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Portfolio Assessment: Planning for an Excellent Return on Personal Investment

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Introduction

A portfolio is a chronologically sequenced collection of a student's work-in-progress and finished products over time.

Portfolios are a resource for teachers to review the processes **as well as** the products of students' learning (Brown, 1992; Gardner, 1993). Portfolios are also a way for students to develop their self-assessment skills (Arter & Spandel, 1992). In Singapore, portfolios are one approach to participatory, process-oriented assessment that has begun to attract attention from teachers in a range of subject areas.

Many educators have underscored the need for teachers to engage more in practices that will help students to become more self-reflective thinkers who are flexibly able to modify their metacognitive strategies according to changing task demands (Gardner, 1993; Lee, 1995; Wolf, 1988). These capacities are essential for young adults who are able to adapt and respond creatively to the expanding, continuously changing world of information and technology. The use of portfolios provides structured opportunities for students to play an active role in negotiating their learning objectives, evaluating their progress and products, and collaborating with teachers about areas in which to focus future learning efforts.

Portfolios and their accompanying reviews by students can yield insights into the **process**, and not only the **products**, of students' learning and **what students think about their learning** (Gardner, 1993). Further impetus for exploring 'alternative' assessment strategies such as portfolio systems comes from a desire among many educators to supplement the discrete, normative evaluations provided by examinations.

Among other benefits, this kind of information often has clear implications about how to improve instructional practices to meet the needs of individual students or student groups. The philosophy of learning which portfolios exemplify is one in which learning and assessment are integrated and developmental. Gitomer, Grosh, & Price (1992) have underscored the isomorphic goals of assessment and pedagogy.

Things are not tested because they are easily measured. Rather assessment is performed because it facilitates instructional activities deemed worthwhile and because it judges students on the basis of performance within those activities.

(Gitomer, et al., 1992, p. 12, emphasis added).

Process-Oriented Nature of Portfolios

Portfolios may include samples of ideas, notes, drafts, sketches, photographs, journal entries, research, and other artefacts (Roettger & Szymczuk, 1990). Portfolios may be viewed as compressed collections of data that document the activity of learning and the outcomes of a concentrated deployment of effort to learn, such as a project report or completed written work. Compressed means that not everything is included in the portfolio – it is not a scrapbook. Rather, it includes carefully selected samples of a student's work, or the work of a group, over a period of time, along with the student's commentaries about their work (Arter et al., 1992).

Entries into the portfolio should be selected on the basis that they contribute to a representative record of the evolution of skills or ideas up until a certain point in time, such as the end of a school year, a course, or unit within a course (Buell, 1991). While it is possible for

a teacher to compile a student's work into a portfolio, the instructional value of using portfolios derives from inviting students to reflect upon their work and develop criteria for making decisions about what they want to show about themselves and why (Arter et al., 1992).

Teachers have used various types of portfolios in order to pursue different objectives. The benefits associated with a few widely used types are described here.

1. Best Works Portfolio

This contains what the student deems as his or her best work. It is a collection intended to document mastery of a learning domain or procedural skill, imaginative use of talent and resources, creative thinking and reflection, as well as expressive work.

2. Collections of Work Portfolio

This catalogues what has happened over the course of a period of schooling, such as a term, and provides evidence of productivity for a teacher, parent, or others. This type of portfolio helps to keep a record of what has been done and to gauge growth and change. However, "collections" may not document the actual learning that has occurred.

3. Process Portfolio

This is a series of developmental snapshots that highlight and document change over time in one type of learning task or domain, or in one major project. Different drafts or versions of an assignment may be included, combined with journal entries, research notes, or other artefacts of production. These can help teachers and students to gain an understanding of how the student thought through their project, approached the challenges of a new area of learning, solved a problem, or mastered a new skill. Process portfolios not only give a picture of the student's thinking and decision-making, but also of his or her flexibility, risk-taking, academic knowledge, and ability to detect and use clues and feedback.

4. Composite Portfolio

This is parallel to an individual's portfolio except that it represents the learning process of a group of students. Criteria must be developed for selecting samples of students' work (Arter & Paulson, 1991). The collection could be one way to demonstrate the impact of a unit of instruction or learning programme upon students in general. Alternatively, the collection could be used to tell the story of a cooperative learning group's efforts while completing a shared task, such as a collaborative writing assignment or science project.

Criteria for Compiling and Evaluating Portfolios

Teachers need to formulate guidelines for selecting work to be included in the portfolio and criteria for evaluating them. Selection guidelines may be very specific (e.g., all students include a composition about a story read in class) or very open-ended (e.g., students may choose whatever they want to include). Arter et al., (1992), suggest a middle ground in which categories of work are specified, while students are invited to select work for each category (e.g., one laboratory report, one "best" piece, one composition with all rough drafts). Students cannot assemble a portfolio without having clearly defined criteria to use to paint a picture of their own efforts, growth, and achievement. In this way, portfolio assessment can be used to improve achievement and not only to measure it (Arter et al., 1992).

Decisions made about criteria for judging the content of portfolios cannot be prescribed beforehand. They must emerge from a consideration of the nature of the learning tasks that are represented in the portfolio and dimensions that are important for monitoring the success of a particular instructional sequence. Criteria used for evaluating portfolios must represent a conception of what is valued in the learning process (Brown, 1992). If the focus is on learning outcomes, then criteria must reflect the evaluator's conception of what constitutes an expert performance at a given level of schooling (Arter et al., 1992). To develop good criteria, teachers need good content expertise and extensive familiarity with the performances of students at the level of schooling being considered (Roettger et al., 1990).

Most teachers are uncertain about the bases upon which to judge qualitative aspects of a student's learning process and self-reflective capacities. However, many teachers find that they can gain a clearer sense of direction when they collaborate with other teachers who are also using portfolios (Buell, 1991). Beyond sharing practical strategies for compiling the portfolio and interviewing students, this can lead to agreement about consistent and rigorous criteria for evaluating them.

We have been able to observe students' growth using projects, portfolios and interviews. At the same time, we have witnessed teachers' growth as readers and interpreters of qualitative, developmental information about their students.

(Wolf, 1988, p. 28)

Student Assessment of Learning Via Portfolios

Students can be invited to suggest important dimensions for evaluating their portfolios. In Singapore, students are accustomed to, expect, and may initially prefer to be assessed using traditional assignments and tests that are designed and evaluated exclusively by the teacher. However, with increasing emphasis on improving not only learning processes, but students' **awareness of those learning processes**, it is desirable to wean students away from exclusively teacher-controlled assessment to more participatory forms of assessment.

Students are rarely asked to appraise their own work at all, much less **out loud** to a teacher or with peers. Yet, helping students to engage routinely in constructive self-review and evaluation is an essential role for teachers interested in nurturing independent learners.

Reflection is usually assumed to take place as a private, covert activity. However, we cannot assume that our students spontaneously engage in useful reflection about the quality of their performances, or about the quantity or direction of their efforts to learn. If we want to ensure that this happens, we need to prompt them to do so and provide a meaningful context for them to do it

(Arter et al., 1992; Roettger et al., 1990). Compiling and reviewing a personal portfolio is an approach that stimulates most students towards self-reflection. When a teacher sits down with a student to review and discuss his or her portfolio, there is a shared focus and a meaningful context for helping the student to articulate their self-reflections and extend their awareness and self-evaluative capacities (Gardner, 1993; Gitomer et al., 1992).

When students are involved in assessing their work based on a review of their portfolios, they are asked to reflect upon the development and products of their own efforts, and to evaluate the amount and quality of the work they have done. In so doing, their awareness of their efforts, strengths, and areas for improvement as learners is refined and their understanding of the elements of improvement is expanded. When students vary in levels of proficiency across areas of the curriculum, then task demands and assessment criteria can be individualized.

Approaches to Portfolio Reviews

An important goal of assessment is to enable a teacher to make reliable and informed inferences about the degree to which various instructional activities evoke thoughtful engagement on the parts of students (Brown, 1992; Wolf, 1988). Thus, compiling a portfolio collection by an individual or group is only a part of the portfolio process. Interactions about this collection are essential.

One goal of portfolio reviews is to make explicit the student's reflections about the learning processes reflected in the work samples contained in the portfolio (Gitomer et al., 1992). Reflection is usually assumed to be private and covert activity. Assumptions about what someone might have been thinking about always have a degree of uncertainty. Teachers need to understand the considerations of students by accessing the thinking process through some form of dialogue. Interviews about portfolios provide one strategy for teachers to gain this access. Interviews can assess the extent to which the student is aware of his or her own development. For example: Has the student identified strengths and areas for improvement? Has the student discovered, through

reflection on their own work, a personal style or preferred approach to productive endeavours?

Another goal of portfolio review is to help students to become more articulate and differentiated in their self-reflections, and to provide an opportunity for them to comment on their own learning needs.

At the heart of interactions about portfolios lies an open-ended questioning, led by the teacher, the student, and/or peers, that encourage the student to reflect critically and constructively on their work. Effective questioning can stimulate the student to understand and construct more penetrating representations of a learning domain. Thus, 'understanding' within the context of a portfolio interview, is a shared event. As Hausman has said about this type of educational encounter:

The complex dynamics of a student's ideas and aspirations, the work itself, and a teacher with a vast store of knowledge and experience – all converge in a particular point in time.

(Hausman, p4, 1992)

Four types of interviews about portfolios can be helpful: formal interviews, rolling interviews, written dialogues and critiques (Gitomer et al., 1992).

1. Formal Interviews

Formal interviews are one-to one, focused discussions between a student and a teacher about a portfolio of work. These are usually conducted at regular though infrequent intervals (for example, twice each term) or at the request of a student. A main goal of this kind of interview is to arrive at a mutual understanding a student's development and understanding, thereby creating a large, formative profile of his or her strengths and difficulties and future learning goals. Formal interviews seem to work most effectively in small class with older students.

2. Rolling Reviews

Rolling reviews occur in the classroom during class-time and are part of the teachers' daily interaction with students. Rolling interviews often involve small groups (2-4) of students in a peer review situation. Rolling interviews are flexible, often spontaneous, and can provide an opportunity for dialogue about a student's work in progress at an opportune moment. They can therefore involve the student in the formative process of making improvements in a way that discrete, teacher-controlled testing cannot. This type of ongoing peer and student-teacher feedback evokes Gardner's (1993) vision of assessment.

Rather than being imposed "externally" at odd times during the year, assessment ought to become part of the natural learning environment. As much as possible it should occur "on the fly," as part of an individual's natural engagement in a learning situation.

(Gardner, 1993, p. 174-175)

Initially, ongoing reviews may have to be structured explicitly. However, after a period of becoming familiar with and benefitting from this form of ongoing and reciprocal feedback, it often occurs naturally as part of peer and student-teacher interaction, with little need for explicit recognition or labeling (Gardner, 1993). Some teachers have found it useful to ask students to make notes about these brief interactions and to incorporate this information into their portfolios.

3. Written Dialogues

Before a teacher-student dialogue, a student may be asked to prepare a written statement about the work represented in his or her portfolio. This can then become the basis for teacher-student conferencing. Some teachers ask students to keep a written journal of their ideas and research which then goes to the teacher at regular intervals for written feedback. During an interview, the student and teacher may agree upon aspects of the student's learning or achievements upon which each will comment after the portfolio review. Alternatively, the student may be asked to write a reflective summary of the portfolio interview.

4. Critiques

With the increasing emphasis on active learning, critiques are becoming increasingly common avenues for encouraging students' capacity for regular, accurate self-monitoring. This involves students evaluating each other's work, either orally or in written form, or both.

Conclusion

Portfolios provide evidence over time about a student's ability to pose and pursue worthwhile questions. By reviewing the portfolio, the teacher can recognise and articulate the particular profile of skills, understanding, and knowledge developing in an individual or group and how this changes or improves over time.

Learning is likely to be most successful when the student is active, motivated, and integrating concepts. Unfortunately, current educational practice is too often passive, impersonal, decomposed, and non-motivating. Portfolios are one of a wide variety of strategies that can be used to extend and reinforce the active role of students in schooling. When we introduce some of these participatory approaches, we are helping to move our students towards becoming more accountable, self-reflective, and independent learners.

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