



ORIGINAL ARTICLE

A Case Study on an Underachieving Student's Learning with Portfolio: Ali's Story

Sabiha Odabasi Cimer

School of Education, Karadeniz Technical University, Trabzon, Turkey

Correspondence: Sabiha Odabasi Cimer Tel: 90-462-377-7323. E-mail: sabihaodabasi@gmail.com

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ABSTRACT

This study aims to research effects of portfolio as a learning tool on underachieving students' learning and motivation. With this aim the study was conducted as a case study at a preservice teacher education course. The paper provides a detailed analysis of an underachieving student teacher's experiences during the portfolio process and the changes in his self regulation and learning. The data for the study were collected via weekly reflective reports and a portfolio prepared by the student during a school term. Analysis of the data showed that, if used properly, the use of a portfolio can be a useful tool to enhance underachieving students' learning and motivation to learn. At the end of the paper basic elements of a portfolio that helps improve learning are defined based on the results of the case study conducted.

Key words: reflection, portfolio, teacher education

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INTRODUCTION

Teaching portfolios were first used in the late 1980s, particularly in the area of language arts and writing (Belanoff and Dickson, 1991; Elbow, 1991; Elbow & Belanoff, 1997; Stiggins, 2001; Valencia, Hiebert, & Afflerbach, 1994). Afterwards, as the natural extension of this, educators around the world started to consider portfolio as a means for assessing the complexities of teaching and learning that are not captured through other assessment tools currently in use (Buttler, 2006; Wolf, 1991; Glatthorn, 1996; Grant & Huebner, 1998; Loughran & Corrigan, 1995). The 1990s saw an increased interest by teacher educators and certification specialists in the teaching portfolio as an additional avenue for teacher candidates to demonstrate professional competence and professional growth and development (Barton & Collins, 1993; Kimball & Hanley, 1998; Lyons, 1998; Shulman, 1998; Snyder, Lippincott, & Bower, 1998). In the early 1990s, there was a strong advocacy for the implementation of portfolios in teacher education, in the USA and Australia, as they support teacher reflection as well as provide authentic evidence of reflection and teacher practice (Loughran & Corrigan, 1995; Lyons, 1998; Wade & Yarborough, 1996).

Various definitions of portfolio exist in the literature. In general terms, a portfolio is defined as a collection of the evidence of, and reflections upon, students' curricular and co-curricular achievements (Stiggins, 1994; Odabaşı Çimer, 2011). A portfolio may include examples of the learner's completion of tasks, writings, homework, projects etc. The items chosen for inclusion in the portfolio can be selected by the learner or the teacher, or both, depending on the instructor's purposes. Hence, the contents of a portfolio have been collected, reflected upon, selected and presented to show growth and the attainment of skills and changing capabilities over time. Thus, it provides a broad picture of a student's achievement by showing the unfolding of skills over time which a one-time performance on a test cannot do. To summarise, as longitudinal in nature, diverse in content, and collaborative in their selection and evaluation, portfolios as alternative to traditional forms of assessment, document not only students' achievement but also their effort and improvement (Tierney, Carter & Desai, 1991); encourage students to reflect on and take responsibility for their own learning (Herman, Gearhart, & Aschbacher, 1996;

Tierney, Carter & Desai, 1991; Yancey, 1998; Strijbos, Meaus & Libotton, 2007) and right the wrongs of traditional measurement practice (Herman, Gearhart & Aschbacher, 1996).

Effective use of portfolio serves both instruction and learning (Strijbos, Meaus & Libotton, 2007; Odabasi Cimer, 2011). Teachers use the portfolio as the vehicles for observing gradual change in students' learning and adapt their instruction based on this information. In addition, students also benefit the effective use of portfolio assessment. Through engaging them in meaningful activities, allowing them to chronicle their own work and self-assess, portfolio helps students become self-directed learners (Strijbos, Meaus & Libotton, 2007; Odabasi Cimer, 2011).

The research literature has reported multiple purposes regarding the purpose of the portfolio since its first introduction. Many researchers and teacher educators advocate portfolios for the purpose of assessment of teacher candidates (Burroughs, 2001; Campbell, Cignetti, Melenzyer, Nettles, & Wyman, 2001; Tellez, 1996; Tillema & Smith, 2007; Wolf & Dietz, 1998) while others identify its primary purpose as promoting teacher reflection and growth (Farr Darling, 2001; Mansvelder-Longaroux, Beijaard, & Verloop, 2007).

The portfolio in this study was intended to be used as a learning tool rather than an assessment tool. In particular, research on how individual students experience the portfolio process is notably lacking in the literature. Thus, this research provides important insights into the effects of the portfolio on learning, especially in regard to its' influence upon an underachieving learner. The present study seeks to fill this gap by providing the detailed analysis of an underachieving student's experience with the portfolio process. The study provides the detailed analysis of one of the underachieving students' experiences during the portfolio process and changes in his self-regulation and learning over time.

METHODOLOGY

This study aims to document the effects of using the portfolio as a learning and assessment tool on a student's learning and motivation. Therefore the study was conducted as a case study in a teacher education course. A case study can be defined as an intensive study about a person, a group of people or a unit, which aims not to analyze but to define and explore the case in order to understand it (Yin, 2003). In this part of the paper the sample, data collection process, and analysis procedures are presented.

The sample

As indicated earlier this study documents the journey that a student took during the process of portfolio implementation, in order to reveal the effects of the process on his learning and motivation. The subject of this study Ali (the student's name has been fictionalized to maintain confidentiality) is a student teacher in his last year of the initial teacher education programme at the Biyoloji Education Department of the Faculty of Education. He is 20 years old. He is not considered as a successful student as his grades are generally lower than the most of the other students' grades in the class.

Data collection process

The portfolio was implemented in a regular course module, namely 'Assessment and Evaluation' during a school term. The course is compulsory one-semester course for all fourth-year students in the faculty. There were 35 students in the class and this study aims to present one student's experiences in order to document details of the effects of portfolio use on an underachieving student.

The first lesson of the term was devoted to providing detailed information on the nature of the portfolio assignment and organization and contents of the portfolio. Students were given a list of items to be included in their portfolios (this was told to be the minimum list of items to guide them during the process and they were free to include other items that they thought would show that they met the learning targets). The content of the portfolio for the module included the following:

- A weekly self-assessment journal entry referring to the reflection prompts which I had provided to them. In this study, reflection prompts – what I learned, what I could not learn, what I have done to close the gap – were used to guide students' reflection.
- Evidence of specific tasks completed in the module (classroom handouts annotated by the students, assignments, tests, homework, and the like). Each piece of evidence would be accompanied by a reflective evaluation (why that piece of work was chosen, and what was learned from the work).
- Notes and evidence of further reading and study.
- A commentary on learning and development over the course of the module (written at the end of the process).

At the end of each lesson, a weekly test was also administered. This was intended to provide students with frequent feedback on their performance, and thereby, promote learning. These tests were self-assessed at the end of the lessons and students were allowed to keep their tests in their portfolios.

The portfolios were collected to provide feedback and guidance before midterm and returned. They were collected again at the end of the term, and each portfolio was analyzed for content.

Data analysis

The data from Ali's reflective journal and written reflections from the final self-reflection task were analyzed for content following the procedures advised by Merriam (1988), Bogdan and Biklen (1992) and Miles and Huberman (1994). This included content analysis which comprised generally determining codes first; then, pulling them together to form categories based on the research questions, so that they became the answers to the research questions.

RESULTS AND DISCUSSION

In this paper, the change process that one student teacher, Ali, (the student's name has been fictionalized to maintain confidentiality) had experienced is presented based on his self-reflections in his portfolio. Thus, using the data from the case study of this student, the study examined the effects of the portfolio process on his learning and motivation to learn and how these changed over time.

The instructions for constructing a portfolio were presented to the students in the first lesson of the term. The class were asked to keep portfolios which include a set of entries that are the pieces of evidence of their learning and development. Each entry would include a description, a rationale for why it was chosen and, a reflection on what they learned from the experience. Later in this part of the paper, I will provide the results of the detailed analysis of the data from Ali's portfolio.

Ali's Portfolio Experience

As indicated earlier, Ali is a fourth-year student of teacher education training to be secondary school biology teacher. He is not a successful student. As it is clear from his own comments quoted below, he rarely submits homework and studies as little as possible. He does not attend lessons regularly either.

The data in this part came from Ali's weekly reflective reports on evaluating his learning in the lessons referring to the three guiding questions indicated in the Method section (what he learned, what he could not learn and what he did to close the gap), and his reflections on the evaluation of the overall portfolio experience written at the end of the process.

Ali's portfolio contained his work for eight out of the twelve lessons during the term. He missed four lessons, therefore, he did not have the materials (weekly journal entries, class work, homework etc.) for those lessons in his portfolio.

Entries for the first lesson were not complete. On a piece of paper, he had just listed the main issues covered in the lesson as the bullet points and written a short evaluation of the lesson. His reflections on the first lesson of the unit are presented below;

This lesson introduced the basic concepts related to the topic of assessment and evaluation. I understood the concepts. But I did not do the assignment that we were expected to do during the lesson. I did not understand it. To be honest, I did not try to understand either! I was not good at the test either. I did not do any work after the class.

As it is clear from his comments above, Ali can be defined as a student who is not too keen to learn. In this lesson, the class had been asked to work in groups of three to discuss the issues and answer the questions given in the worksheet provided. As he reports above, Ali did not work on this assignment. He indicates that he did not understand what the teacher had asked them to do, but as he also reports, he did not even try to understand it. At the end of the lesson, a test was administered to provide students a quick feedback. An interesting point in Ali's comments is that first, he claims that he understood the concepts covered in the lesson, later on, he says he was not good at the test. Thus, obviously, he misjudged his own performance and did not spend too much time to think if he really understood the lesson. Moreover, as he reported, he did not do anything to close the gap after the class.

Next two lessons' evaluations were not too different from the first one. But his fourth report showed that Ali started to think about his learning.

This week's class was not productive at all for me. I could follow very small part of the lesson. Even, I realized at the end of the lesson that I had not taken any notes at all... The test we took at the end of the lesson showed that I did not understand what had been taught. My answers to the most of the test items were wrong and those I was correct were the items I guessed. The number of items I answered correctly was too few considering that we had just learned the concepts those items asked... I know I need to do after class work and do extra work but again I did not do anything.

As can be seen from the above quotation, this lesson's evaluation is more detailed and consistent than the first one. Ali accepts that the lesson was not "productive" for him and what he reported afterward

supports this. In the first lesson's evaluation, however, he had first indicated that he had understood the concepts, but, afterward, he reported that he could not do the class work and was not good at the test. But in the fourth week's evaluation, he seems to be more realistic. His comment; *"I realized at the end of the lesson that I had not taken any notes at all"* may be interpreted as that he is aware of the importance of note taking and knows that he should have taken notes. He reflects on his own test performance too and clearly, he is not happy with the result. Critical reflection on his performance is evident in his comment; *"The number of items I answered correctly was too few considering that we had just learned the concepts those items asked"*. As it is indicated in the last sentence, he comments about what to do to close the gap. Even though he did not do what he thought he should have done, that at least he started to think about such things can be interpreted as an improvement. It shows that in addition to reflecting *on* actions, he started to engage in reflection *for* his actions (Day, 1999). This can be seen as an improvement since earlier he had indicated that he was not interested in doing more work.

Again, he did not attend the next two weeks' lessons but his reflections at the end of the seventh lesson shows that he started thinking about what he had missed;

In this lesson, we learned about item difficulty and item discrimination values. I was not very good at the test again. The reason for this is that the questions on the test were related to the concepts covered in the last week's lesson and I had not attended that lesson. But what really made me upset was that I made mistakes on the items that most of the other students answered correctly. I asked my friends for the last week's lesson notes and I did the homework.

The comment above presents the positive change Ali had experienced. On his reflections above, he provides more detail about his success and failures and reflects on the reasons behind them. His reflections are more evaluative than the first week's comments. He did start doing things. He did do the homework and asked his friends about the missed lesson's notes. This is an important step because in his earlier reflections he wrote that he did not do or was not interested in doing anything to improve himself. Below reflections in this last entry make the change he had experienced clearer.

I understood the subject covered in this lesson, I think... The homework I did after the class helped me understand the topic better. ***In addition, in order to close the gap, I asked the lecturer for the lesson notes that I had missed and studied them.*** (Author's bold and italics).

Asking lecturer's notes after the class to close the gap is an important improvement for Ali, which demonstrates the change process that he has gone through. Below, he analyses his study behavior saying that he does not study regularly but only studies for exams and admits memorizing instead of learning;

I do not study regularly. Just study for exams... as I try to memorize I forget after the exams. That is me... Actually, I should say that was me!... Now I have to study regularly. I am asked to write what I could not understand and I have to do something to understand that and I have to give evidence that I did something to understand that. Interestingly, this made me study. I do this and I got used to it...

The above quote shows that Ali had changed his study behavior very much. His reflections above are more critical than his earlier weeks' comments. Ali's above comments present a discourse with himself through the exploration of possible reasons for his failure. It is this kind of reflection which results in improvement, as John Dewey (1933) is often quoted as saying that *"You don't learn from your experience. You learn from processing your experience"*. Processing experience can be achieved through mindful reflection and metacognition which are the qualities every student teacher should develop to be lifelong learners.

The above quote is also important in terms of reflecting the change process in Ali's words. The obligation to provide evidence of closing the gap made him study regularly as he admits. The progress Ali had made as reported above is important.

In his overall evaluation report written at the end of the portfolio process, Ali clearly indicates the importance of portfolio and self-evaluation;

I can say that portfolio helped change my way of study. It really is a strange thing that made me study. As I evaluate my learning I noticed that I did not exert enough effort. I noticed that I could do better. This process helped me to see that.

As is clear from the quotes above, Ali is quite open about his lack of commitment to learning and the change process he had experienced is an encouraging finding. The testimonies above reveal the value of portfolio process and the importance of engaging students in the self-reflection in this process. Such process, as evidenced by Ali's story above, may change students' attitudes toward learning and may help them become lifelong learners.

Overall the data in this paper revealed, an obligation to write self-evaluations and self-reflections as vital elements that must be included in a portfolio if it is intended to influence learning.

CONCLUSIONS AND SUGGESTIONS

This study aimed to document one student's learning experience during a portfolio implementation process to reveal the details of the effects of the portfolio on learning. Based on the student's self-reflections, it was obvious that portfolio process may affect learning and intention to learn. The current study revealed three key elements that resulted in such effect. They are, (I) obligation to write self-reflections on learning, (II) obligation to present pieces of evidence of both learning and the effort to close the gap in learning and (III) frequent testing and feedback to help increase self awareness and self-assessment.

Authors agree that reflection on learning is a critical aspect of portfolios (Arter & Spandel, 1992; Baume, 2001; Grant & Huebner, 1998; Hutchings, 1998; Lyons et al., 2002; Paulson, Paulson & Meyer, 1991; Shulman, 1992) and that the process of creating a portfolio promotes reflection (Borko, 1997; Boud and Walker 1998; Convery 1998; Loughran 1995; Jenson, 2011; Jones, 2010; Lyons, 1998). In fact, in this study, it is the reflection part what contributed most to Ali's learning. As Kimball (2005, p. 451) indicates, "neither collection nor selection [of pieces to be incorporated into a portfolio] is worthwhile learning tasks without a basis in reflection. Reflection undergirds the entire pedagogy of portfolios". Hence, just a collection of evidence with no reflection may not result in any changes in learning and motivation to learn.

Thus, in response to the question of if the process or the product affects learning in portfolio process, based on this study, it certainly is the process of constructing a portfolio, rather than the end product. It is by reflecting on the evidence collected in their portfolios that student teachers are able to uncover their strengths and weaknesses, develop an awareness of their teaching and learning achievements, assume responsibility for their own learning, and begin to anticipate their learning needs.

There is a misunderstanding of portfolio pedagogy among teachers in schools (Rees, 2005; Odabasi Cimer, 2011). Teachers describe portfolio as simply a collection of evidence or a 'dossier of evidence' which doesn't include reflection. However, reflection is the key aspect of portfolio pedagogy. What is learned from this case study that the portfolio process needs to be seen as a generative process extending the students' learning rather than merely being a collection of the examples of work. In conclusion, portfolio process combined with self-reflection, which is a critical component of the portfolio, an obligation to present evidence of what has been done to close the gap in learning and frequent testing and feedback contribute motivation and self-regulation of even an underachieving student.

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