

Portfolio in Higher Education: Time for a Clarificatory Framework

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The article distinguishes between four modes of implementation of portfolio in, and in relation to, higher education. These range from the use of portfolio in admissions to higher education, during the higher education course, on entry into the profession and for ongoing professional development. There is a tremendous diversity of portfolio types in use in higher education courses, which manifests itself in a large number of applications and classifications. A classification which we regard as worthy of universal acceptance is that which distinguishes between portfolios aimed at profession-specific competencies and portfolios aimed at learning competencies. In higher education portfolios aimed at profession-specific competencies yield a limited added value because they only provide supplementary information compared to other and better tools. Portfolio aimed at learning competencies adds genuine value in higher education if we want our graduates to be capable of continuing to learn on a life-long basis. The assessment of profession-specific competencies and learning competencies by means of portfolio by the same evaluator is to be strongly discouraged as it is highly prejudicial to the reliability of the reflections.

There is a great deal of discussion about the use of portfolios in higher education, yet this is still the subject of a fair amount of confusion. The concept 'portfolio' has many different meanings. The purpose of this article is to provide a degree of clarification by distinguishing four modes of implementation of portfolio in higher education. We then go on to consider the question as to whether it is worthwhile to establish categories of different types of portfolios in higher education. Furthermore, we adopt a particular position with regard to this debate. In our view portfolio is not a neutral tool. It cannot be used indiscriminately within every educational vision. Nor is it a learning tool suitable for all competencies. These views may well not be very fashionable, but we believe it is high time for a critical reflection.

The Container Concept 'Portfolio'

Portfolio has a very wide variety of applications in higher education. The 'portfolio' concept can be adapted very easily to the wishes of the user and the requirements of the context. This flexibility is part of what makes portfolio such a powerful tool, but it also has a negative side. It is scarcely possible to give a general description of portfolio because this depends so heavily on how the tool is used (Wolf & Siu-Runyan, 1996). However, in order to provide at least some degree of clarification, we begin by distinguishing four modes of implementation of

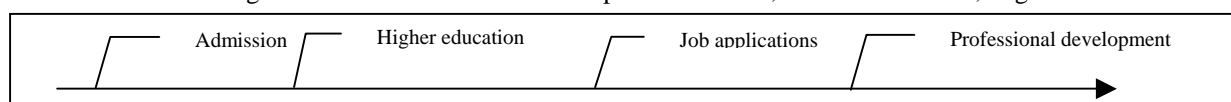
portfolio, in and in relation to, higher education. First we will review the usefulness of portfolio for the various modes of implementation and we will then go on to focus on the value or otherwise of the current nomenclature and classifications of portfolio types in higher education.

Modes of Implementation

We have identified four different modes of implementation for portfolio in, and in relation to higher education which have a very significant determinant effect on how the portfolio concept is interpreted. These modes of implementation can be represented on a time-line (see Figure 1). This time-line provides an overview of the possible use of portfolio from the perspective of life-long learning, including higher education and career. Portfolio can play a role:

- 1) In admissions to higher education: for the assessment of competencies acquired elsewhere by students applying for admission.
- 2) During the higher education course: for the supervision and assessment of the initial competencies of the student.
- 3) On entrance into the profession: for use in connection with job applications.
- 4) As part of professional life: for ongoing professional development, on the job.

FIGURE 1
Time Line Showing the Four Modes of Portfolio Implementation in, and in Relation to, Higher Education



The first mode of implementation represented on the time-line above is related to the trend towards the *flexibilization* of higher education. Numerous experiments are in progress all over Europe involving flexible learning pathways (van der Wende & Huisman, 2003). Assessment procedures are being developed in order to take into account qualifications acquired previously and competencies acquired elsewhere for the design of shortened study routes (van der Wende & van de Ven, 2003). Such study routes are individualized course programmes, by definition shorter than the standard study routes for regular students. Therefore the competencies of the candidate are matched with the course programme purposes. Portfolio crops up as a frequent element in these admissions procedures. In combination with other tools it is regarded as a suitable tool for ascertaining the initial position of the applicant (Uhlenbeck, 2003). It serves as a way of screening acquired competencies, as a means of self-assessment and as a tool for collecting together evidence of competencies (Klarus, 2002). For instance, a candidate for Primary Teacher Education with a certificate of the local arts academia is released from the music course, or a candidate for the study of Health Care with experiences in a day-care centre delivers evidence of nursery competencies with children. In most cases portfolio takes the form of a file to be filled by the applicant with the course directors laying down precise stipulations with regard to minimum submissions and/or the materials to be included by way of evidence of the acquisition of competencies in order to be eligible for recognition. Compiling a portfolio may take the applicant a few hours or a few days. The gathering of the necessary proof material sometimes requires even more time. If this results in the applicant receiving a shortened study duration, it is worth the effort. It is clear that this is an example of a standardised portfolio application, namely the use of portfolio as an extended Curriculum Vitae.

A very different mode of implementation is that of portfolio as a supervision and evaluation tool as part of the courses in higher education. An increasing number of courses acknowledge portfolio as a tool for the supervision and assessment of the initial competencies of the student. There is, after all, a need for new tools of this type. From an educational standpoint there has been a trend in higher education in recent years towards a greater tailoring of the courses to the needs of professional practice. This has resulted in a continuous series of innovations in higher education in the direction of more competence-orientated educational formats. Portfolio functions here as a competence-orientated educational tool. The student puts together his or her portfolio during his or her course and this is monitored by one or more course instructors. For instance, a student in Primary Teacher Education collects lesson plans and samples of videotaped

lessons to show his or her teaching competencies. Or a student in Health Care writes reflections on his or her position and functioning in the hospital team. Yet there is sometimes an economic motivation for introducing portfolio in higher education courses. In a number of cases an increasingly large group of students is taught by an ever smaller body of course instructors. An attempt is being made to compensate for the reduced supervision facilities by means of portfolio. Whether portfolio can meet this expectation, however, is open to considerable doubt. It should be borne in mind that the supervision and assessment of portfolios requires an enormous time investment on the part of the course instructor (Walther-Thomas & Brownell, 2001; Oosterhuis-Geers, 2001). Courses which opt for portfolio rather on the basis of economic motives, may well in our view end up being disappointed.

Portfolio can also be of use on entry to the profession. When an applicant is asked to present a letter of application and a Curriculum Vitae, he or she can submit his or her portfolio. Portfolio differs from the classic CV by virtue of its scope and its creative execution. Whereas a CV is usually limited to a summary of factual information, a portfolio contains examples or representations of the work and the professional achievement of the applicant (Frederick et al, 2000). For instance, a graduate from Primary Teacher Education submits a cd-rom with evidence of good teaching experiences. Or a graduate in Health Care hands over a first-aid box with medical equipment referring to successful interventions. According to Slingerland (2001, p.64) a portfolio is preferable to a CV for application purposes because a portfolio makes a bigger impression. Research does indeed reveal that managers are often strongly influenced by the design of portfolios submitted when making their assessments of candidates (Wolf et al, 1997). Other research, however, suggests that many managers are rather sceptical with regard to the value of portfolios in the context of job applications (Theel, 2002). Some managers mention time constraints, others don't believe that portfolios provide meaningful evidence of the competencies of the applicant.

For completeness sake, and as a final mode of implementation we should mention the introduction of portfolio as part of ongoing professional development pathways after higher education (Seldin, 2000; Twisk, 2000). Professional development implies a life-long process which finds concrete expression in qualitative changes in the thinking and professional practice. The assessment of the quality of the work of the professional concerned by means of portfolios as part of a process of ongoing professional development provides a way of ensuring an adequate reflection of the individuality of the professional and the complexity of the working environment in which professionals habitually operate. For instance, a primary school teacher keeps

record of his experiences with different classes and pupils. Or a nurse documents her assignments in different wards in the medical branch. The development of portfolio-supported ongoing professional development pathways can generally be integrated into the competence management of organisations (van der Heijden, 1999).

For the different modes of implementation of portfolio in, and in relation to, higher education there are different expectations. In what follows we will concentrate exclusively on the use of portfolio for supervision and evaluation in the higher education courses. We will also briefly consider the question as to whether it is worthwhile developing specific nomenclatures for particular types of portfolio and drawing up systems of classification.

Nomenclature and Classifications

With regard to portfolio in higher education courses there is no single standard application, but rather an amalgam of applications. Each specific educational context with its specific educational objectives gives rise to its own specific portfolio. A rapid screening of the recent literature yields at least 49 different nomenclatures used to describe particular types of portfolio (Meeus & Van Looy, 2005; see Table 1). On closer scrutiny it is apparent that there are many portfolios with the same nomenclature being used for widely differing applications. We also found applications which were extremely similar designated with different nomenclatures. At first sight this diversity might be considered as enriching, but it brings communication problems in its wake. It is all too often assumed that merely giving the name of a specific portfolio type is sufficient to ensure that the reader knows exactly which sort of portfolio is being referred to. What should we infer from the terms 'behaviour portfolio', 'evaluation portfolio' or 'meta-portfolio'? The less specialized reader no longer sees the wood for the trees, while specialists can argue until they are blue in the face only to discover that in reality they are talking about different portfolios with the same name. Nomenclature on its own is just not enough. The typical characteristics and the implementation context of portfolio must be clearly specified each time.

In order to clarify this rather confused situation, many authors have attempted to make a classification of portfolios. Various applications are grouped together in a limited number of categories or types. Screening of the recent literature yielded 28 different classifications (Meeus & Van Looy, 2005; see Table 2). For many of these classifications it was also difficult to ascertain the precise criteria on which they were based. What was supposed to have brought clarification, has in fact resulted in additional confusion. Classifications must therefore clearly indicate on which criteria they are based, or it is better not to make them. It is especially unfortunate that in the vast majority of cases the classification offered is presented as *the* internationally acknowledged, standard classification of portfolios. What is intended as an attempt at clarification seems to have contributed very little to the furthering of the debate. The simple truth is that with the current state of the academic study there is still no universally acknowledged classification.

TABLE 1
Some Examples of Nomenclatures

Smart portfolio	(Wilcox, 1996)
Documentation portfolio	(Farr & Tone, 1998)
Professional portfolio	(Winsor et al, 1999)
Learner portfolio	(Salend, 2001)
Introductory portfolio	(Foote, 2001)
Course portfolio	(Kelchtermans, 2001)
Meta-portfolio	(Janssens et al, 2002)
Developmental portfolio	(Mansvelder-Longayroux et al, 2002)
Instruction portfolio	(Eisendrath & Carette, 2002)
Demonstration portfolio	(Chalfen, 2004)

Portfolio Not for Every Educational Vision

With the amalgam of applications of portfolio in higher education it looks as if portfolio can be introduced into any course profile. We believe that this is a false impression. Portfolio is conditioned by its origins. It has been adopted by higher education from a particular vision of education. In the following paragraphs we argue that portfolio cannot be usefully employed in every educational vision. Nor do we consider portfolio to be useful in every phase of the course.

TABLE 2
Some Examples of Classifications

Presentation portfolio / Working portfolio	(Dietz, 1994)
Ownership portfolio / Feedback portfolio / Accountability portfolio	(Wolf & Siu-Runyan, 1996)
Evaluative portfolio / Archival portfolio	(Wortham et al, 1998)
Exemplary portfolio / Objective portfolio	(Duffy et al, 1999)
Evaluation portfolio / Employability portfolio / Professional growth portfolio	(Tanner et al, 2000)
Everything portfolio / Process portfolio / Product portfolio	(Campbell & Brummett, 2002)
Training portfolio / Personal development portfolio	(Smith & Tillema, 2003)

Skill or Savoir-faire?

Portfolio in higher education is not a neutral tool. It has been developed from a particular educational vision and still bears the marks of this. In order to understand this we have to go back to the origins of the concept. Bird (1990) was the first to write an article on an entirely hypothetical application of portfolio in higher education, specifically in teacher education. With his search for alternative evaluation methods, he was reacting against the dominant psychometric approach to assessment in the United States. It is no accident that he sought his inspiration in the artistic world. Higher education can, after all, be focused on *savoir-faire* (artistry) or skill (technical ability).

The tension between higher education focused on *savoir-faire* or skill is probably as old as higher education itself. The adepts of higher education focused on skill maintain that professionals must first and foremost have sufficient knowledge and must have mastered sufficient techniques. Professionals are seen as trained technicians. From this vision the task of the course instructors is to impart to their students the necessary knowledge and the correct techniques by the transfer of knowledge or the training of isolated skills. The central focus is therefore on the technical ability of the professionals.

The proponents of higher education focused on *savoir-faire* can be recognized by their adherence to the idea that there is no such thing as the good professional. Professionals are seen as artistic personalities. They use the possibilities of the working environment in order to come up with a creative solution for complex and unpredictable problems which present themselves (Schön, 1987). From within this vision, the task of the course instructors is to foster the problem-solving capacity of the students and to help them develop a personal style. The central focus is therefore on the artistry of the professionals.

In our view both visions have shortcomings with regard to the education of professionals. Both visions

highlight a different facet of professional performance. A good professional must have a minimum equipment in terms of knowledge and skills and have a healthy dose of creativity and problem-solving capacity. In higher education students must get the chance to acquire the necessary techniques and to hone their artistry. We advocate an integrated vision whereby the course curriculum in higher education makes room for skill and *savoir-faire*.

Portfolio in 'Higher Education Focused on Savoir-faire'

Imparting basic knowledge and skills presupposes a different approach from fostering the development of artistry. In other words, each educational vision has its own approach, which in turn requires a suitable array of tools (see Table 3).

In higher education focused on skill the central emphasis is on knowledge transfer and the training of isolated skills. The psychometric approach of assessment is aimed at tabulating these kinds of knowledge and skills. Knowledge tests and skills-labs are typical tools within this vision. However, they have limited power to assess the complexity of artistry.

Portfolio on the other hand was borrowed from the artistic domain as a reaction against the psychometric approach of assessment. In a portfolio 'artists' show their public professional self via a personal selection of materials (Castiglione, 1997). In higher education portfolio is a dossier by means of which the students demonstrate their qualities as future professionals. Portfolio is therefore a form of (indirect) performance assessment. Does this mean therefore that portfolio cannot be used as a psychometric evaluation tool? On the face of it using portfolio for the assessment of knowledge of skills is likely to lead to disappointment. This ought not to be a surprise given that this method of evaluation is not tailored to the knowledge objectives targeted (Van Petegem & Vanhoof, 2002).

TABLE 3
To Each Educational Vision Its Own Array of Tools

Educational vision	Object	Mode of evaluation	Examples of artefacts & tools
Focused on skill	Technical ability	Psychometric evaluation	<ul style="list-style-type: none"> • Examination for knowledge evaluation • Checklist for skills-lab observation • Chronometer for triathlon
Focused on <i>savoir-faire</i>	Artistry	Performance assessment	<ul style="list-style-type: none"> • Project evaluation for problem-based learning • Jury for dissertation • Portfolio for competencies assessment

The Place of Portfolio Within the Curriculum

We regard the focus of higher education on skill or on *savoir-faire* as complementary. In our view this is a continuum with two poles: technical ability and artistry. This means that we assume that the curricula of higher education courses must make room for both visions. We are therefore not in favour of organizing higher education with too strong a bias towards either one of the two visions. In the past higher education may perhaps have been too one-sidedly aimed at knowledge transfer or skills instruction. Yet it does not seem wise to us to shift higher education one-sidedly to focus on artistry, either. *Savoir-faire* is only possible on the basis of a certain level of skill.

However, both visions do not need to receive equal attention at every moment of the course. It is advisable to emphasize particular aspects at particular stages. After all, the more students have at their disposal in terms of basic intellectual equipment the more possibilities they have of using this creatively. To a certain extent skill is a prerequisite to *savoir-faire*. Is it permissible to throw students in at the deep end at the start of the course without sufficient intellectual equipment, in the hope that they will be able to make sense of things with creative problem-solving capacity?

In our view it is better to concentrate on the teaching of basic knowledge and skills at the start of the course, in order to make more room for artistry towards the end of the course. If course directors opt for the integration of both visions when compiling the curriculum, they can gradually reduce the emphasis on technical ability as the course progresses in favour of artistry (see Figure 2). In line with our overall view we consider that examinations and skills tests have their most important function in the beginning of the course. Portfolio is more useful towards the end of the course when the students are ready to deal with more complex situations.

Portfolio is Not Suitable for All Types of Learning

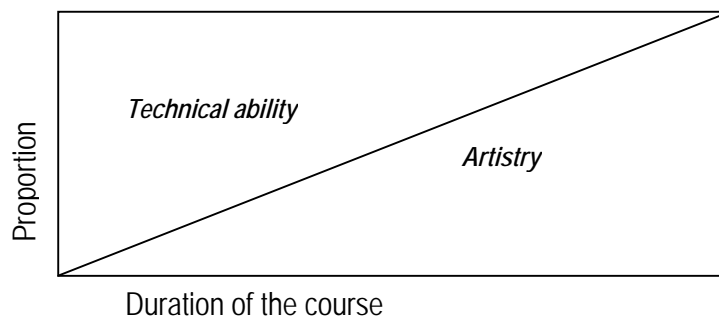
In the following paragraphs we set out our position with regard to the usefulness of portfolio for the supervision and evaluation of the various competencies for professionals. When considered in the light of the existing array of tools we see first and foremost that there is an important role for portfolio in the supervision and evaluation of learning competencies. With respect to profession-specific competencies we see that portfolio makes only a modest contribution.

Learning a Profession or Learning to Learn

While studying the many classifications of portfolio in higher education, we have arrived at a classification which merits universal recognition. In essence, portfolios in higher education can serve two different educational objectives: that of learning a profession and that of learning to learn. We call these portfolios aimed at profession-specific competencies and portfolios aimed at learning competencies. This distinction is of great value because there is a significant degree of difference between how portfolio is used for these two sorts of competencies. We will attempt to assess the value of these portfolios by placing this in the context of the existing array of tools.

Naturally students in higher education have to learn a profession. For the supervision and evaluation of profession-specific competencies higher education can fall back on an extremely wide range of methods and tools. This extends from the examination of educational content, training of skills in the educational setting by simulations and role playing, to the assessment of work experience placements. Higher education institutions have a considerable experience and expertise in this area. The question is, however, whether portfolio can offer any additional value above and beyond this. If we already have so many tools at our disposal, what can portfolio do that

FIGURE 2
Proportion of Technical Ability and Artistry Throughout the Duration of the Course



other tools cannot? In order to formulate an answer to this question, we will examine the shortcomings of the existing tools.

We see portfolio as a tool for indirect performance assessment. For this reason we will concentrate on the shortcomings which have been signalled with regard to the present tools for the supervision and evaluation of the work experience placement or when applied to open and practical assignments. Direct observation of the student's performance during his or her work experience placement may well be the most valid mode of evaluation. In many cases however, the resources and possibilities in this regard are rather limited. Yet the course instructor can form a picture of the student's performance using the work experience placement file, the information of personal tutors, etc. We believe that portfolio can play a supplementary role here. In a portfolio the student can provide an extensive documentation of his or her performance. In this way, the course instructor can get a better picture of the student's profession-specific competencies by using portfolio in combination with other tools.

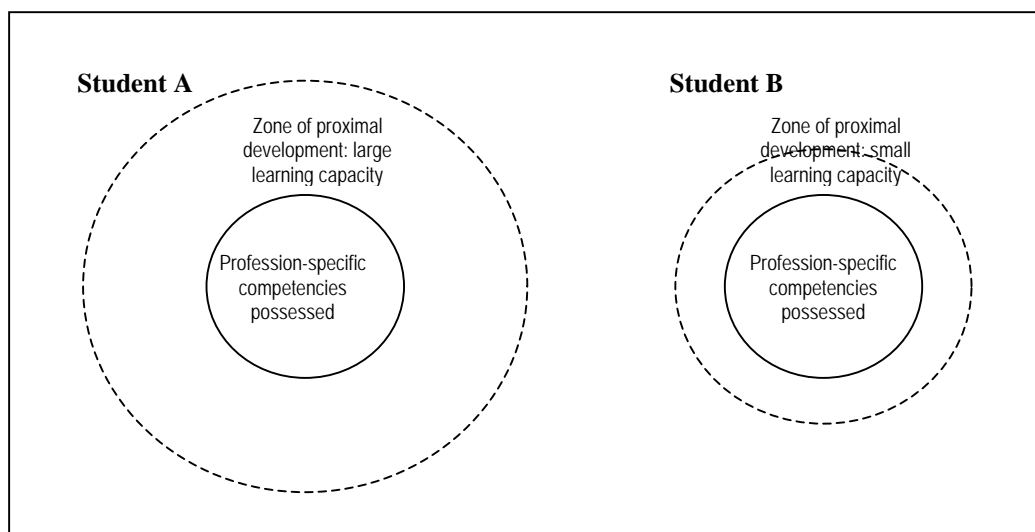
However, the situation with regard to learning competencies, is somewhat different. By learning competencies we mean skills such as being able to work independently, the ability to plan, the capacity for reflection, being able to modify one's behaviour etc. In order to make the distinction between profession-specific competencies and learning competencies as clear as possible, we used Elliott (2003) as our inspiration. In his article he uses Vygotsky's (1978) concept of the zone of proximal development. Imagine two hypothetical students who at a particular moment possess the same quality profession-specific competencies (see Figure 3).

Assuming that the quality of the supervision is the same for both students, student A will still be able to get more out of the learning situation than student B, given that the size of the zone of proximal development is a measure of the learning capacity of the student. Student A possesses more learning competencies than student B.

For instance, two student teachers are equally competent to start teaching after their initial course. In relation to their teaching competencies both have equal chances to be considered a good teacher. But society and science evolve. Which teacher is most likely to be a good teacher after twenty years? Most definitely the one who is able to adapt to the new situation. In other words, the teacher who is most capable of learning from his experiences and his environment, will keep a better position to be successful.

Since the importance of life-long learning has permeated through into higher education a great many courses now pay more explicit attention to learning competencies (Foote, 2001). Even so, for the time being, higher education cannot fall back on such a rich tradition with regard to the supervision and evaluation of learning competencies as it can in the case of profession-specific competencies. The supervision and evaluation of learning competencies is not a simple matter and we need to bear in mind that the learning process always occupies a certain period of time. The existing array of tools is rather limited and characterized by being very labour intensive. We have in mind monitoring through personal contact (such as in the master-apprentice relationship) and supervision (Stevens et al, 1998). Questionnaires for the self-reporting of learning competencies, interviews, techniques such as thinking aloud and tools such as logbooks yield additional

FIGURE 3
Differences in Learning Competence Where Profession Specific Competence Is Equal



information, but can pose problems with regard to their reliability. There is sometimes a very high chance of receiving socially desirable answers if self-reporting is used as a source of information as part of evaluation by third parties. A combination of tools is, of course, also possible.

Here portfolio serves as a powerful tool that can be used both on its own as well as in combination with other tools for the supervision and evaluation of learning competencies (Meeus & Van Looy, 2002). Portfolio offers outstanding possibilities of tracking and adjusting the student's learning process. It permits the student to show long term processes. Going through a portfolio is certainly labour intensive (Viechnicki, 1993; Evelein & van Tartwijk, 2000), but this is also true of the other tools. Moreover, all kinds of materials can be included in a portfolio such as questionnaires for self-evaluation or evaluation by others. The fundamental principle underlying portfolio aimed at learning competencies is to foster a self-directed learning process. Portfolio can play a prominent role in the supervision and evaluation of learning competencies. Evolutions in practice fit in with this point of view. In general, portfolios aimed at learning competencies seem to have more to offer than portfolios aimed at profession-specific competencies (Inspectie van het Onderwijs Nederland, 2003, p.16).

Incompatibility of Evaluation

We believe that there is a fundamental difference between the use of portfolio to demonstrate profession-specific competencies and portfolio to demonstrate learning competencies. In both portfolio types different materials are selected. In portfolio aimed at profession-specific competencies the student selects his or her best work. After all, the quality of the work is being judged. On the other hand, in portfolio aimed at learning competencies the student selects work that represents his or her learning process. Not the quality of the work but the quality of the learning process is being judged. Learning competencies can be demonstrated by revealing the different phases of a learning process. A learning process consists mainly of four phases: choosing one or more learning components, draws up a personal learning plan, carrying out the plan and reflecting on the results. Moments of failure may just be very interesting for this purpose.

Is a combination of the two sorts of portfolios in a single portfolio possible or desirable? We do indeed see organizational possibilities of combining the two sorts of portfolios. This allows the student to create a portfolio archive and to select and present material, as the course directors desire, for the evaluation of profession-specific competencies or learning competencies. However the combined evaluation of profession-specific competencies and learning competencies by the same evaluator is not desirable!

In this event, the student is required to show him or herself in his or her best light, but at the same time it is assumed that the student will record qualitatively effective reflections. This means in fact that the course directors are asking the student to show both his or her strengths and weaknesses in order then to judge the student on his or her weak competencies at the same time. The chance of unreliable reflections in that case is very high (Meeus et al, 2005a).

In practice we often see many examples of portfolios where the evaluator considers both profession-specific competencies as well as learning competencies. Students are usually quick to spot this and to develop strategies for turning this problematic situation to their advantage (Meeus et al, 2005b). They avoid genuinely opening up and reduce their weak competencies to a few harmless learning components. The reflections degenerate into exercises in tactical writing to convince the evaluator of their brilliant achievements. At the same time students invent a few non-risk defects in order to show that they are nonetheless capable of adopting a critical attitude with regard to their own performance.

Evaluation methods should be chosen according to the objectives which they are intended to achieve (Van Petegem & Vanhoof, 2002, p.46). If the course directors opt for a portfolio aimed at learning competencies, the student should be allowed to report his or her learning process in a safe context. In that case there is little risk for unreliable reflections. If the course directors opt for a portfolio aimed at profession-specific competencies, the student should be allowed to select his or her best work. In that case there is a considerable risk for unreliable reflections, certainly when there is a lot at stake for the student. Students will not be eager to reveal their failures (Smith & Tillema, 1998).

Conclusion

In order to make sense of the portfolio landscape, we have distinguished between four modes of implementation of portfolio in, and in relation to, higher education. In chronological order these range from the use of portfolio in admissions to higher education, during the higher education course, on entry into the profession and for ongoing professional development.

There is a tremendous diversity of portfolio types in use in higher education courses, which manifests itself in a large number of applications. We have also observed a large number of classifications, yet there is still no universally accepted classification for portfolios in higher education. A classification which we regard as worthy of universal acceptance is one that can distinguish between portfolios aimed at profession-specific competencies and portfolios aimed at learning competencies.

We have made a number of observations regarding present portfolio applications. Portfolio

only really comes into its own within a particular educational vision, namely that of the education focused on artistry. We regard technical ability and artistry as complementary educational elements which both deserve attention in higher education. We have argued that to a certain extent skill precedes savoir-faire, which leads us to conclude that portfolio can best be used at the end of the course.

We argued that in higher education portfolios aimed at profession-specific competencies yield a limited added value because they only provide supplementary information compared to other and sometimes better tools. Portfolio aimed at learning competencies can add genuine value in higher education because there are currently few other and better tools for supporting and evaluating the student's learning competencies. If we want our graduates to be not only professionally competent, but also to be capable of continuing to learn on a life-long basis, the introduction of a portfolio of this kind is the recommended choice. The assessment of profession-specific competencies and learning competencies by means of portfolio by the same evaluator is to be strongly discouraged as it is highly prejudicial to the reliability of the reflections.

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