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# PORTFOLIO FOR ASSESSMENT OF PRIOR LEARNING: DESIGN ISSUES

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**Abstract:** Assessment of prior learning (APL) introduced recently in Dutch educational system supports employability and lifelong learning by validation of competences developed in various contexts and providing broader access to formal education. The paper presents results of a pilot study in which APL took place in the academic settings and portfolio was used as an assessment instrument. Applied design principles and heuristics are presented and discussed.

**Keywords:** portfolio, assessment of prior learning

## Introduction

Lifelong learning perspective implies major shifts in the educational landscape. Curriculum driven education gives way to learner centered approaches, personal competence development and employability gain acceptance as legitimate educational goals (Koper, Rusman & Sloep, 2005). Those lacking an official certificate or a diploma but with sufficient competences, knowledge and skills get the chance to fulfill learning aspirations and ambitions through alternative routes as assessment of prior learning (APL) (Colardyn & Bjørnavold, 2004). APL supports validation of competences developed through informal and non-formal learning, professional and voluntary activities etc. It helps to define the acquired competence level and opens access to education of desired level in formal education and training systems. Besides APL contributes positively to employability. By creating a transparent overview of persons' capabilities it promotes mobility between branches and sectors.

Successful implementation of APL requires design of appropriate methods and instrumentation, development and validation of these methods, procedures and tools. Portfolio is generally accepted as a method for presenting evidence of the achieved level of knowledge, skills or competence in general (Barrett, 2003) and in evaluating competences acquired in informal or non-formal contexts in particular (Bjørnavold, 2001). As such portfolio fits in the APL approach and is generally recognized as an APL tool (Joosten-ten Brinke, Sluijsmans, Brand-Gruwel & Jochems, 2007). APL methods and tools are accepted for years in vocational education but are less frequently applied in academic curricula (Scholten, et al, 2002). Recently a series of pilot studies at the Open University Netherlands (OUNL) attempted to fill in this gap and investigate how APL can be applied to broaden access to formal academic education. For these pilots APL portfolios were developed and tested.

This paper presents one of these pilot studies, the APL study conducted at the faculty of Educational Science of the OUNL (Master of Science program of Active Learning). The paper describes the curriculum involved as the setting of the pilot, provides an overview of portfolio design principles, presents the APL portfolio designed in this pilot and discusses applied design principles and heuristics.

## Objectives

The main goal of the conducted pilot was testing feasibility of the APL concept in the context of a university curriculum at the Masters' level. APL portfolio design constituted an important sub goal thus forming the focus of this paper.

## Method

This section introduces the actors involved in the APL portfolio design and testing, briefly describes the procedure followed and gives an overview of the educational program used as the pilot setting.

### ***Pilot participants***

Eight applicants to the Master of Science through the APL procedure, two tutors who provided support and guidance to the participants, two assessors and a researcher were involved in the pilot.

### ***Curriculum related issues***

Curriculum requirements and the curriculum competence map served as input for defining the APL criteria for the APL procedure in the pilot and for portfolio construction.

The Master of Science in Active Learning is an academic competence-based distance program in Educational Science offered by the Open University Netherlands to educational practitioners in the Netherlands and Flanders with a professional bachelor degree. Academic bachelor degrees in Educational science or Educational Psychology provide direct access to the program while graduates at professional bachelor level in teacher education, pedagogy or related disciplines follow one of the available transitional programs first. The composition and length of the transitional program depend on the educational background of the applicant and may include up to nine bachelor level courses in Educational Science, Learning Theory, Social Science Research Methods, Academic Writing etc. In the standard application procedure access to the program is granted based exclusively on diploma evaluation.

Competence attainment in the areas of educational research and instructional design at the Master of Science level constitute the curriculum goal. Both competence areas are defined and described in detail at the entrance (bachelor) and graduate level. For the purpose of the APL procedure an additional competence level description was compiled for the start of the transitional program of the maximal length. Based on this description the APL criteria for pilot applicants could be defined.

### ***The APL procedure in the pilot***

The APL portfolio template was designed by the two assessors and the researcher in several iterations with the tutors providing feedback on these iterations. Then the portfolio was validated by the applicants who filled it in as part of the APL procedure. Two participants did it independently, six turned to their tutors for feedback. In two cases the tutors provided feedback on several versions of the portfolio.

The APL portfolios filled by the applicants were then submitted for assessment. In four cases portfolio's provided sufficient information for the decision-making. In one case the applicant was requested to provide additional information and argumentation. Based on the portfolio assessment four assessment interviews were held. In these cases decision-making was based on the assessment of the APL portfolio and interview results. In the course of the pilot evaluation several improvements in the APL portfolio were made.

## **Results**

Pilot results reported in this paper pertain to portfolio design. Portfolio evaluation by the users as well as feasibility study results are discussed elsewhere (Joosten-ten Brinke, et al., 2007).

The APL portfolio designed in the pilot was based on theoretical instructional design principles applied to a particular case of a Master of Science program. The resulting portfolio reflects both. This section dwells on the portfolio design principles, describes the resulting APL portfolio and provides and underpinning of the choices made based on the theory and on the practical experience.

### ***Portfolio design principles***

The portfolio design requirements as deduced from the literature formed an important point of departure in the APL portfolio design process. General principles and criteria for portfolio design were derived from a literature study (Joosten-ten Brinke, et al., 2007) and from prior experiences with portfolio construction and use in similar settings (Joosten-ten Brinke, Stijnen, Van de Vrie, Lemmen, & Kees, 2006). These principles are translated into the specific requirements for this particular APL procedure.

As demonstrated in other studies the APL portfolio should:

- provide clear descriptions of knowledge, skills and competences to be presented in the portfolio,
- include examples of both evidence and argumentation,
- state possible outcomes of the APL procedure,
- include templates and formats for argumentation purposes (Joosten, et al, 2006).

Principles applied in portfolio construction include:

- Provision of guidance in structuring and presenting results of prior learning (Colardyn & Bjørnavold, 2004) and the process of portfolio construction (Ministry of Economic Affairs, 2000; Scholten, Teuwsen & Mak, 2003; Scottish Qualifications Authority, 1997; Thomas et al. 2000; Wheelahan, Miller & Newton, 2002),
- Scaffolding through clear portfolio templates and worked out examples to help structure the evidence and support the applicants' claim (Nyatanga et al., 1998; McMullan, Endacott, Gray, Jasper, Miller, Scholes et al., 2003).

The evidence in the portfolio should fit the following criteria:

- educational relevance (Aarts et al., 2003; Scottish Qualifications Authority, 1997),
- transferability (Cantwell & Scevak, 2004), validity (Bateman & Knight, 2003; Colardyn & Bjørnavold, 2004; Day, 2001a; Fahy, Periin, & Ferrer, 1999; Starr-Glass, 2002)
- authenticity (Day, 2001a; Konrad, 2001; Scottish Qualifications Authority, 1997).

It should be of appropriate level (Aarts et al., 2003), be based on recent experiences (Konrad, 2001) and be sufficient (Scholten & Teuwsen, 2002; Scottish Qualifications Authority, 1997).

### ***Portfolio description***

The resulting APL portfolio includes the following sections:

- personal data,
- self assessment in the form of a quick scan,
- argumentation template based on the STARRT model (STARRT standing for situation, task, activity, result, reflection and transfer),
- product archive for artifacts and documents collected as evidence to support the claims done in the self scan and STARRT form,
- summary of application request.

Self assessment scan and argumentation through STARRT form the core of the APL portfolio and include:

- part 1 to be filled for all applicants,
- part 2 to be filled by applicants to the Masters' directly or through a variable individualized pre-masters' arrangement.

Design of both parts is identical though the part one Quick scan includes general criteria as affinity with the educational field, general writing skills, personal organizational skills while the part 2 Quick scan is based on competence specific criteria defined in the curriculum. The STARRT template is filled per criterion or for several criteria of the quick scan to support claims made and demonstrate the competence level. Finally, artifacts and documents collected in the product archive serve as illustration.

### ***User evaluation***

According to the pilot evaluation the applicants found the instrument and instruction clear and easy to use. They appreciated availability of templates and examples. They required advice on specificity of descriptions, examples and argumentation and found the two-layer structure of the quick scan complex and not transparent. The portfolio provided a good picture of the competence level of the applicants from portfolio assessment so that an accelerated procedure could be applied (without interview). The portfolio made important bottlenecks and potential hindrances visible and helped formulate additional specific comments and further questions that assessors could pose.

When an interview was held, portfolio provided sufficient input for in-depth inquiry. Desired improvement aspects concerned completeness of information on the applicants' background and explicit preference of individualized pre-masters' arrangements.

Upon completion of the study minor changes based on the evaluation results were carried out. The APL portfolio is accepted for further implementation.

## Conclusion and discussion

The portfolio designed for the study provided sufficient insight in the achieved competence level and the learning potential of the candidate applicants. The pilot demonstrated the general usefulness of portfolio as an APL instrument and provided validation of general portfolio design principles and heuristics in the context of APL. Specific APL oriented heuristics include specificity of argumentation and support of claims through templates; multi layer structure and a combination of self assessment and argumentation tools.

In the pilot a MS Word document served as portfolio template and completed portfolios included print-outs, audio-visual and hypermedia materials on cd-roms. For the time being institutions may require hard cover formats for APL portfolio for accountability purposes. As learner support however web-based format seems more appropriate. Applying APL portfolio design principles to e-portfolio design can be seen as the next challenge.

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