

Portfolio assessment in an in-service teacher education course

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Abstract

Portfolio assessment is now very commonly used in teacher education programmes, both for assessment and as a learning tool. This paper reports on a study which aimed to examine the extent to which artifacts collected in teachers' portfolios demonstrated knowledge application and self-reflection. Forty portfolios from teachers on an initial in-service teacher education programme were analysed to assess their ability to apply what they had learned from the course to their classroom practice and to evaluate and reflect on their own teaching performance. The findings indicated that around 90% of the teachers demonstrated the ability to apply general pedagogical knowledge but less than 20% showed evidence that they had synthesized pedagogical content knowledge. As regards reflection and self-evaluation, the artefacts of 82% of teachers indicated that they had reflected on their classroom practice based on theories learned from the course. However, there was very little evidence that they had reflected on educational purposes, values, and philosophical perspectives on teaching. The study provides a better understanding of the use of portfolio assessment in teacher education; and it also gives teacher educators further insights into the feasibility of using teaching portfolios to enhance teachers' reflection and professional development.

Introduction

Portfolios are now very commonly used in teacher education programmes, both as learning tools (e.g. Loughran and Corrigan, 1995; Wade and Yarbrough, 1996; Smith, 1998; Wood, 2000; Doty, 2001) and for assessment (e.g. Wenzlaff, 1998; Mislson and Brantley, 1999; Curry, 2000; Delandshere and Arens, 2003; Sickle et al., 2005). The use of portfolio assessment in teacher education has a number of potential benefits as it can: provide a more comprehensive picture of student teachers' performance throughout a course of study; document their learning process and development; and provide opportunities for self-evaluation.

This paper reports on a case study of portfolio assessment in a compulsory professional skills course in an in-service Postgraduate Diploma in Education (Primary) programme (PGDEP) at the Open University of Hong Kong. It aims to examine the extent to which the artefacts collected in the portfolios demonstrated knowledge application and self-reflection by the teachers involved, and their views on

portfolio development.

Method

This is a naturalistic study in which portfolios submitted by teachers on a course were analysed. A small sample of the participants was also interviewed at the end of the course.

Research participants

In the presentation of the course studied, 278 students were enrolled in the compulsory professional skills course in the PGDEP programme. While it is an in-service teacher education programme, it is for initial training because, in Hong Kong, a considerable number of university graduates enter the teaching profession without prior training. As 18 students withdrew from the course at various stages, 260 submitted a portfolio. Of these, 39 (i.e. 15%) were analysed, comprising the sample portfolios selected for monitoring purposes¹, which usually represent a range of student performance.

The portfolio development process

At the beginning of the course, guidelines were provided to students on portfolio development. They were informed that the portfolios submitted would be assessed based on the extent to which the artefacts included demonstrated that:

- their application to teaching practice was theory-laden; and
- they had reflected on their performance and educational values.

As some researchers (e.g. Biggs and Tang, 1997) have suggested that guidance is needed on the number and types of items to be submitted in portfolios, students were asked to include eight to 12 artefacts, of which the following were mandatory:

- a lesson plan;
- a worksheet for pupils
- evidence of the use of information technology in teaching;
- a video of a lesson with reflective notes;
- a short report on a case related to classroom management; and
- a short essay about their views on portfolio assessment based on their experience.

Other than the above items, students were encouraged to submit various types of evidence to demonstrate originality, and were requested to attach written reflections for each item submitted.

¹ At the Open University of Hong Kong, students' assignments are marked by tutors and a sample of three scripts from each tutor is selected for monitoring by the Course Coordinator. This is a common practice in distance learning universities.

Interviews

Ten teachers were interviewed, using an unstructured question: ‘Tell me about your experience of, and views on, portfolio development’.

The interviews were tape-recorded, with the consent of the teachers, and then transcribed.

Data analysis

The types of non-mandatory items submitted in the portfolio were first recorded and counted. Then the artefacts in the portfolios were examined carefully, based on the assessment criteria provided in the assignment guidelines for students.

The interview transcriptions and the short essays were analysed to identify issues related to portfolio assessment. As both the interviews and the essay were unstructured, no pre-determined themes were used for the analysis.

Results and discussion

Types of items

A total of 340 items were collected from the 39 portfolios. All the students submitted the required items, with 32.7% including an additional required items as free-choice artefacts. The types of items submitted which were not in the assessment requirements varied, as shown in Table 1.

Table 1 Items not in the assessment requirement list

Items	No. of item (% of students submitting such items)
• Discussion of issues related to teaching, with personal reflections	29 (74.4%)
• Learning resources other than worksheets	16 (41%)
• Records of extra-curricular activities or subject-related activities outside the classroom	11 (28.2%)
• Assignments for pupils, tests or examination papers	10 (25.6%)
• Records of collaborative work with other teachers	4 (10.3%)
• Web-pages on the teaching subject for pupils	2 (5.1%)
• A record of teacher-parent cooperative activities	1 (2.6%)
• Pupils’ work	1 (2.6%)
• Questionnaire results on pupils’ evaluation of the teacher’s performance	1 (2.6%)
• Experience in the development of a proposal for the government’s Quality Education Fund	1 (2.6%)

A very high percentage of the students (72.5%) analysed some questions that arose during their teaching, and attempted to reflect on their beliefs about these issues.

While most of the questions were about practical classroom problems (e.g. classroom management), some also reflected on management issues in their schools and government policies. The other artefacts were mainly items related to teaching, but it was very surprising that only one student included pupils' work in the portfolio.

Indications of application

About 90% of the items indicated that students were able to apply what they had learned to actual practice. These artefacts included lesson plans, worksheets, videos of their own teaching, reports on the use of IT in teaching and items related to classroom management. However, among these, only about 20% showed clearly that students' practice had been theory-laden, e.g.

Based on Bruner's theory of discovery learning, I planned a guided discovery experiment in this lesson. Learning is more effective through such an experimental approach.

Constructivists argue that learners are active constructors of knowledge and not passive receivers, so I try to use student-centred approaches in planning my lessons. With the guidance of the teacher, pupils actively construct knowledge and don't just receive it from the teacher.

The most important strategy in classroom management is to make use of group processes to increase pupils' participation and cooperation and by building a receptive classroom atmosphere.

I use praise as a positive reinforcement to reduce their misbehaviour.

Frequent failure in study will lead to frustration and, possibly, 'learned helplessness'. I must try to avoid this happening to students.

While it is recognized that it is by no means straightforward to assess whether or not practice in teaching is theory-laden, students who explain the rationale underlying their practice are more likely to have been guided by theories.

Indications of reflection

Eighty-two percent of the items – including the short essay, reflection sheets and discussion of educational issues and teaching problems – demonstrated a degree of personal reflection. Some of these reflections were merely self-evaluation, without any suggestions for future improvement, e.g.

I organized group discussion but it was not successful because some pupils did not participate.

In this lesson, I stressed cognitive learning too much and underplayed the affective domain.

I did not react properly when a pupil's pronunciation was incorrect. I repeated his wrong pronunciation and the child seemed very embarrassed.

I have used a lot of questioning but it seems that the majority of the questions are at the recall of knowledge level.

In other cases, the self-evaluation was followed by a suggested change for improvement, e.g.

This lesson was barely satisfactory. I used questioning for almost the whole lesson. I should have used a variety of teaching strategies for more effective teaching.

I scolded one student because he was sleeping in the class. Afterwards, I thought I should have used a more positive approach by telling him that if he slept in class he would miss a lot. I should have recognized that building good relationships with students is effective for classroom management, and the pre-requisite for this is to understand pupils.

I should have recapitulated the main points before asking pupils to complete the worksheet on sentence patterns and, better still, use an example for illustration. Now, many of them don't know what to do.

I used too much drilling today for the speaking skills. Pupils seemed nervous. I should make the classroom atmosphere less threatening by getting pupils to converse in pairs rather than my posing questions to them one by one.

I used competition for students to practise the sentence structure but the time spent was too long and the students became bored. Students lost interest by over-practising. I must think of more diverse activities next time.

Views on portfolio development

There were two data sources for identifying students' views on portfolio development, namely the short essay in the portfolio and the unstructured interviews. These data are reported and discussed together in this section.

Importance of portfolio development for reflection and improvement

All the students said that portfolio development helped them to reflect on their practice, and identify their strengths and weaknesses, as in selecting portfolio items they had to review and analyse their lesson plans and other artefacts related to teaching. The following two quotations illustrate their views.

When I reviewed the lesson plans I intended to put into the portfolio, I found that some of them were not very satisfactory. I asked myself: why did I do that in that lesson? I then questioned myself a lot; this is reflection. It [the portfolio] helps me to reflect.

In the past, I just taught routinely and was not conscious of what I was doing. Portfolio development forced me to review what I had done; it's like helping me to observe myself.

Such ‘stepping back’ to review one’s performance facilitates meta-learning and is important for professional development – and this process was suggested by students as a possible outcome of portfolio development, e.g.

Portfolio development helps me to implement reflective teaching, which is important for professional growth.

Portfolios help teachers to develop.

While all students reflected on their teaching, only some of them reviewed their work regularly in producing their portfolios, e.g.

Portfolio development helps me to reflect on my daily teaching. I spend some time thinking about my teaching at the end of a lesson to see if the lesson plan was good enough to be included as an item in the portfolio.

Because I needed to select the best teaching evidence for my portfolio, I tried various methods for different lessons so that I could develop the most effective teaching strategy and use that lesson as a piece of evidence. Had it not been for the portfolio, I would not do this.

As I need to review my teaching materials frequently to decide whether they are good enough for the portfolio, I constantly evaluate myself and make changes.

This group of students had really used the portfolio assessment for formative purposes. Portfolio development helped them to review their teaching every day, for continual self-evaluation and improvement. However, some other students just kept all the materials and reviewed them at the end of the course to select items for submission, as revealed in their short essays, e.g.

When I reviewed the materials collected at the end in order to choose items for submission, I made an overall summative evaluation of my performance in the year.

I wasn’t too sure what to do for the portfolio, so I just kept everything until the end of the year; then I selected the items and it made me think about how I had been teaching.

For these students, portfolio development did not achieve the purpose of process assessment. While they did reconsider their teaching at the end of the year, it is questionable whether reflection at this late stage would lead them to make improvements in the following year. It is clearly essential to brief students more fully about the importance of the development process and alert them to the need to review their materials and write reflections regularly.

Difficulties in portfolio development

While the students considered portfolio development to be valuable, the majority commented that the task was very time-consuming and demanding. Many said that

they had had to put in a great deal of effort in completing this assignment. Also, a few noted the difficulties they faced in choosing items which represented their best practice.

Portfolios are useful for self-assessment. However, overall, the students' responses indicated that they did not find it easy to carry out this process – perhaps, in part, because assessment has often been used by Hong Kong teachers as a tool for selection. Requiring the student teachers to develop portfolios helped them to develop this important skill, and hopefully alerted them also to the importance of helping their pupils to develop it.

Some students commented that they were rather unsure about what they needed to do to produce a portfolio as they had never developed one before. For example, two students preferred to be given very specific requirements for the portfolio:

It would be better if we were given a list of all the items required in the portfolio.

It's difficult to decide what sort of artefacts should be used for the free-choice items. I would have preferred to have all the items defined for me.

In portfolio assessment, students are usually given the freedom to include anything they like to demonstrate their performance. In this case, having taken into account the views of other researchers (e.g. Biggs and Tang, 1997) and the fact that most students were unfamiliar with the process, some items were made mandatory. However, if students have to follow strictly a complete list of items provided by the lecturer, this defeats the purpose of turning assessment into a learning process, with students playing a central role. Some students did appreciate the provision of free-choice artefacts, as exemplified by the following quotations:

I like the freedom given to us to include any items that we like to select. This gives me room to include artefacts specific to myself.

I like to be allowed to include some free-choice items. This gives me an opportunity to show my originality.

These students were more aware of the nature of portfolio assessment and were more confident in producing a portfolio. It may be necessary to provide more individual guidance to students who are less confident and less aware of its purposes.

Other views of students

A few students made some other comments which should be considered in implementing portfolio assessment. For instance, two said that there must be clear objectives for developing portfolios at the start, as they were not entirely clear about why they were producing a portfolio for this course. In future, it would be useful to make the rationale for portfolio assessment clearer to students, and further guidance could be given to them in setting the objectives for their own portfolios.

Finally, in the short essay, two students made the following comments:

Whether portfolio development is valuable depends on whether one is really serious in selecting items and in writing reflections

There are many aspects of a teacher which cannot be demonstrated in the portfolio; for example, the artefacts cannot show whether the teacher is genuinely caring and patient, and is committed.

While these views were expressed by only two students, they provide some counter-arguments worth consideration. The first point above echoes the scepticism of some researchers about the validity of portfolio assessment; and the second reflects the difficulty of assessing teacher performance and argues against the claim that portfolio assessment can evaluate teacher performance holistically.

Conclusion

This case study in a Hong Kong context adds to the already extensive literature on the effectiveness of portfolio assessment in teacher education programmes. The items students included in their portfolios demonstrated their ability to apply what they had learned, though only a limited number showed explicitly that their practice was informed by theory. As in other studies, this research also demonstrated that portfolio development stimulated reflection and self-evaluation, leading to improvement and change, and professional development.

The common concern among students about the heavy workload involved in portfolio development was reflected in this research. Also, there was an apparent need to ensure that students understand the nature and purpose of portfolio assessment first. In addition, students who are unfamiliar with this type of assessment should be provided with more guidance on how to develop portfolios, stressing in particular the need for regular reflection throughout the entire process so that continual improvement can be demonstrated.

Portfolio assessment will continue to be a common assessment strategy in teacher education. However, because of differing contexts and student backgrounds, teacher educators need to make adjustments to how it is implemented and the type of guidance provided to students.

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