Evaluating Higher Education Learners through Portfolio Assessment

Hanife Akar
Middle East Technical University, Turkey
hanife@tutor.fedu.metu.edu.tr

Abstract

This paper presents a part of a larger needs assessment study that aimed at designing a course called Instructional Planning and Evaluation (IPE), which is offered at Middle East Technical University, Faculty of Education, Turkey. The purpose of this study was to understand how undergraduate students perceived portfolio assessment (PA) with respect to IPE courses, and how students wanted to work during PA implementation. Data was obtained through a five-point Likert-type scale, interviews, field notes, and unobtrusive measures. Results reveal that students were frustrated in the initial stages of the implementation, and frequently demanded guidance by their lecturer. Although individual work was preferred, collaborative work facilitated preparing the content of portfolios. In course of time, data obtained through participant observations or unobtrusive measures reveal that PA led learners to become self-regulated learners.

Keywords: portfolio assessment, evaluation, self-regulation, higher education.

Introduction

The active use of portfolio assessment has been increasingly become popular in the field of education. Portfolios serve for multiple purposes. Coppola (1999) states 3 pedagogical reasons for portfolio assessment; to reinforce a process approach to writing with sharing, feedback, and revision; its communal nature for assessment; and to provide validity and reliability measures for assessment. In the literature a portfolio is described as purposeful collection of learners' work. It demonstrates to its audience their efforts, progress, and achievements in any given area. Besides being a collection of documents, portfolios are tangible evidence of the wide range of knowledge, dispositions, and skills that the learner possesses as a prospective professional. These documents are self-reflected and autonomous (Anderson and Bachor, 1998; Campell et. al., 1997; Moran and Robinson, 1994).

Portfolio assessment elicits higher order thinking by working on items that learners consider as essential rather than working on pre-determined tasks. Since learners relate the options they put in their portfolios to classroom learning, it entails authentic assessment that is often based on performance. During such processes the learners are to demonstrate their knowledge skills, or competencies in whatever way they find appropriate. The primary value of portfolios is doubtless in the assessment of learners' achievement. For instance, in the professional development of prospective teachers, portfolios may expose much insight related to their educational growth (Anderson and Bachor, 1998).

Forgette-Giroux and Marielle (2000) highlighted possible relationships between input and process variables and resulting organizational issues surrounding portfolio assessment implementation in the classroom when a generic content selection framework was provided. This strategy suggested the collection of entries along with five learning dimensions of competency: cognitive, affective, behavioral, metacognitive, and developmental. They examined how often teachers (n=12) used portfolios during the week, what responsibilities learners had toward their portfolios, whether portfolios were used within or across subjects, and what management issues were considered for assessment purposes. The results suggest that portfolio

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assessment involves temporal, spatial, human, and contextual organisations.

In another study, Philipp (1999) focuses on the use of report of action research on portfolios as a way of assessing and reporting in schools. This study suggests some change toward better portfolios. One of the issues the researcher changed was providing the learners with ownership of portfolios. In other words, instead of telling the students what items to be put, they should select samples of work they wish to include and to comment on. Next, adapt a philosophical base of portfolios and an outcomes approach to reporting rather than favouring traditional assessment and reporting strategies. Thus, portfolio assessment kindly discriminates the traditional way of assessment and introduces authentic assessment and reporting it in a progressivist way.

Methods of increasing the accuracy and consistency of portfolio scoring have been developed (e.g., holistic scoring, primary traiting, anchor papers, and rubrics) to increase the reliability of this technique; however, there have always been concerns that this method of assessing student performance was somehow less reliable than some more established techniques (Dutt-Doner and Gilman, 1998; Parsons, 1998). Therefore, it is essential that lecturers make explicit how students will be evaluated in advance.

Dutt-Doner and Gilman (1998) conducted a study with 621 university students enrolled in courses in secondary and elementary undergraduate teacher preparation classes to understand how students perceived their experience with portfolio evaluations or the advantages and limitations of portfolio evaluation that students have identified. Findings obtained from an open-ended survey questionnaire indicated that the students expressed pride in what they perceived to be their ingenuity in accomplishing their goals. Nevertheless, they were concerned with what to include and how much to include. They reported problems in determining what to keep and what to abandon. On the other hand, students believed that portfolio assessment was a better method of evaluation for the classes they had completed. They considered that multiple-choice tests did not reflect everything that one had learned. One student even commented that s/he never learned so much from an assignment. The portfolios produced were considered as valuable asset by students since they could refer to them over and over again whenever they needed to do so.

When the literature related to portfolio assessment is examined, it can be seen that portfolio assessment gains an important place in evaluation. It takes learners as active participants and gives them the responsibility to build upon their previous knowledge in a constructivist way rather than receiving knowledge in a traditional way. Nevertheless, more research needs to be done to obtain more insight on how students from different disciplines perceive portfolio preparation, and how they would like to deal with portfolio implementation. In short, the purpose of this study was to understand how Turkish undergraduate students perceived portfolio assessment in teacher education with respect to Educational Planning and Evaluation Courses, and how students wanted to work during portfolio implementation.

Method

This study was conducted as a requirement of a doctorate course: Practicum in Curriculum Design and Instruction. Since the researcher was assisting a newly developed course called Instructional Planning and Evaluation (IPE), she was interested in gaining more insights about students' perceptions pertinent to portfolio implementation in IPE. In Spring 2000 there were three sections of IPE with 86 students that constructed the population. Nevertheless, the learners in two sections who were exposed to portfolio assessment constructed the sample. In other words, the sample of this study consisted of 42 undergraduate learners in their 4th semesters, who experienced PA for the very first time. From this sample two learners were selected purposefully to gain more insights about the experience they went through; nevertheless, only one of them was interviewed. Again, through purposeful sampling techniques, 5 learners in their 6th terms who had experienced PA in their former year by the same lecturer were selected for the group interview to gain more insights about their perceptions pertinent to PA.

Learners taking IPE had three-hour theoretical, and two-hour practice sessions in a week. One semester consisted of 12 weeks. During practice hours, learners would come together and reflect upon the contents of their portfolios, and the plans they developed. They were expected to include at least 3 items that were left to their own initiatives and a self-evaluation report considering the process of learning. They were made explicit that they had to be creative to decide what to include in their portfolios so that these would reflect their learning and development in the field. During these sessions the instructor monitored the learners in writing goals and objectives, for instance. Thus,

the role of the instructor was acting as a facilitator or guide. The researcher, on the other hand, was acting as a participant observer either taking field notes or assisting the learners with their problems in objectives writing or other issues they had come across.

Data Collection and Analysis

Since this study was a part of a larger study conducted as a requirement of a doctorate course, only data with respect to PA are discussed. All instruments were initially developed by the researcher. Next, a team of 4 doctorate students and 1 professor met, and made constructive judgments about the instruments, and essential modifications were brought about after pilot testing procedures with randomly selected 3 students taking the course, which met the requirements for construct validity.

In this study a five-point-rating scale of 12 open-ended and one close-ended items was used. The first five items aimed at understanding the perceptions of students about holding a portfolio, and the remaining aimed at understanding how they would like to deal with implementing PA. The responses of students were analyzed according to means and percentages. Themes that emerged in the open-ended item, were categorized in meaningful wholes.

The interview schedules included questions like: what learners liked/disliked about holding a portfolio; how portfolios affected their learning process; how learners wanted to work on their portfolios, what influenced the content of their portfolios, and what suggestions they had related to portfolio implementation. Both interviews lasted about 35 minutes. Data were recorded, and later transcribed and analyzed regarding the themes that emerged.

Field notes included how students were reflecting on their portfolios, what problems they faced most, how much sharing did occur about the samples in the portfolios, and other naturalistic observations like interactions among learners and between the lecturer and the learners. Consequently, triangulation of data collection from various sources was means to meet reliability concerns.

Results

Results obtained indicate insightful data with respect to learners' perceptions about portfolio assessment. When Table 1 is scrutinized, it can be seen that learners are rather positive about portfolio preparation since more than half of the respondents agreed that it helped them understand and practice the topics they covered in class. Although the majority agreed that preparing a portfolio took much of their time, the results reveal positive perceptions about holding a portfolio.

When the subscale pertinent to how learners wanted to work on their portfolios is scrutinized (See Table 1), results reveal that half of the respondents wanted to share their works, one third was uncertain if they wanted to do independent work or not, more than one third liked to work in pairs, and less than one-third wanted to work in a group.

Almost one fourth of the learners agreed, and one fifth completely agreed to put products of a group activity in their portfolios. This result may be due to the fact that they did not collaborate to construct an item to be put in their portfolios. Since the literature in portfolio assessment reveals to conferencing of portfolios, the sample in this study showed a negative tendency toward portfolio conferencing, which may be specific to the context or the culture the respondents are in. This finding is means to another research question as to whether the culture of the educational environment influences portfolio conferencing. Finally, the majority indicated that they wanted to know what criteria were put to assess their portfolio. This indicates that the scoring method needs to be made explicit so that learners are assured that the same standards of fidelity and scoring as in any type of testing or assessment are met (Dutt-Doner and Gillman, 1998).

The learners' responses to the open-ended item in this scale indicate negative and positive perceptions. Learners' negative perceptions indicate that preparation of a portfolio is time-demanding, and difficult. As for their positive perceptions, they indicate that keeping a portfolio is useful, and clarifies what they learned in class. Moreover, portfolio implementation is reported as a facilitator to put theory into practice. Data also reveal that the samples learners put or created by themselves were helpful and enjoyable in constructing meaning.

Data obtained during group interviews provided the researcher with more insight about learners' perceptions and endorsed the data obtained through the survey questionnaire. The concerns voiced by Turkish undergraduate teacher education learners in this study were as revealed in the literature (Dutt-Doner and Gillman, 1998; Philipp, 1999). During the group interview the learners indicated that they felt lost when they first started preparing the portfolio; nevertheless, they became more aware of what to include into their portfolio when they progressed with the

course. They thought that the guidelines given at beginning of the course were not very clear to them since they newly started to master the subjects, but the more they learned, the more they could come up with samples to include into their portfolios. Also, they indicated that experiencing such an evaluation process made them think about the implementation process they went through, which actually helped them practice their future profession. Building knowledge upon previous knowledge helped learners recognise and reinforce their ability to think critically and construct new information (Bevenino, Dengel, Adams, 1999; Windschitl, 1999).

Learners voiced that the compulsory items the lecturer wanted them to put into their portfolios helped them understand and practice the course content as well as think of other samples to be put. They voiced that they, therefore, wanted the instructor to tell them more about what items to put into their portfolios rather than being given the freedom. On the other hand, two of the interviewees disagreed upon that, and pointed out that thinking about their items helped them understand how to deal with certain issues as prospective teachers, they added that coming up with new ideas gave them the sense of achievement and success. In brief, when the learners were guided with certain items to include in their portfolios, these were means to facilitate learning experiences and means to thinking of new samples to be included. On the other hand, the process of constructing meaning through available sources, and reflecting upon that led learners to become self-regulated.

As for how to work on the portfolio, one of the learners asserted that she liked the ownership of a portfolio; therefore, she liked to study on the portfolio on her own. She did not want anyone to interfere with what she was producing to put into her portfolio. Actually she seemed to imply that she did not want to share the samples that were her self-created products with peers. On the other hand, few students suggested to collaborate in activities such as interviewing a teacher, but added that they wanted to analyze the data themselves. In other words, although students voiced being able to deal with tasks for PA implementation in groups or pairs, they emphasized again ownership of their portfolios, which is revealed in the literature that PA empowers learners to gain ownership of their work (Parsons, 1998).

The learners were asked how they would feel about conferencing their products to the entire class, voices revealed a negative attitude toward this idea. Later, through an unobtrusive talk, the instructor voiced that because of the competitive culture of the university, the students seemed not to be very ready to care and share their self-developed works. Thus, it can be argued that the competitive environment in this group curbed the sharing of keeping portfolios among students. However, more insightful research needs to be done to conclude upon such a statement

Students' voices indicated many invaluable remarks about their perceptions related to the process of portfolio preparation. The interview with one learner during the process of portfolio implementation reveals that proceeding step by step in completing the samples to be put in the portfolio was challenging since her efforts turned into a product of her own. Moreover, data reveal that the learner collected samples from actual teachers and also interviewed teachers to obtain a clear understanding of instructional planning. Since the interviewee was questioning the process like, 'how will I make use of such instructional planning in the future'; 'will a detailed description of intended learning outcomes be useful', reveal that implementing PA made her analyze and synthesize the issues she came across. Thus, PA involves practicing higher order skills. Self-regulated learners do not try to construct meaning only for short term goals but also consider long term goals. When the interviewee was asked whether she liked to give reflections during practice hours about their portfolios, she voiced that reflections made her think about her weaknesses, made her come up with new ideas, and helped her pacing with peers. Thus, reflections during PA build upon evaluating own performance, and improve the present products.

Field notes obtained through participant observations were means to understand to what extent learners collaborated or preferred to collect samples individually. It was seen that the instructor dealt with a specific dimension of instructional planning and assigned learners to prepare that specific dimension in the plan they held to be put into their portfolios. Also, samples that indicated creativeness and self-reflection were encouraged to be constructed. Learners came together during practice hours (2 hours a week), and peer checked and commented on their products in small groups, and expected external feedback from the lecturer. PA encouraged students to collaborate and revise their documents so that it would reflect the interchange among teacher and students (Coppola, 1999).

Subjects' samples consisted mostly of interviews with teachers from different grades, observations of previous classroom environments, literature based on instructional planning, and reflective analysis of data gathered. Field

notes reveal that self-regulated learners knew how to use the resources available, seek help through collaboration and revise the work they did (Shunk, 1996). Moreover, learners collaborated more on tasks that were assigned by the lecturer; nevertheless, seemed reluctant to share samples that were their own creative products. This finding correlates with voices in the group interview and indicates a rather competitive environment among subjects with whom the research was conducted.

Conclusion

Although the results obtained in this study can not be generalized to the whole population, findings suggest invaluable remarks regarding portfolio assessment. Findings suggest that PA is an important means to assess learners' performance with respect to developing skills in instructional planning and evaluation. Through PA, the skills of learners were exposed, which enabled the learners themselves and their instructor to obtain evidence of their weaknesses and strengths in instructional planning and evaluation procedures. Through collaborative work, learners guided each other to fulfill their weaknesses, construct new meaning from various sources and pace themselves according to the allotted time. Activities during portfolio implementation involved students' observing, collecting data, generating and testing hypothesis, and collaboratively working with others, which indicates a constructivist class (Shunk, 1996). Nevertheless, the question of whether the competitive environment in higher education curbs the sharing aspect of self-created materials during portfolio implementation emerged. It is suggested that future studies based on PA consider this issue.

Moreover, as observed in this case, teachers are suggested to facilitate learners to construct knowledge by providing them with environments in which they are encouraged to think and create (Brooks and Brooks, 1993). While students are progressing with their portfolios, they develop their our knowledge by integrating current experiences with past experiences or through collecting data from relevant authentic environments that indicate constructivist learning (Dunlop and Grabinger, 1996; Marlowe and Page, 1998). It is suggested that learners be given tasks at the initial stages so that they will not be frustrated and will help them become self-regulatory learners (Curry, 2000). Also, it is suggested that learners include evidence of reflection and self-evaluation in their portfolios (Anderson and Bachor, 1998). Evidence as such helps the individual and the lecturer to make explicit learner weaknesses and strengths.

In a nutshell, portfolio assessment seems to be an effective means in assessing learner performance during teacher education with respect to Instructional Planning and Evaluation. It allows learners to focus more effort on studying in areas where they have weaknesses. By self-monitoring their capabilities and collaborating with peers, learners become aware of their competence and strengthen their self-efficacy, which enhances self-regulated learning. Nevertheless, there is a need to find more evidence so as to find whether the cultural learning environment curbs with student perceptions about holding and sharing the samples in portfolios.

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Biography

Hanife Akar is a research assistant at Middle East Technical University, Department of Educational Sciences. Her field of specialization is Curriculum and Instruction. She had formerly 9 years of English foreign language teaching experience at the Faculty of Political Sciences, Ankara University.

Table 1: Portfolio Implementation

	CD 1 %	D 2 %	U 3 %	A 4 %	CA 5 %	X	N
1. The readings we do guided me in preparing my portfolio.	4.8	2.4	-	61.9	31.0	**<u>4.12</u>**	42
2. Preparing a portfolio has helped me to <u>understand</u> the topics we learn in class.	-	7.1	7.1	61.9	23.8	**<u>4.02</u>**	42
3. Preparing a portfolio has helped me to <u>practice</u> the topics we learn in this course.	-	2.4	7.1	66.7	21.4	**<u>4.14</u>**	42
4. It takes too much of my time to prepare a portfolio.	2.4	4.8	4.8	28.6	57.1	**<u>4.45</u>**	41
5. It is worth the effort to prepare a portfolio.	-	7.1	38.1	42.9	7.1	*3.52*	40
6. I like to share the works in my portfolio with my classmates.	-	4.8	28.6	52.4	14.3	*3.76*	42
7. I like to work on my portfolio on my own.	11.9	11.9	33.3	19	21.4	*3.27*	41
8. I like to work on my portfolio in pairs.	7.1	26.2	19	35.7	9.5	*3.15*	41
9. I like to work on my portfolio in groups.	11.9	21.4	26.2	28.6	9.5	*3.02*	41
10. I like to put works in my portfolio that are <u>products of a group activity.</u>	9.5	16.7	28.6	23.8	21.4	*3.09*	42
11. I like to present the contents of my portfolio to the whole class.	16.7	38.1	31	9.5	4.8	2.48	42
12. I would like to know what criteria are put to assess my portfolio.	-	2.4	4.8	26.2	66.7	**<u>4.57</u>**	42

In the table CD refers to Completely Agree; D: Disagree; U: Undecided; A: Agree; CA: Completely Agree; X: Mean; N: Number of subjects who responded to the item. The underlined means refer to means above 4, the ones in italics refer to the means between 3 and 4.