development encounters, term reviews, a pupil protocol and a picture storing function with slideshow and comment function by clicking different flaps. With the "pupil login" mentioned above the pupils can fill in the term review form, the protocol, enter their information and insert pictures of their work.

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2.5 PORTFOLIO INVENTORY IN LITHUANIA

2.5.1 Portfolio in General

In the European Union the attention to educational issues is a priority area next to the economic interests. EU countries can be characterized by equal attention to educational processes and educational background. Lithuanian integration into the European Union facilitates a new approach to various educational issues including in-service professional development, lifelong learning, non-formal and informal education, etc.

This context provides a new impact and meaning to the development of in-service professional development. Becoming a professional is a process of systematic development that occurs in all stages of growth and continues as long as appropriate experience is formed. Learning is a lifelong process, not a period of time from the first lesson till obtaining a document conferring the qualification.

The *Portfolio Evaluation Method* is in the phase of beginning in various learning sectors in Lithuania. This kind of evaluation has no deep traditions, but, based on the competency-based learning approach, there is the need to develop and implement it. The paper will mainly discuss and present the portfolio inventory through the example of the vocational teacher education sector, where the evaluating of lifelong learning is a specifically problematic area. Continuous development is happening and valuable experience is being gained in formal, non-formal or informal environment. Nevertheless there is the problem of assessment, evaluation and recognition of the learning results.

The purpose of this paper is to define the use of *portfolio method* as the opportunity for professional growth, based on the example of portfolio evaluation method, used by prospective vocational teachers. Scientific literature and document analysis and survey methods were employed in the research.

The academic character of the contribution is determined by and illustrates the real situation of portfolio use in Lithuania, which is under the phase of developing and does not have many examples of practice.

2.5.2. Portfolio use in schools

Starting the discussion about the use of portfolio in schools and colleges in Lithuania, one could present the conclusion beforehand, that this kind of evaluation method is not yet included in any formal study programme. On the other hand, there are several private initiatives of single teachers, who try to experiment this kind of innovative approach to evaluation. However it would not be correct to present these initiatives as the example of Lithuanian experience.

Some schools and colleges, also on autonomous level, have started to initiate “The collection of competencies” during the process of teacher attestations. Teachers are asked to collect all kinds

of documents and certificates, proving their activities in pedagogical, social and project development spheres. Since this kind of evaluation method is new, there are no standards nor criteria set of how this collection of competencies should be prepared.

2.5.3. Portfolio use in Higher Education

Unfortunately, the presentation about portfolio usage in universities has also to conclude solely with the need for competency-based evaluation system. So far any formal study program in Lithuanian universities does not include the portfolio method for evaluation learning outcomes and gained competencies. In this point private initiatives of innovative lecturers and theoretical research about competency-based evaluation can be mentioned.

There are discussions and initiatives of developing portfolio as an evaluation method in language learning and teaching at Kaunas Technological University (KTU). Researchers at KTU declare that portfolio aims at presenting student-teacher cooperation in creation, access and participation (Learning/Teaching Portfolio), the research functions of the university and its departments as well as student-teacher research (Research Portfolio), the responsibility of the department to the society (Society Service Portfolio), the adaptability to the world developments (the European Language Portfolio or Project Portfolio). The lecturers of different disciplines at KTU prepare those selected teaching collections for more flexible and effective teaching in a changing university. For forming the portfolio structure for language learning and teaching, the researchers at KTU ground on the following principles by Hamn and Adams (1992); Murray, Bozzone and Zubizarreta (1994) who have suggested the following lists of entries which might be included in the teaching portfolio:

- teacher's philosophy, principles, educational theories, etc;
- principles of both human learning and language learning;
- principles of language teaching.

Program Design

A statement about student`s needs to learn English (or a special course, e.g. Business English);
Goals and objectives of the course
General statements about the syllabus
Guidelines for developing language skills (listening, speaking, reading and writing) and language components (lexis, grammar)
Principles of language achievement assessment;
Statements about the teacher's role;
Statements about the student's role
The statement about the use of the native language.

Methodology

Effective teaching techniques
Effective exercises, activities and tasks
Stages of language lessons

Professional Development

Students' evidence of learning
Actual products of learning;
Audio, video, computer-aided programs and other facilities
Teacher-created materials
Language assessment tests
Recent changes in language teaching

Workshops, seminars, conferences articles or books
New ideas
Organizations, the teacher belongs to.

Personal Achievements

Published articles
Articles to be published
Certificates, honors and distinctions.

Teacher's Reflections

Specific impressions about the students, thrills and disappointments
Student's evaluation data
Colleagues' statements about your teaching
The supervisor's evaluation
Self-evaluation
Analysis of these evaluations
A list of issues to be improved
A plan and expectations to improve your skills.
(Čižinauskiene and others)

2.5.4. Portfolio use in Adult Education

This part of the paper will analyse the example of vocational teacher education change in Lithuania, emphasizing the importance of learning in the workplace, analyzing methodical approach of preparing the portfolio and formulating the guidelines for its used strategy.

There in vocational teacher education, there is an emphasis on acquisition of the competencies, essential for vocational teacher activity based on reflective learning principles. Therefore persons, aiming at acquiring vocational teacher qualification in authentic environment, performing special assignments, have an opportunity to test themselves and use the acquired knowledge in a pedagogical activity.

The newly developed strategy of vocational teacher education determines the assessment goals for prospective teacher professional growth. Assessment is to be understood in a broad sense and oriented to the development of prospective teacher personal and professional capacities and adequate evaluation of one's possibilities and abilities.

Thus, assessment and evaluation in teacher education carry particular significance for prospective teachers as well, and assessment outcomes are long-termed. Assessment takes a lot of time. Taking into consideration that in-service professional education of teachers is experiencing a transfer from academic to competence model, based on school practice, a fundamental question arises: what kind of methods would best fit for the assessment of the professional growth, acquired abilities and competencies of future vocational teachers?

Vocational teacher education in Lithuania as well as in other European countries has to accept huge challenges. Relevance of this topicality is determined by constantly growing importance of vocational training for the economy and social life change.

In the previous strictly centralized vocational education and training system, the majority of vocational teachers had no pedagogical qualification. Vocational teachers had a possibility to acquire general pedagogical qualification in seminars or short-term courses, where academic learning form dominated and too little attention was devoted to the development of practical pedagogical competences.

In the year 2002, the Centre for Vocational Education and Research at Vytautas Magnus University started the implementation of module program for initial vocational teacher pedagogical education. The program was prepared in PHARE program in cooperation between VMU scientists and scientists from the Sheffield University. It is the first program of this kind in Lithuania. The scope of the program is 40 credits, the duration of studies is 1,5 years. The studies are grounded in module learning principles. The characteristics of this initial vocational teacher pedagogical education programme are as follows:

“students of the programme have different professional qualification and teach different subjects; the programme consists of study modules; content of every module is oriented to the acquisition of particular pedagogical competencies; every module is realized in three-day sessions at the university and independent prospective teacher activity in the workplace under mentor supervision; study curriculum is organized by “uprising spiral” principle emphasizing pedagogical activity aspects studied in a more complicated order; studies focus on reflective thinking and practical self-analysis of practical experience; professional training institutions - prospective teacher workplaces – are actively participating in the study process.

Study modules are studied in cycles. During every cycle prospective teachers acquire the content of one module. The content of every module is described in detail in the learner manual. In the manual, module aims are formulated, expected study results, as well as evaluation criteria and methods; the main learning material and tasks are presented. After every session, teaching and learning evaluation is carried out with the purpose of obtaining feedback and improving module content. All the learner achievements are gathered in the student’s „portfolio“. Here, module teachers and mentor present their comments and evaluation. The final evaluation is also based on the *portfolio*.

The new strategy of teacher education determines the assessment goals of prospective teacher professional growth. Assessment is to be understood in a broad sense and oriented to the development of prospective teacher personal and professional capacities and adequate evaluation of one’s possibilities and abilities.

Thus, assessment and evaluation in teacher education carry particular significance for prospective teachers as well, and assessment outcomes are long-termed. Assessment takes a lot of time. Therefore, it is essential that university lecturers, being the educators of vocational teachers as well as mentors develop a repertoire of possible assessment tools and help prospective teachers to acquire this experience.

In the process of teacher education, the assessment is oriented to methodical collection, transformation and interpretation of facts about pedagogical competencies aiming to identify the level of their quality.

A similar understanding is provided by Šernas V. (1995) where the assessment is called systematic evaluation of how prospective teacher’s results of professional preparation have changed.

In the proves of teacher education, assessment is based on three major principles:

Assessment is a constant evaluation of the process characterized by a formative aspect;

Assessment is based on a dialogue;

The most important aspect is a constant evaluation of one’s activity and development.

Nowadays better and more objective ways are sought for evaluating activity achievements. It is important to maintain the positive aspects of assessment and evaluation, i.e. feedback for a prospective teacher, and avoid negative aspects, which do not enhance critical thinking and the development of problem solving skills.

One of the new methods of assessment is *portfolio* method. This method is closely related to *assessment of activity* and *authentic assessment*. *Portfolio* is making a file, which is used to demonstrate competencies on the basis of which prospective teacher achievements, and professional growth can be measured. While preparing a *portfolio* prospective teachers have to be guided by a certain methodology, which they discuss together with their mentor. The preparation of *portfolio* has to provide a real opportunity for a prospective teacher to think over his or her own learning and activity (Hebert, 1992).

Portfolio is a collection of reflections, speculations, individual experience, and assignments done over a period of time and gathered into a file. Developing the portfolio as the method for evaluation of teachers' professional growth was grounded on principles, that it is essential that prospective teachers are able and desired to constantly and purposefully learn on their own, develop, to understand their weak and strong areas as well as to be able to acquire teaching and learning methods and to successfully apply them in practice. *Portfolio* is an instrument that provides the opportunity to understand one's teaching and learning and vocational growth processes deeper and more in detail. The advantage of *Portfolio* is its process-orientation; it is one of the major instruments of evaluation process.

Portfolio is a collection of prospective teacher study works that reflect his or her participation in the learning process, efficiency of the learning process, teacher professional growth and is a perfect mechanism to provide feedback. Besides, portfolio helps a teacher to communicate with a tutor and mentor. Pollard & Tann (1995) distinguish four principles of portfolio application. Portfolio provides an opportunity:

For tutor and mentor – to get acquainted with prospective teacher achievements, evaluate their significance and provide feedback;

For prospective teacher – to develop his/her competencies and foster professional development due to growing motivation, variety of encouragement forms, clearly envisage own development, achievements, shortcomings and possibilities;

For teacher education institutions – to identify study problems, modify study programmes, forms and methods and study process organization to serve a more effective education for teachers;

Alternative prospective teacher achievement evaluation is based on a new assessment paradigm. Calfee (1992) presents the following main features of this new paradigm:

Real competence is more important than formal evaluation

To demonstrate the acquired competencies is much more pleasant than to repeat the learnt information;

Project development is more important than answers to the provided questions;

The depth of knowledge is more important than the quantity of knowledge;

A well-founded expert solution is more important than mechanical memorisation.

The purpose of *Portfolio* is to get constant feedback about the activity, problems and personal pedagogical development, to see weak sides in all the stages of the teaching process. *Portfolio* allows to gradually observing the achievements.

The main idea is that *portfolio* creates a possibility for multitudinous, authentic, more objective and reliable evaluation of prospective teacher competencies.

Designing the assessment method for one or another subject to be assessed it is important to answer the following questions: what has to be gathered in a portfolio file; what criteria should be used to ascertain learner work; what are the criteria to define that the work of a learner is sufficient; what are the signs of evaluation (points or other evaluation means).

Portfolio is a file where samples of student's performed assignments are collected. Prospective teacher accumulates a collection of essential material during the whole learning period; a list of literature resources that have been studied, remarks on literature analysis, lesson plans, meeting schedules, descriptions, projects, activity descriptions, performed tasks, etc.

Some tasks are provided by tutors or mentors; other tasks can be chosen self dependently, after having evaluated one's personal needs and aimed competences. In the process of the preparation of portfolio it is important for mentor to discuss all the assignments with the prospective teachers who should understand well what skills are to be acquired during the process of the module. By this way prospective teachers are acquainted with portfolio that serves the purpose of helping them to acquire and master these skills.

Mentor together with prospective teachers discuss the following questions:

- Why is it necessary to gather the material?
- What are the possible ways of making a portfolio?
- What are the requirements for materials in terms of scope, portfolio file format, etc.

Selecting the material for portfolio enables teachers to solve the assignments of a concrete module. The prospective teacher gathers the whole material used during the period of studies into a portfolio file. This material reflects the learning process, conclusions and summaries of all the discussions, notes of the read and reflected material, reflections on problem solving, argumentative essays as well as personal reflections and questions. According to Brown and Knight (1995), portfolio is not a bunch of material or shapeless collection of it. The value of portfolio is reflected in its real content, principled selection of the material and ability to present the material properly.

Portfolio mirrors the way covered by every teacher depending on the teacher's individuality and training needs.

At the end of their studies prospective teachers, with the help of mentor review the material gathered in the file and, on the basis of the experience decide what should be included in the final portfolio, which material reflects their professional growth best of all. Thus, while accumulating the material prospective teachers know that it is not a final variant and that at the end of the studies they will review it and will reorder the gathered material according to a certain structure and then will present for the final evaluation.

The main guide to the portfolio content is the programme of every module.

Portfolio allows following and analyzing teacher achievement dynamics. Gathering the material into a file teacher constantly revises and assesses his/her activity and its results. Portfolio is a useful instrument in organizing the teacher learning process. Portfolio creates favourable conditions for *formative* and *summative* evaluation. Formative evaluation is important in the process of studies, when teachers review what they have done, rethink their achievements, compare initial goals and their approach to problems with the current activity results and their understanding, self-evaluate their achievements and mistakes. The same process is repeated at the end of the module together with the module supervisor and mentor who give a final evaluation of the module.

The main portfolio preparation principles discussed at the outset of the studies is the major criterion for the final evaluation. These principles include the portfolio content, its structure and methods of preparation. Various methods can be used for assessment. They are: teacher self-assessment, colleague assessment as well as mentor and tutor assessment.

The main principle of portfolio preparation is a constant reflection of one's own activity and learning. Prospective teacher learns through experience. However, in order to learn efficiently it is necessary to develop reflection skills, as the most efficient learning takes place through reflection and analysis. It is possible to reflect on your past in different ways; thus, prospective teacher should try several of them. Journal writing is one constituent of portfolio and one way of reflecting upon your experience. It is a good way of analyzing your activity aspects, thinking, etc. Journal entries should be made after every activity as soon as possible. The form and structure of the journal or concrete questions may be prepared in advance. While gathering materials for portfolio, prospective teachers have an opportunity to apply their learning skills, choose individual learning tempo and more deeply understand learning goals and how to achieve them. Portfolio preparation provides prospective teachers with opportunities to organize their learning in a more successful way, monitor their activity, evaluate and demonstrate their achievements. According to Argelado (1996), teachers are given opportunities to experiment in their teaching process, appropriate unique ideas, plan and reflect upon their learning and activity. *This is the background of creative independent learning.*

The main principles of preparing the portfolio are as follows:

Formulating clear goals. Prospective teachers themselves formulate goals that they will try to achieve in preparing portfolio and learning as well as activity context.

Fostering the understanding of interrelationship between decisions made and their results. All the decisions related to studies should be accepted together with prospective teachers.

Developing deep thinking skills. Prospective teachers should reflect upon every activity and learning in written form. Writing a journal every day can serve this purpose. A teacher can also use structured "reflection sheets" which present analytic questions or unfinished sentences and tasks for reflection. Open discussion of the results. It is very important to give constant feedback to the prospective teacher.

The purpose of portfolio is to follow the development of prospective teacher qualification and teaching experience. Supervising prospective teacher practical activity requires additional time on the part of a mentor, sometimes the foreseen observation of teacher activity may not occur because of some inevitable obstacles. Through the use of portfolio mentor will be able to analyze teaching, lesson plans and other activities, as prospective teacher will reveal his/her concerns and problems reflecting about them in portfolio journal. Mentor can analyze portfolio together with prospective teacher and listen to his/her comments or explanations on one or another issue.

The Vocational Pedagogic programme for vocational teacher education, which is being implemented by the Centre for Vocational Education and Research at Vytautas Magnus University since 2002, has worked out the structure for the portfolio:

Recommended portfolio structure for teacher continuous education

1. Individual prospective teacher's module learning plan.
2. Theoretical pedagogical studies
 - 3.1. Research papers on literature analysis
- Performed module assignments
- 4 Practical pedagogical studies
 - 4.1. Teaching unit (lessons, seminars, practicum, etc.) plans
 - 4.2. Reflections of practical activity (planning, lesson preparation, teaching, assessment, etc.)
 - 4.3. Journal of action analysis
 - 4.4. Assessment of own professional growth
 - 4.5. Final report of the module
5. Mentor comments (assessment)
6. Tutor comments (assessment)
7. Module supervisor's review and evaluation

The Vocational Pedagogic consists of 11 study modules: Introduction to the Teacher Profession, Organization of Learning, Learning Methods and Resources, Evaluation of Learning Outcomes, School as Organization, Leading the Learning, Planning the Learning, Evaluation and Development of Teaching Quality, Vocational Education and Labour Market, Improvement of Teaching Practice (2 modules), Preparation of Final Thesis. The portfolio, with its given structure reviews and presents the learning results and professional development progress through all the modules. One of the main tasks for the portfolio development after the evaluation of learning progress is to encourage the self-development of teachers through professional reflections.

Portfolio reflects the professional development of prospective teacher. Beside the mentioned above material, the prospective teacher can gather samples of practical activity, certificates of attended courses and finished studies and other documents that a teacher prefers to include to as documents testifying teacher's learning experience and know-how.

Discussion about the use of portfolio method in other educational areas can be begun only in terms of planning and foreseeing to develop and determine its position in the system of education. For example, the strategy for vocational guidance (2003) foresees that the learning results and working experience of specialists of vocational guidance will be assessed using the portfolio method. The Strategy for Sustainability of Lifelong Learning (2003) also determines the need of portfolio as the accumulative score, which would decrease the gaps between academic and vocational education, as well as formal and non-formal/informal education. Presenting the portfolio use in language teaching area one can notice the private initiatives of teachers in secondary and upper-secondary schools, which are presented and shared in local educational conferences.

2.5.5. Portfolio and ICT/IT

Portfolio use in ICT could be defined as the objective for future research and development in Lithuania. Nevertheless the first steps to be made are to foresee the position of the portfolio method in the system of evaluation of learning/teaching/practical competencies, to define the structure and evaluation criteria of portfolio.

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2.6 Portfolio inventory in Italy

2.6.1 Portfolio in general

In Italy the competence certification is growing as well as in the most advanced industrial countries. Even at a slower pace, the certification of competencies is not anymore merely limited to concise judgments or measurement against evaluation scales.

Portfolio, defined as “*a purposeful, selective collection of learner work and reflective self-assessment that is used to document progress and achievement over time with regard to specific criteria (cf. Wolf et al. 1991; Kohonen 1992b,c; 1996; Gottlieb 1995; O’Malley and Valdez Pierce 1996).*” is a solid evidence of this new trend which, “*In the course of the learning process*”... *becomes a kind of autobiography of the Learner*”⁴⁴.

The “*Lisbon strategy*”⁴⁵ has set a new philosophy for the rights to education underlining the need of competence equality and not just certifications uniformity. The “*Copenhagen Declaration*”⁴⁶ has emphasized the importance of strengthening transferability and acknowledgment of competencies and qualifications, in order to foster labour and geographical mobility. It represents a strong step towards a common framework for qualifications and competencies mutual recognition.

The commission has faced this task and has produced the proposal⁴⁷ to group all these actions in one single tool called Europass and to define *European Curricula* and *European Portfolios of languages*.

Although Italian delays toward the European model⁴⁸, the “*traditional*” evaluation method based on judgment against measurement scales, have been recently questioned. The portfolio is perceived to better describe competencies, which are by nature extremely articulated, and constantly changing.

The *Committee of Presidents of Italian Regions*, in accordance with *Government* and *Trade Unions*, has stated, in august 2002, “*defining rules for the introduction of national standards for the certification of competences, specific for all different educational domains, has to be dealt urgently, in order to face the decentralisation processes of education and vocational training*”.

The Committee believes that keeping the vagueness of the current Italian legislation in this field could cause a great risk for the overall quality of the system and limit the right to lifelong learning for students and workers.

⁴⁴ Viljo Kohonen, University of Tampere Finland, Authentic assessment as an integration of language learning, teaching, evaluation and the teacher’s professional growth –

<http://www.irre.lombardia.it/portfolio/FINLANDia%20assess.pdf>

⁴⁵ At the Lisbon Summit of March 2000, Heads of State and Government set a goal for the European Union over the next decade to become: “the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion”.

⁴⁶ “*Declaration of the European Ministers of Vocational Education and Training, and the European Commission convened in Copenhagen on 29 and 30 November 2002, on enhanced European cooperation in vocational education and training*”.

⁴⁷ Adoption expected on 14.12.2004 in Maastricht

⁴⁸ Italy has already been rebuked many times by European Court of Justice for breaches regarding competencies certification, right of job and enterprise flexibility or about other aspects concerning portfolios.

In Italy, Constitutional Law no. 3 of 18/10/2001, which modified section V of the Constitution, and in particular art. 117, had already modified the relationship between central Government and Regions in the field of education and vocational training and therefore in the introduction of new ways of assessment and certification of competencies.

In particular, since 2001, the new legislation framework has redefined the roles and the leadership of Italian institutions: the education sector, still based on general principles stated by central Government, is governed by legislations made both by State and Regions whereas vocational training legislation is managed in a decentralised way by the Regions.

Regions and major trade unions (CGIL, CISL, UIL) have agreed on stating that “*national standard system of certifications and competencies must guarantee the right for students and workers of the recognition of previous competencies acquired in different educational and working contexts, both in Italy as well as in a European dimension; this will entail the right to lifelong learning, whose prerequisite is the recognition of any former educational credit and the capitalization of competencies, to be certified by a personal leaflet. To this path is oriented every directive from the European Union and even the “memorandum for lifelong learning”*”⁴⁹.

Therefore, also in Italy we’re trying to build a common framework to enable mutual understanding with other European educational systems, where standards and certifications are adopted, in order to guarantee the quality of the education offer and the mobility opportunity for students and workers. The social partners agree on the importance of a personal dossier very similar to the definition of portfolio given by international literature.

However, a national framework of standards for certification of competencies is still missing and in all different educational domains, apprenticeship, further education, compulsory education, vocational training and adult education actions are taken in order to define these standards. Different educational domains adopt different methodological approaches and register different degree of implementation.

As the vocational training is concerned, in order to establish a national system of minimum standards and of certification of competencies, several professionals have been grouped to form a National Commission and different Committees specific for the various sectors, composed by national and local educational institutions and by social partners.⁵⁰

Although the need of a national framework was perceived more by the vocational training sector rather than by further education, both technical and academic, nowadays, thanks to the integration processes⁵¹ and to some kind of competition between these two training and educational domains, the lack of shared certification methods concerns all.

Furthermore, everyone recognizes the schizophrenic proliferation of professional profiles, generated by the lack of a centralized system, which leaves complete autonomy to local institutions.

At present, the school and university systems from one perspective and the vocational training and counselling from the other, are proceeding towards a progressive integration, converging toward common objectives. This implies that also the school system, not traditionally interested as the vocational training sector in certification of competence, has to take into consideration

⁴⁹ Agreement between Presidents of Regions and CGIL, CISL, UIL syndicates. Approved by the Conference of Presidents of Regions on August the 1st 2002.

⁵⁰ Decree of Ministry of Labour no. 174 of 31/05/2001.

⁵¹ See the experience of Integrated Superior Training (IFTS) instituted with law no. 144/17 may 1999 “*Arrivano gli standard nell’Istruzione e nella Formazione Tecnica Superiore*”, article by Claudio Gentili published on supplement “scuola” from “Sole 24 Ore”, 31/01 – 13/02/03
<http://www.indire.it/ifts/articolo.pdf>.

matters like portfolios of competencies and assessment procedures and the debate on all these issues is on top of the agenda.

2.6.2 Portfolio use in schools (levels up to and including high schools)

In the school system “*we are in a phase in Italy where we assist to a parallelism between traditional official certification system and diplomas and a growing number of declarations of sub certifications promoted both by central authority and local educational institutions*”⁵² As the central authorities are concerned, every student between 3 and 18 years, who attends the educational system, should gain a personal portfolio of competences composed by one *assessment report* and one *guidance report*.

The first one is made on the basis of indications provided by the Ministry of Education or other relevant Government bodies⁵³, whereas schools and those in charge of student educational process create the second one.

Each school tends then to produce additional certification elements for internal educational use (assessment reports taken in different times etc.) or, in summative fashion, for external and declarative purposes (university students’ record book etc.).

Although laws’ indications, the debate is still very much heated, not just because of the “novelty” of portfolio’s role in the pedagogical field⁵⁴.

Teachers are at the mercy of uncertain reforms, started by previous governments, halted, twisted and then reformulated, sometimes, with hard fractures inside the educational system. In this framework, the development of a common system for assessment and certification of competencies has received similar problems of reforms promulgated and then stopped after the election of a new political leadership.

At present, strong tensions have been generated by the current educational reform in Italy. Many share strong doubts and concern about the impact of recent reforms and the main trade unions for the school sector (CGIL, CISL, UIL) have expressed some reluctance on the introduction of portfolio in primary school⁵⁵.

According to some literature⁵⁶ the move towards European standards and to adopt strong measures to secure the right to education and students’ mobility, or the simple portfolio of competences, can be insidious fields to lay the foundations of dangerous classical methods of certification of the individuals and allowing the attempt to impose models of life and passive indoctrination with dominant thought.

That is why in the Italian school the cultural debate regarding portfolios and new ways of assessment is dealt with very carefully and it won’t be solved in a short time, although the teachers and trainers are very keen on progressing on the themes related with portfolio and evaluation and certification in general.

This discussion runs between governments (center-left before and center-right recently), supported by sometime famous pedagogy professionals, social partners and trade unions, as well as a significant group of teachers who take part in the deal since they are working everyday “in the field”.

⁵² <http://www.irre.lombardia.it/portfolio/certporf.html>

⁵³ Art.8, Dpr. 275/99, paragraph 1, point g

⁵⁴ The introduction of individual portfolio of competences, which shall document the learning process followed by each student since kindergarten, is one of the novelties scheduled by law 53/2003 that draws general norms in matter of instruction and base levels of performance in education and vocational training.

⁵⁵ *Il Portfolio e i sindacati confederali (28/11/2003) Le novità previste dalla nuova legge in materia di istruzione e formazione professionale e le riflessioni dei sindacati confederali*, by Laura Coscia, editorial office webzine [l.coscia@indire.it], <http://www.bdp.it/content/index.php?action=read&id=437>

⁵⁶ Guido Armellini, *Bertagna e la valutazione*, article published on daily newspaper “Il manifesto” 6.01.02

Many, although considering the need to work on the processes to guarantee the right to lifelong learning and to students' mobility, are very careful in accepting changes (such as educational *debits-credits system* which equalizes the value of technical educational contents with social emotional and behavioural element of the students). The introduction of these elements and new forms of assessment could generate problems in terms of democracy of education and respect of the rights to equal opportunities.

2.6.3 Portfolio use in Higher Education (university level)

Following Bassanini Law,⁵⁷ the Government has completed the autonomy process of the Italian Universities, started in 1989 with the Law that has created the MURST (the Ministry of University and Research)⁵⁸.

The Government has entitled the faculties to define the curriculum of the different disciplines, according to the general principles and procedures identified by the MURST. By this mean there has been defined⁵⁹:

- a new articulation of study paths⁶⁰;
- the legal value of study paths, equivalent for all certificated of courses from the same level and of same class;
- overall spread introduction of training credit unit, identified in 25 hours of work, as the basic measure for all university and post university courses in Italy.

According to this new framework, the universities have moved toward a new competition era, based on autonomous management of internal resources. This process has generated a significant variety of training initiatives, parallel to traditional university offer. The training credit system has contributed to provide recognition to these training actions.

The training credit system has become widely used in universities providing the basis for the diffusion of the portfolio as a factual certification system.

The universities have started to recognize credits for work experiences, placements and other educational experiences in public and private institutions.

In the mean time, the Government, with the new scheme of IFTS, has introduced the integration of university courses with the vocational training paths forcing Faculties to determine credits to be recognized following educational paths external to traditional university offer.

The university offer has become closer to vocational training and vice versa: the latter has seen a formal recognition of its value and the value of different experiences, such as work experiences and vocational paths external to normal university premises.

In this framework, the portfolio of competences, that seems to be only widely used in the field of recognition of language competences (Europass), has acquired a primary relevance for a number of Faculties that intend to adopt it also within other domains. As literature in this respect is not consistent, there is available only fragmented information from individual university departments concerning specific courses.

Although the portfolio is not institutionalized as a method to recognized competences within the university sector, we believe it will certainly increase its importance in the near future.

⁵⁷ Law n.127, 15 may 1997, art. 17, paragraph 95 and following on educational autonomy.

⁵⁸ Law n. 168 institutive of Ministry of University and Scientific Research and Technology

⁵⁹ Rule promulgated with Ministerial Decree n. 509/1999

⁶⁰ Reorganized into two levels, labelled university degree and specialist degree (the first triennial; the second have two more years) with exception of: university degree course regulated by European Union (Pharmacy, Medicine, Surgery, Veterinary science, Dentistry and Dental prothesis) for which no first level university title is provided for; equal classes of formative periods with the same qualifying objectives.

2.6.4 Portfolio use in Adult Education

In Italy adult education is the combination sum of educational opportunities from the formal (certified vocational education and training) and non-formal dimension (culture, health and social education, civic and physyc education). The education is provided for citizens in adult age and it is focused on personal basic competencies, required for a positive social and professional integration.⁶¹

The vocational education and training, representing the biggest share in adult education, groups both continuous training, focused on updating and upgrading workers competencies⁶², according to company needs, as well as life long learning paths, aimed at providing the individuals with opportunities for continuous personal and professional development⁶³.

The overall objective of adult education in Italy is to increase the qualification levels of the work force, promote the rights of citizenship and provide opportunities to life long learning.

Stemming from these objectives, adult education has strongly affirmed the need to build *“opportunities to certify and recognize credits in education, in a system that includes compulsory education, compulsory vocational training, further education, apprenticeship schemes, initial vocational courses as well as continuous training. In small words, any proven and certifiable experience, in Italy or abroad”*⁶⁴.

The Portfolio is therefore an issues for current debates in adult education, even if it finds more opportunities of implementation within vocational training offer as compared to educational paths in the field of culture, health, social and civic studies.

It has to be said that vocational education and training, as compared to formal education, have registered a different evolution because every Region in Italy has promulgated different legislations for the sector. Another crucial element is that school and university have been traditionally more oriented on a “classical” academic approach towards knowledge, not attentive to the work environment.

As already mentioned, the “Committee of Presidents’ Regions”, together with the Government and workers’ unions, have stated in 2002 that the definition of clear system of national standards of competences and certification, specific for different educational sectors, had become an inevitable matter to discuss, since educational decentralisation process was, and still is, in the making.

If we had different systems in the past, nowadays labour market reforms and new regional vocational training dispositions are forcing the convergence of the procedure for evaluating and certifying competencies.

At present, we assist at a progressive consensus on the creation of a common national system for certification of competence promoted by the mean of new national legislation, the committee composed by government and regions, the contribution from the national body responsible for vocational education and training ISFOL, the cooperation among Regions trough multi-regional pilot projects.

It has to be said that “portfolio” itself is still not the official aim of policy making in this field.

⁶¹ See, for this topic L.440/97, L. 144/99, Text EDA, Social Agreement for development and employment of December 1998

⁶² See, for this topic L.196/97 and Social Agreement for development and employment of December 1998

⁶³ See, for this topic Decree 112/98 and Social Agreement for development and employment of December 1998

⁶⁴ *Riflessioni sui nuovi modelli di apprendimento - l'approccio alle competenze valutazione, riconoscimento, certificazione - crediti formativi - il modello isfol per unità capitalizzabili - integrazione chiave di volta del sistema*, Formation Policies Service, University School Service, integration between formative systems, by Paola Armaroli, Giulia Antonelli, march 2000,

http://members.xoom.virgilio.it/eduadu/antonelli_riflessioni.zip

Even if the process has started long ago, firstly with the debate on professional qualifications and then on competence portfolios, the use of portfolio is still not compulsory and there is no consensus on a common method for building the portfolio among the regional authorities in charge of vocational education and training.

“Permanent Committee between Government, Regions and independent provinces of Trento and Bolzano”⁶⁵, stated that a special commission had to be established by the Ministry of Labour in cooperation with the Ministry of Education and the Ministry of University and the Regions, in order to establish and adopt a common national system for certification of competences.

The Minister, on the basis of preliminary investigation of this Commission and on the contribution of ISFOL, of the employers and workers representatives, has the task of devising proposals on criteria and procedures to certify competences achieved in vocational training programmes, in order to guarantee homogeneity of certifications nationwide and allow a mutual recognition at European level.

Competencies achieved through vocational training, working activities or by continuous training, as well as apprenticeship, lifelong learning or self-training, are certified by the Regions which are responsible of the “citizen educational record-book”⁶⁶. This pamphlet can prove the educational credits owned by the individuals that can be used to obtain a formal qualification or to access to educational path according to specific former experiences. The use of the citizen educational record-book is governed according to the Ministries regulations, the training agencies and the Regions.

2.6.5 Portfolio and ICT/IT

For several years, Italy has been experiencing a shortage of qualified professionals in the field of IT, even if the labour market announced the opposite several times⁶⁷.

Training offer is pointed on this competence demand, but there is no national coordination for activities or for shared standards neither.

As other professional areas, ITC is experiencing the “proliferation problem” that generated a lot of different definitions for roles and know-how. This is quite troublesome because ITC covers 5.5% of national employment, even if it is second just to building industry (6.5%) that has a smaller number of legally recognized professional qualifications.

In that sense, vocational training and school systems, mostly in recent times, have not been pointed towards the creation of electronic portfolios, supporting the documentations of knowledge and skills achieved by the student or the worker; they focused on classifying and certifying know-how and competencies instead, carrying out a classification which is not useful neither for personnel selection nor for workers potential valorisation.

With the need of ITC competencies, several recruiting activities on-line have flourished, to facilitate meeting of job offering and demanding, making World Wide Web an effective alternative to traditional tools of job and manpower research.

⁶⁵ STATE-REGIONS CONFERENCE - Seat of 18 February 2000 - OBJECT: Agreement between Labour Ministry and Ministry of Social Security, Regions and autonomous provinces of Trento and Bolzano for spotting minimum standards of professional qualifications, formative criteria and accreditation of vocational training and education structures.

⁶⁶ From Isfol 2000 Report - *La certificazione delle competenze e il riconoscimento dei crediti: una panoramica nazionale su riforme e innovazione*: The “dossier” tool, on which the work is focusing at the moment, doesn’t exclude other documenting categories, such as single records or certificates, since they could grant deeper levels of details. In this perspective, certificates can be used by themselves and attached to the “dossier” also, composing a personal collection of records and testimonials for individuals; that would be in the path of “portfolio” theory.

⁶⁷ According to Federcomin report “Net-economy and new employment”, between 1997 and 200, Information Technology created almost 95000 new working positions, shifting from 1.2 millions employed to 1.3 millions (+7,7%) with a growing percentage much higher than whole national economy’s.

This phenomenon facilitates the previously mentioned process concerning the entrance of portfolio method in vocational training.

On-line recruiting method is developing in Italy as well, thanks to international agencies such as Stepstone, Talent Manager, Jobpilot, Jobline etc. This method offers the chance to manage recruiting and job searching processes in a more accurate way, by modifying personal data just in time, taking information from agents about new job offers, manpower research etc.

In this sense, portfolio seems to be not just an effective tool, but also one to be hoped for, since IT professions could tend to exchange their demand with workers data on line.

Vocational training, as mentioned above, has already begun introducing portfolio in operative strategies. Inside regional rules that manage training planning, we can locate several directions in accordance with portfolio strategy; training offer often provides for competence portfolios elaboration, for each qualification and, in particular, for those linked to ICT fields.

3 Comparison and Conclusions

3.1 Comparison

The portfolio inventory presented in the previous chapter is built on the individual contributions of the project partners as a result of their own research at national level.

Though not exhaustive, it gives a rather comprehensive picture of portfolio use - both as learning methodology and as evaluation method - in the six partners' countries. The inventory can also be considered as a whole, providing a clear added value at European level.

Here lays, in our opinion, one of the strengths of the partnership and implicitly of our project: its broad composition including countries from Northern, Southern and Eastern Europe.

The inventory is presented according to a common structure and from a wide perspective, intended to cover both formal and non-formal education with a special emphasis on the use in the ICT sector.

Our purpose was to provide a comprehensible inventory and at the same time to be able to compare the portfolio use in the partners countries and to draw some conclusions.

The comparison criterion was mainly the extent of portfolio use, the provided information being enough for identifying and presenting similarities as well as differences and particular features in the partners' countries.

According to the above-mentioned criterion, we partitioned the partners' countries in three groups.

In the 1st group we placed Sweden and the Netherlands, countries where portfolio is quite broadly used throughout the educational system.

Portfolio in *Sweden*, despite being known since the 70s, made its breakthrough – at first mainly as evaluation method - in the second half of the 1990s. The reasons were, on one hand the interest for innovative learning methods and the influences from New Zealand, the United States, etc. and on the other hand the dissatisfaction with the standard testing methods in higher education and the search for alternative assessments. The development and spreading of portfolio were right from the beginning welcomed and encouraged both by the Swedish government and the Ministry of Education.

In fact, if we can point out one factor contributing to the development of the portfolio method and its dissemination at all educational levels in Sweden, this is the “IT in Schools” (ITiS) programme initiated by the Swedish government. This initiative, regarded as the biggest school development in Swedish history, was an investment of 1,700 million SEK over four years (1999-2002) and covered most of the educational system (with the exception of higher education). But most important was its focus on the development of schools, pedagogy and ICT, thus giving the teachers not only the opportunity but also the resources to learn more, to experience and to implement new pedagogical approaches (like portfolio).

The Swedish contribution points to a large number of hits, links to websites describing a variety of digital portfolio projects at the respective educational stages. Many of these websites are rather new, set up both for presentation and for dissemination purposes.

The examples described in the inventory – preceded by a short introduction for an easier context understanding - show a diversity of digital portfolios used both in formal and non-formal education.

Preschools, for example, are given a special attention as many educationalists consider it the best place to begin documenting the children's learning process.

An interesting feature connected to the use of digital portfolios is the determination to adapt portfolio to students' age. The focus in using the portfolio method is placed subsequently on different issues at different (educational) ages, from preschool to adult education. Continuity and development are always important concerns as achievements at senior age build on achievements at junior age.

The survey showed that digital portfolio projects were financed from different sources and different authorities evaluated their results, the Swedish National Agency for Education being one of them. The goal was always to learn more from these experiences (case studies) in order to further disseminate their positive results.

Regarding the general perception of digital portfolio use in Sweden, the most part of the evaluations described it as valuable, positive and interesting for all the parties involved - teachers, children, parents, etc. There was of course some criticism, mainly associated to computer-related problems, but this was outweighed by the benefits of this innovative methodology.

The Netherlands seems to have the most liberal education system of all project partners. The freedom of education guarantees the people's right to set up educational institutions reflecting different pedagogical, social or even religious views. Few references mention the Ministry of Education and/or specific legislation in dealing with the portfolio method. Beside the obligation of complying with a number of quality standards and of giving access to qualifications standards, the educational institutions are completely free to select their methods and learning materials.

The research results show that the portfolio evaluation method has a special relevance and it is mostly related to previously acquired competencies, adult education and lifelong learning.

Digital portfolios are rarely used in primary schools, usually smaller units lacking resources. This shows a particular feature of the Dutch system - the need for a certain size of the educational units in order to have enough resources to develop and apply innovative methodology. This resulted into a merge of many secondary education institutions (and to a lesser extend higher and further education institutions) into larger units called Regional Educational Centres (ROCs).

Higher education seems to be the best sector to illustrate the portfolio use, as every noteworthy institution seems involved in developing some kind of student portfolio.

Portfolio method usage in adult education is almost similar to its usage in further and higher education, as many of the adult education institutions are also ROCs.

The chosen examples of portfolio use - presented in a clear and detailed manner - show a very practical, open and flexible approach to portfolio.

In the 2nd group we placed Denmark and Italy, countries where the portfolio method use though not considered widespread, raised some interesting questions and debate issues.

In *Denmark*, the tentative use of the portfolio method for monitoring the children's progress in the preschool institutions brought up an interesting debate issue: is there a "big brother" aspect of the method usage? Institutions are in possession of these personal progress records, the students and their parents not having any control at all of them. In a broader context, this debate addresses the privacy and confidentiality issues. These were discussed extensively by the partnership during the meetings, and the joint conclusion was that every portfolio belongs to its author, the student/learner. He/she has to decide, when presenting the portfolio, what to include in each of the threefold categories of access:

- A *private* area (exclusively for student access, usually containing work in progress)
- A *school or group* area (teachers having access to review and comment the assignments, parents having password-based access to their children's' assignments and peers/classmates and school community- having access to each other's work).

- A *public* area (Internet and other media where the students can decide to make their work available to the grand public).

Learning is broadly seen as an individual responsibility in Denmark, and this approach is very close to the one used in applying the portfolio method. Learning is also seen as a continuous process and the possible interruptions are considered a potential obstacle to deal with.

This requires a closer co-operation between schoolteachers, a problem also encountered in Sweden (and probably in the other countries, too). Here the solution was using the portfolio itself as a communication tool between the teachers, thus providing a complete image of a student's competencies.

Due to the recent reforms in the Danish education system and to their impact, it is somehow difficult to produce a relevant picture, as in some cases the use of the portfolio evaluation method does not seem to be given very much importance.

In Danish elementary schools, the usage of portfolios is both seen as help and tool, a help for students to understand, formulate and personalize the goals of their own education, as well as a communication tool between the parents and the school, a situation also met in Sweden.

In the Danish vocational education, a web-based tool called *ElevPlan* was introduced in 2002, enabling the students to design their own education inside the bigger national framework of objectives. This means every student is involved in setting up his/her individual learning plan and they share the responsibility for their learning with the educational institutions.

Some schools work with *ElevPlan* (ELP), but this method encountered also some criticism: its fixed structure of criteria, formats, etc was considered in some cases a source of disappointing limitations.

Another interesting question raised in Denmark was: *are students ready to work with portfolio?* In some study environments students have a very conservative view on learning, therefore showing a lot of scepticism towards portfolio. They just want to be taught (in the traditional sense of the word), showing no interest for "nonsense" like self-reflection and actively setting up criteria and objectives for own learning. This kind of reactions was met in the other countries too, even if not quite in the same extent (the reactions in Sweden, for example, were mostly positive and even enthusiastic).

Portfolio usage proves to be a challenge also for the teachers and for the schools as organizations. Many teachers still see their role in a traditional way and are intimidated by the shift to new roles and attitudes that portfolio use brings: From teacher to mentor/tutor/coach, from passive students to potential discussion partners, giving access to information to other students, colleagues, parents, etc.

It is also obvious that implementing and using portfolio in educational units requires supplementary efforts for good planning and steady support from the school management, things not always welcomed in a school's busy schedule.

In *Italy*, the field of competence evaluation is subject to a lot of various influences. The new legal framework of the education sector makes the Government accountable for setting the general principles, but gives legislative powers to States and Regions for setting up the details. The *personal dossier*, a collection of documents resembling to portfolio, is given very much importance by the social partners.

A progressive integration tendency links school, university and the vocational training systems together. From all three of them, the school system is the most interested one in setting up competence portfolios and assessment procedures. Competence portfolios composed of two

distinctive parts - an *assessment report* and a *guidance report*- were introduced in every school, but their usage is made difficult by other additional certification elements.

The recent reform of education in Italy has been the source of a huge debate between government and trade unions on one side, and teachers on the other side. The teachers and trainers showed interest in the introduction of the portfolio evaluation method, while the others expressed reluctance and much more caution to innovation.

According to the new Law of Education, universities were granted complete autonomy, and this new situation will probably contribute a lot to the spreading of portfolio as factual certification system. Another interesting evolution in Italy is the integration of the academic path with the vocational training path, the competence portfolio becoming more relevant as the interest in implementing it increases.

In Adult Education, the usage of the portfolio evaluation method is still under debate, while its implementation in vocational education and training – where the interest for it is big - is an important opportunity.

The general picture of portfolio usage in Italy seems to include several important elements: an on-going decentralization reform process of the educational system, big debates between different actors in the field (government, trade unions, teachers) and a progressive consensus for the creation of a common national system for certification.

Under these circumstances, portfolio is still a debate issue and there is no agreed common method for building a portfolio.

The interest for portfolio as evaluation method is constantly growing, despite some obstacles and delays, and the most interested in implementing it seems to be the vocational training and the higher education systems.

Finally, the 3rd group includes Romania and Lithuania, countries where portfolio use is still in an early stage. The “standard” explanation for this situation - the inflexibility of the former conservative education system in these countries - is not considered to be a valid one for the slow expansion of the portfolio method usage. Other countries, like Germany for examples, have conservative education systems and they were still early adopters of the portfolio method and can now show some very interesting achievements.

In *Romania*, even if a general awareness on the portfolio method exists, its use is not widespread. With the exception of some isolated cases, all the young teachers are trained to use the portfolio method, but they hardly put it into practice. In most of the cases that were identified, the focus is on gathering material evidences on the learning process and not on reflection and progress assessment. One of the causes could be the previous focus of the education system on delivering education, using a traditional grading system. Nowadays, the Romanian education system is slowly moving towards student-centred education, both teachers and students willing to make these changes happen. The recent initiative to provide every student with a lifelong learning personal portfolio needs methodological support and awareness raising campaigns. Good practices and good examples will have to be promoted and disseminated in order to impose a proper usage of these portfolios, otherwise they are in danger to become just another formal document.

In *Lithuania*, the described example of portfolio in teacher education is considered a very important issue, as learning portfolios have a significant role in teacher education all over the world. Portfolios are self-empowering tools that encourage teachers to become accountable for their learning. This sector is very important because the future teachers learn how to work with portfolio, both as learning method and as assessment tool, a methodology they will later implement it in different educational units.

3.2 Conclusions

The inventory in chapter 2 offers a complex picture of the portfolio use in the partners' countries. It shows, for instance, that portfolio use is deeply influenced by the educational system (type, traditions/learning culture, development, etc) in the six countries included in the survey. Countries open to innovation and to lifelong learning such as the Netherlands and Sweden, even Denmark and Italy (despite some scepticism and obstacles) have adopted the method earlier and use it more or less widely in their educational system. Countries with an educational system under transformation such as Lithuania and Romania are later adopters.

Governmental support in form of different initiatives, like the ITIS (IT in Schools) in Sweden and the ITMF (ICT, Media and the Danish Folkeskole) in Denmark, meant a welcome funding boost that by its impact made a difference for innovative methods like portfolio. A question can be raised: is such a support a pre-requisite for success?

Even if the answer cannot be absolute, it seems that - in a given situation, country-specific circumstances and from a larger perspective - such initiatives certainly help.

National particular factors play an important role. In the Netherlands, as opposed to Italy and Romania, the (almost) total freedom of the educational institutions means there is no need for complex legislation or tight control from the government/ authorities.

Another particularity, the ROCs example, shows that in the Netherlands the size of the educational units not only matters but also seems decisive for developing and applying innovative methodologies. This is not necessary true in the other partners' countries where portfolio use was experienced in many small units.

Another interesting question: can the Netherlands become a model for spreading the good practices? Even if we can learn a lot from the Dutch achievements – as from other European countries - there will always be necessary to adapt the use and dissemination of portfolios to the national conditions.

Finally, no concrete and relevant examples regarding the *Portfolio use in ICT training* were found in the partners' countries. It seems that hardly research and development have been carried out regarding this subject, as most of today's focus is using ICT as a tool to construct digital portfolios. The survey mentioned and/or briefly described a number of examples of digital portfolio systems (Blackboard, Folio, etc), e-coaching systems (Flexus) or Virtual Learning Environment (ClassFronter).

This validates the assumptions made in the project application and justifies the need for research on extending the use of portfolio in ICT training. The partners intend to fill this gap with this project by developing portfolio related test assignments that will:

- Innovate the present training methodology, providing the ICT field with practical alternatives to online multiple choice testing.
- Improve students' evaluation by offering alternative testing methods and procedures that will reflect clear manner, their actual competencies rather than measuring their knowledge of facts. In other words a clear shift from factual knowledge to relevant competence.

From the employability point of view, the *employees* will be able to show their full competence in ICT by means of a portfolio revealing ample evidence of their skills, and the *employers* will have a far better image of the candidate's skills and knowledge by looking at their portfolio.

This approach is exactly what the employees need and employers demand in the present knowledge society.

In the structure of our project, this Survey Report – as main outcome of Work Package 1 - lays a solid foundation for the continuation of the project. Bearing in mind its results, the project team will proceed to develop, in the next Work Package, samples of portfolio related assignments and evaluation procedures for the ICT sector, keeping in mind the specific features and requirements of adult learning.

4 Literature and references

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2.1 Portfolio inventory in Denmark

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2.4 Portfolio inventory in Sweden

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The discussion of using portfolio evaluation methods is currently growing among educators in Europe. The partnership of the Pellea-project wants through this project to contribute to the development and implementation of valid and reliable evaluation methods for adults especially in IT education. The overall objective of this project is to provide the IT field of education with sensible and highly alternatives for online multiple choice testing, which will contribute to the quality of the learning process shifting the accent in adult learning from factual knowledge to relevant competence by introducing portfolio evaluation and by this make IT learning programmes more accessible.

The outcome of the project is firstly this survey report, which describes the general use of portfolio methods in the partnership countries i.e. Denmark, Holland, Romania, Sweden, Lithuania and Italy. Secondly, a set of practice oriented assignments and evaluation procedures for a portfolio context in IT training with a special attention on the learning process of adults and thirdly, a web-based information module to support teachers and learners to use the portfolio evaluation method will be developed and tested.

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