Portfolios in Schools: A Longitudinal Study

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Abstract
Rubrics like those of Paulson and Paulson (1994) that trace the evolution of portfolios in a sequence from off-track, emerging, on-track to outstanding, may be misleading because they confuse process with purpose. They assume that all portfolios should model the process portfolio that contains ongoing work and student self-reflection.

This article reports on a longitudinal study of one school in which data on teacher perceptions of, and actual portfolio implementation were collected on three different occasions over a five-year period. These data were obtained from interviews, document analysis and surveys.

The findings reveal three distinct emphases, each relating to a different data gathering stage: a tightly teacher-directed and highly outcome based portfolio; a still traditional portfolio but with the incipient process element of self assessment; and an evaluation portfolio containing marked assessment tasks with individual grades and scores. Challenges for systems and schools are discussed.

Introduction
Throughout the 90s in Australia, two trends have shaped school assessment practice. The first was the advent of the national curriculum, part of the federal government’s agenda for microeconomic reform. Apart from redefining learning areas, the national curriculum included a strong emphasis on outcomes, or observable, demonstrable benchmarks of student achievement that operated as a means of demonstrating teacher, school and system accountability.

The second and concurrent change was a move towards "authentic" assessment, an international trend that had its beginnings in a reaction to formal regimes of testing, and the consequent concerns about the validity of assessment. There are a variety of different interpretations of authentic assessment (see
Cumming and Maxwell (1999), but it is generally understood to comprise two dimensions: performance assessment, or tasks assessed through actual demonstration, a term sometimes used synonymously with authentic assessment; and situated assessment, or tasks assessed in a real world context.

These two assessment trends heralded the portfolio in NSW schools, at first tentatively in 1996, and soon after with a concerted passion. The 1997 Strategies for Assessing and Reporting in NSW Primary Schools (Department of School Education) gives detailed examples of portfolios and information on their planning. Portfolios were regarded as the ideal exemplification of the two trends. They demonstrated student achievement through work samples that often had outcomes statements attached, thereby providing tangible evidence for those desiring accountability. They also focused on real work or actual performance in classrooms.

By 2000 most primary schools had tinkered with or developed more comprehensive policies on portfolio implementation. So what has happened to portfolios a few years on? Have they changed in their nature as a result of changing teacher perceptions of their purpose? Are they viewed as tools of accountability or as tools of assessment, that is, meaningful learning narratives for students?

One rubric for tracing the evolution of portfolios is that of Paulson and Paulson (1994) who identified four portfolios in a developmental sequence: the off-track portfolio, the emerging portfolio, the on-track portfolio and the outstanding portfolio. Growth is characterised by a higher degree of meaningful organization, and in particular a higher degree of student ownership and student self-assessment. Such a rubric confuses the debate about portfolio development because it assumes that all portfolios are what Valencia and Place (1994) called ‘process portfolios’, viz those which contain ongoing work and student self-reflection.

Many of the more generic definitions however do suggest that portfolios are more than just ‘hunches of stuff’ (Paulson and Paulson 1994) and they do include self-assessment and reflection on the process of learning. This article reports on a longitudinal study in one NSW primary school, tracing the development of portfolios from 2000 to 2004. It involves case study methodology (teacher interviews, document analysis and surveys) on three separate occasions in 2000, 2001 and 2004 respectively. It seeks to answer the questions:

- have there been changes in teacher perceptions of the purpose of portfolios?
- have there been changes in teacher perceptions of the contents of portfolios?
- have there been changes in teacher perceptions of the degree of student engagement/ownership of portfolios (as evidenced by student choice of contents, self-assessment and reflective writing)?
- have there been changes in teacher perceptions of the desirable/ideal portfolio?
The investigation of these questions provides insights and enables the development of generalisations about the wider school population.

Literature

While a portfolio is a collection of student work that provides a representation of student achievement, that representation is a function of portfolio purpose. The definitions of portfolios differentially emphasise three elements. The first defines portfolios as a collection of student work that demonstrates achievement. This element, though variably defined, is universal. It is characterised as ‘a depository of artefacts’ (Wolf 1991, p.36); ‘a purposeful collection of student work that tells the story of the student’s efforts, progress or achievement’ (Arter and Spandell 1992, p.210); ‘a collection of materials assembled by students to demonstrate achievement’ (Freeman and Lewis 1998, p.271); ‘a collection of student work that shows evidence of learning (Padgham 2001, p.9); and ‘the systematic and selective collection of student work that shows mastery or growth over a period of time’ (Walther-Thomas and Brownell 2001, p.225).

A second element that is not universally accepted is student engagement. Such engagement may include student collaboration with teachers in selecting contents, or student reflection on learning. This element is apparent in the definitions of Hill, Kamber and Norwick (1994), Paulson and Paulson (1994) and LaBoskey (2000).

A third element that rarely occurs in definitions, but is often cited as a characteristic of portfolios is the rubric or criteria for scoring or judging (see Skawinski and Thibodeau 2002).

Stiggins (2001, p.468) distinguishes between the essential and desirable attributes of portfolios when he adopts the previously cited definition of Arter and Spandell (1992), but suggests that the ‘portfolio’s communication potential and instructional usefulness are enhanced’ when students participate in selecting content, when criteria are available for judging the merit of work, and when students engage in reflection.

The notion of definition reflecting purpose is apparent in several different classifications. Benoit and Yang (1996) identify the accountability portfolio and the instructional portfolio. Richter (1997) describes the working portfolio containing daily work and the showcase portfolio containing best work; and Smith, Brewer and Helfner (2003) report on the showcase portfolio (best work), reflective portfolio (specific learning), cumulative portfolio (collection over time) and goal-based portfolio (pre-established outcomes). Valencia and Place (1994), whose classification forms the basis of analysis in this article, present four types:

- the showcase portfolio which includes the student’s best work;
- the evaluation portfolio which includes specified and marked work;
- the documentation portfolio which includes student work systematically kept by the teacher but not marked;
• the process portfolio which contains ongoing work and student self-reflection.

The classification of Stiggins (2001) (celebration portfolio, growth portfolio, project portfolio and status report portfolio) has prima facie appeal because there is an implicit developmental sequence like the rubric of Paulson and Paulson (1994). Yet rather than making judgments about quality, it focuses upon shifts in purpose. Stiggins (2001, p. 476) writes:

We can start them with celebration portfolios in early grades to start students evaluating their own work. We can also help students track their own academic development over time. Sometimes this might centre on the growth of a particular set of proficiencies. Other times, it might track the completion of a set of required projects... and finally we can tap the portfolio idea to describe students’ achievement status standards met....

The determination of purpose has implications for the contents of portfolios. The list of possible artefacts is exhaustive: prose, poetry, learning contracts, extracts from diaries and journals, laboratory and project reports, art works, photographs, software, merit certificates, models, book reports, maps, diagrams and self-assessments. Berryman and Russell (2001) report on portfolios at Dunbar High School in Kentucky where students included a letter to the reviewer, and two ‘transactive’ pieces (writing to communicate with a real-world audience).

Several questions arise in relation to portfolio contents. Should rough drafts or only polished work be included? Should all inclusions relate to the demonstration of outcomes? Should out-of-school experiences be included? To what extent should student self-reflection be included?

The issue of engagement is generally endorsed as desirable both in relation to involving students in the selection of portfolio contents (Salvia and Ysseldyke 1992, Stiggins 2001, Popham 1999) and student self-reflection (Bailey and Guskey 2001, Ellson 2001, Smith 2000). Arter and Spandel (1992) provide questions for students designed to facilitate the process of self-reflection. They involve the student in identifying strengths of their work, tracing the process they experienced, identifying the feedback they received, and identifying the distinctive qualities of their work.

Of course the extent of student engagement, like the nature of portfolio contents, is informed by the perception of portfolio purpose.

Context
The case school is atypical of Sydney’s upper north shore in that it is socioeconomically diverse. Single houses, unit dwellings and community housing support a range of ethnic communities. There are approximately 520 students in 18 regular classes, and 52 languages are represented. The teachers comprise a range of ages and teaching experience, and there has been a considerable staff turnover throughout the study. These changes are evidenced by the fact that in the 2004 interviews, only two of the original ten teachers were interviewed.
The school began implementing portfolios in 1999, a year before the initial interviews. Since that time, there have been four different principals (or relieving principals), each with a demonstrably different leadership style. Some of the changes in portfolio implementation may be attributed to the different perceptions of principals of the value of normative and formal assessment.

In 2004, during the salaries case in the Industrial Relations Commission, the Department of Education and Training argued that there was no requirement for any teacher to collect, assemble or construct portfolios of student work for reporting, and that such a task was not onerous. Notwithstanding, the NSW Teachers Federation imposed a ban on the construction of portfolios of student work for reporting. While the 2004 interviews were carried out at the time of the ban, no mention of the industrial situation was made by teachers, but such a ban does signal incipient or growing concern about the additional work portfolios create.

Method

The research used case study methodology involving the intensive collection of data at three times in 2000, 2001 and 2004 respectively. The unit or ‘bounded system’ (Burns 1997, Stake 1994) was the school. Even though the same teachers were not interviewed on each of the three occasions of data gathering (as a result of transfer), the fact that a majority of staff was interviewed, provides a clear focus on the school as unit.

The school was selected from survey research conducted on portfolios in 2000 using a stratified proportional sampling of NSW primary schools. Burns (1997, 364) argues that the bounded system should either be ‘very representative or extremely atypical’. Thus the selection of the school as very typical was considered to be an instance of purposive sampling, or as Burns (1997, 370) indicates ‘a unit that matches the blueprint recipe’.

The case study method was regarded as valuable for three reasons: it would illuminate phenomena for more intensive investigation; it would provide insights and promote generalisations about the larger school (system) population; and it would be a valuable case in its own right.

On each of the three occasions, data were collected from the identical survey, interviews and document analysis (the portfolio). The use of the same survey (a 30 item survey with five likert scale response options) enabled the computation of means to provide comparisons over time. The interviews were semi-structured so that the teachers could be informants as well as respondents; they lasted for approximately 40 minutes each; and they involved teachers at all grade and stage levels. Six randomly selected portfolios from each grade were also analysed.

Data from the three sources were organised into themes according to the process advocated by Miles and Huberman (1994) by which the themes emerge from the data rather than being imposed upon it. The reduced data is displayed on matrices with text in cells, so that results are reported according to patterns or
themes. The findings are surprising in revealing a change of direction in the case school to include numerical and normative data on student performance. While these findings relate to a single school, they may well represent a return to reporting information that is preferred and requested by parents, and that is typical of external testing mandates (Higher School Certificate, and Basic Skills tests). Following is a reporting of these results.

Findings

1. Changes in perception of purpose.

The most apparent trend since 2001 was a declining perception of portfolios as showcases of student work, and an increasing perception of them as strategic collections of work. Such a trend which arguably reflects a greater maturity in understanding the role of portfolios, was indicated in the following comments on purpose: 'to reflect what’s truly going on', 'it isn’t a showcase of beautiful work', 'to include) first drafts, not necessarily polished copy' and 'to show parents examples of student work, but not necessarily best work'.

In 2004 there was a dramatic increase in perception of the portfolio as comprising marked and graded work as a basis for evaluation/accountability. This perception was high in 2000, perhaps because portfolios were regarded as accountability tools to demonstrate the achievement of outcomes, but it declined markedly in 2001. The sudden increase in perception of this purpose may be explained by a change of school portfolio practice in 2003 whereby marked work was placed in the portfolio and was accompanied by a student progress report which gave each student both a mark for the included assessment task, and the grade average. These findings demonstrate a shift in school practice from showcase to evaluation portfolios (Valencia and Place 1994).

It was notable in 2001 and 2004 that teachers made fewer references to outcomes as a defining factor in portfolio development. In 2000, the link between outcomes and portfolios was often made explicit, and reference was often made to the outcomes based education mindset. As the means for the survey items relating purpose to outcomes were uniformly high but not markedly different between the three data gathering occasions, outcomes are obviously regarded as important. Their infrequent mentioning in the recent interviews may be explained by the fact that assessment and reporting within an outcomes framework is now seen as routine. It is apparent though that teachers are perceiving the portfolio as a more versatile tool for capturing the reality of a student’s achievement, rather than as an instrument for the mere demonstration of outcomes.

In determining the nature and implementation of portfolios, teachers consistently believed there were two stakeholders: the Department of Education and Training because it mandates the learning outcomes, and the teachers themselves because they teach to the outcomes. Some teachers acknowledged that parents could provide input, as long as teachers had the right of veto; other teachers indicated that parents do not understand the issues involved and should therefore have no say.
While the differences in means for survey items relating to the respective purposes of the portfolio as a tool of assessment and of reporting remained slightly higher for reporting on the three occasions data were collected, the responses at interview indicated a stronger perception that portfolios are tools for reporting more than assessment. Typical comments in relation to purpose included ‘to report to parents’, ‘provides opportunities to show parents work for a specific purpose’, and ‘to give parents an overview of work done in the classroom’. It was gratifying to hear a number of responses indicating purpose for teachers and students: ‘this is our way of showing how professional we are’ and ‘I want it to be a positive experience for the child’.

2. Changes in perception of content

In the case school, portfolios, called ‘student progress folders’ comprise plastic envelopes spiral bound in hard plastic covers. In 2000 and 2001, each work sample was accompanied by an outcomes sheet, and boxes which had to be ticked for more specific indicators, according to whether the student was ‘working towards’, ‘achieving’ or ‘achieving beyond’. For terms 1 and 3, five work samples, predetermined by stage teachers at the beginning of the term, were included in the portfolio. They related to reading, writing, number, measurement and space. In terms 2 and 4 of 2001, corresponding with half yearly and yearly reports, work samples were provided for each learning area. The progress folder was sent home after each term, though in terms 2 and 4, it also included the report.

While the 2004 Federation ban on portfolios has created some current confusion, it is proposed that the 2003 portfolio format will be repeated. Claiming to provide a ‘snapshot of where the children are at, at the moment, relative to other children within the same grade’, the portfolio provides a description of assessment tasks in Maths, English and Social Science. Each description specifies which outcomes are being assessed (though the previous outcomes sheet with boxes for ticking indicators is no longer present): the marking criteria for scoring the assessment task; a copy of the actual completed task; and a report which includes the student’s score in the three learning areas, the grade average in each area, the student’s score for homework and classroom application, and the grade average for each. So the student progress report within the portfolio might read:

*English* – *In the English Assessment Task your child scored 7.5 compared with a Grade Average of 7.0*

The same format continues for Maths, Social Science, Homework and Classroom Application.

The marked increase in support from teachers for learning areas other than English and Maths between 2000 and 2001 remained constant in 2004. At the same time, perception of the importance of work samples in English and Maths increased. This finding is consistent with system emphases on literacy and numeracy, and may be a reflection of enduring school practice that in earlier years included only English and Maths.
Issues relating to portfolio contents are also linked with perceived purpose. The discernible shift in perception from showcase to evaluation portfolio was apparent both in teacher interviews and the elevated survey means for the desirability of including test papers (an item for which there was a markedly reduced mean between 2000 and 2001), completed assignments and learning contracts.

The shift to an evaluation portfolio is not necessarily at odds with a teacher desire to find different ways for demonstrating student achievement. While survey means for the desirability of many inclusions in portfolios did not alter markedly in 2004 despite strong increase in support for other artefacts between 2000 and 2001, one which indicated a marked increase, and which was corroborated in interviews, was the desirability of including journal entries relating responses to learning activities.

The 2004 data revealed moderate support for social and citizenship achievements to be demonstrated in the portfolio, though there was a separation between those who saw it as a reporting tool and therefore favoured the inclusion of tests and work samples, and those who viewed it as an assessment as well as a reporting tool and were more likely to advocate a “bit of everything” and a “well rounded experience”. A number of teachers in the latter group argued that not all inclusions need demonstrate syllabus outcomes. They advocated including some meaningful personal experiences and even “anything they students are really proud of”. An interesting counter to the view that all learning and portfolio inclusions demonstrate the achievement of outcomes, was the claim by one teacher that there is so much student can achieve that can’t be translated into portfolio contents, and that “outcomes glaze over the explicitness of reporting”.

A further illustration of the ways in which shifting system emphases are reflected in teacher perceptions (outcomes, literacy, numeracy) is the absence of any reference in 2004 to integration in portfolios. This was a strong system and therefore school emphases in 2001, as typified by the comment “I really support putting things in that show integrated learning…..writing and reading that show maths…art that show’s language”.

3. Changes in perception of student engagement/ownership

Despite marked increases in the perception of the importance of student engagement both in terms of self-assessment and student determination of portfolio inclusions between 2000 and 2001, there was no further increase in 2004. These marked increases in student engagement in 2001 were the major findings of the study at that time, and led Brady (2002a, p. 59) to define the Australian portfolio of the future as “a negotiated collection of student work involving student reflection that demonstrates achievement of outcomes”.

A majority of teachers supported some collaboration with students in determining portfolio contents in 2001, though they had not given this support a year earlier. The following was typical:
Teachers ought to have time to sit down with the children and say "we have been looking at... how do you think you've gone" and then be able to say "if you want to show mum or dad your work, what would you like to put in the folder?".

In 2004, there was a marked increase in the means of survey items supporting discussion/collaboration between teachers and students in selecting work. Most teachers believed that students could select one or two pieces of work for the portfolio, usually each half year; most thought that the students should not be allowed to do so in certain areas like English and Maths; and most claimed that it was more appropriate for older children. The practice of teacher's conferencing with individual students about portfolio inclusions was not mentioned.

The marked increase in support for student self-assessment, apparent in 2001, may be explained by the perception of portfolios in 2000 as tightly regulated teacher directed tools for demonstrating the achievement of outcomes. The school had only been using portfolios for a year, and time and experience produced more flexibility and a greater understanding of the versatility of portfolios. So in 2001, self-assessment was strongly advocated, even by kindergarten teachers who gave the children smiley faces to self-assess. One teacher described the portfolio as 'a CV for kids', and another cautioned about the need for training in self-assessment. This interest was only modestly reflected by the optional inclusion of self-assessment. Stage 3 portfolios for instance, contained a 'personal reflection sheet' requiring answers to six unfinished sentences relating to self-appraisal.

In 2004, the majority of teachers supported student self-assessment though there was no increase in survey means relating to this area, and no evidence of self-assessment in portfolios. Some commented on the tedium of the unfinished sentence approach to self-assessment, and two teachers argued the need for providing scaffolding for self-assessment. Of course the virtual disappearance of the modest and rudimentary self-assessment that existed prior to 2001 is a legacy of the shift towards evaluation portfolios.

4. Changes in perception of the ideal portfolio

From the 2000 perception of portfolios as accountability tools to demonstrate the achievement of outcomes, the 2001 ideal became one "involving a greater variety of artefacts (photos, tapes, high tech materials) in all learning areas; a high degree of self-assessment and student collaboration with teachers; and one which can reflect student development" (Brady 2002b, p. 30). The litany of ideal elements are those extolled in the literature: enabling self-assessment, increasing student self-knowledge, providing opportunities for teacher-student collaboration, and enhancing student ownership.

The 2004 responses were not thematic. They varied from perceptions that reflected the outstanding process portfolio of Paulson and Paulson (1994), the traditional showcase portfolio that demonstrated the achievement of outcomes, and the belief that portfolios are 'a waste of time' because teachers can simply show parents the child's books in each of the learning areas.
The disparate views are a reflection of the different expressions of school practice in relation to portfolios over the last five years, and the nature of the sample.

Several teachers were new to the school or to teaching, and had no well developed notion of a desirable portfolio. One teacher had been recently transferred from a school in which she claimed 'teachers taught for the portfolio': two or three tasks, each with five indicators and five response options were sometimes included each week. This experience had created a negative view of portfolios.

For the less experienced and newer teachers to the school, current practice was more likely to be regarded as desirable.

**Discussion and conclusion**

Paulson and Paulson’s (1994) rubric of off-track, emerging, on-track and outstanding portfolios is confusing as its evolving emphasis on student self-reflection is more consistent with the notion of process portfolios. To evaluate portfolios without a consideration of their purpose is near-sighted. For instance, the most commonly known portfolio, the showcase portfolio, dubbed in the pejorative as a ‘brag book’, makes no claims beyond showcasing best work. Similarly for DET, the portfolio was conceived as a fitting demonstration of the achievement of student outcomes. It is therefore not surprising that the contents comprised work samples, often included with outcomes and indicators that were rated according to student achievement.

In the second stage of the study, it became clear that the portfolio was regarded as having more versatility than just a tool to demonstrate achievement of outcomes. Increasingly, elements of the process portfolio, viz student reflection and self-assessment were modestly introduced or at least acknowledged by teachers as legitimate inclusions. Other artefacts like learning contracts, assignments, merit certificates and demonstrations of social/civic achievement were also perceived as reflecting all-round development.

The fact that this trend was not demonstrated in the third stage of the study has a prima facie explanation. The principal (the third since the research began) altered the portfolio in two main ways: the outcomes sheets, rated by indicators for each work sample, were removed; and a student report providing an individual and grade score for assessed work samples was included. This practice had a resultant impact on teacher perceptions of the nature of portfolios.

It might be facile though to dismiss this trend towards an evaluation portfolio as a specific school phenomenon and therefore as atypical. A NSW Teachers Federation ban on portfolios, however interpreted, can only signify that there is a perception that additional work beyond normal demands is required by teachers in implementing portfolios. One teacher in the 2001 interviews, claimed that portfolios 'have turned into a bit of a juggernaut...something that could be simple and practical has turned into an onerous task'. Schools in NSW are also waiting a
foreshadowed DET reporting template that all state schools will be required to use. Perhaps these two factors will shape the nature of portfolios in ways similar to that of the case school. It may well be that the principal who introduced the 2003 model will prove to be more prescient than staff realised.

The findings raise several important issues and challenges. The subsuming issue relates to the purpose of portfolios. To evaluate their effectiveness, there needs to be an understanding of purpose. Portfolios are developed to demonstrate student achievement, and with the 90s movement to outcomes-based education, there is an implicit belief that they should reflect the achievement of syllabus outcomes. However, beyond that, their purpose is not clearly articulated.

More significantly, there is little direction from education systems as to whether the portfolio is a reporting and/or assessment tool. The emphasis on demonstrating outcomes suggests the former, and partly accounts for the relatively small emphasis on student reflection and self-assessment in portfolios. Yet Wolf's (1991, p36) early definition specifies the need for written reflections by the student. Thus the portfolio becomes a meaningful learning narrative for students, and not just another method of reporting. The central dilemma of purpose raises several challenges for systems and schools:

- Should the portfolio be a reporting and/or assessment tool?
- If the former, should the portfolio report by standards (outcomes) and/or norms (position in class/grade/cohort)?
- If the latter, should portfolios include written reflections by the developer (acknowledging the value of self-assessment and meta-cognition), and:
- Should work not specifically related to syllabus outcomes be included, "viz" journal entries, merit certificates, creative writing?
- Should the teacher or student own the student's portfolio; or should there be more than one?

The author contends that the evaluation emphasis of the new portfolio is not inconsistent with the inclusion of student reflection, and argues the need for teachers to provide scaffolding for students to self-assess and constantly reflect on their performance. If portfolios are the repositories of student work, organised in a systematic way, they are the appropriate place for student reflections on the quality of that work over time. The trend towards evaluation identified in the case school portfolio raises the further challenge of how much of a student's total performance should be captured by a portfolio. After all there are other strategies for assessing and reporting.

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