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University students' opinions on application of portfolio in higher education

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Abstract

Click here and insert your abstract text. The purpose of this study is to determine opinions of university students towards the use of portfolio as a tool of teaching and evaluation in higher education. Also aimed to reveal if there is a difference of opinions in terms of gender (male or female), class (3th or 4th) and type of education (I. or II.) of the university students. This research is a descriptive research. The working group consists of 189 university students field of education in Kırklareli University Faculty of Arts and Sciences Department of Philosophy during fall semester in the 2013-2014 academic year. Portfolio application was carried out in the department of Philosophy at the 3rd grade "developmental psychology" lesson and 4th Grade "psychology of learning" lesson. Portfolio which was prepared over a period by students was evaluated and the obtained results have affected the students' course grade. For the purpose of the study a form was developed by researcher to determine the students' opinions towards the portfolio. The survey used as a measurement tool contains 18 items and in the form of triple likert-type like "I totally agree", "partly agree", "disagree completely". The data obtained by Survey were analyzed by SPSS 17. For this analysis procedures, percentage, mean and t-test were used. According to analyzing results value it can be said that university students' opinions regarding the application of portfolio are reasonably positive. No significant difference was found in university students' opinions about portfolio application in terms of their genders, classes and type of education.

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1. Introduction

1.1. Assessment in the education process

Education must be interactive and development is being followed process. In this process it is possible to follow improving by assessment activities. Measurement and assessment is indispensable factor in instructional curriculum (Metin, 2012). Carless (2009) assert that evaluation should include theoretical and practical applications. Leithner (2011) emphasizes that assessment must be streamline and transparent process in education. Because students want to know about their success and mistake in the process of education. Thus they will study more consciously and the study became more effectively.

1.2. Assessment tools

Assessment give feedback about education process to teachers, students and parents. It is so important point fair treatment in assessment process as well. In this situation there is a quation “how can be possibile measure adequately whether or not learning has really occurred?”. Students’ learning level can measure not only by exam tests but also other alternative evaluation tools (consept map, performance tasks, project, self evaluation, sturactured grid, rubric, branched tree, drama, observation, control list, portfolio) extensively (Birgin, 2003; Corcoran, Dershimer & Tichenor, 2004; Leithner, 2011). Complex mixture of assessment models are taken into consideration in higher education. Exam tests, presentations, tasks, assignments which prepared by students can use together in education for comprehensively assessment (Gülbahar & Köse, 2006; Powell, 2013). In addition to students devolop themselves by organazing work. Thereby students can track their own growth and determine their own deficient(Baturaya & Daloğlu, 2010).

1.3. Portfolio as an assessment tool

Systematic and purposefully collection of students’ working documents on their course is defined as portfolio (Arter & Spandel, 1992; Chang, 2008;) Portfolio can use as a tool of knowledge, ability, working and skill assessment in higher education (Barrett, 2001; Powell, 2013). According to Trevitt, Stocks & Quinlan (2012; 164-165) portfolio should include, five elements:

- representations of practice;
- engagement with key ideas in education, and/or the educational literature;
- reflective commentary – an autobiographical/autoethnographic aspect that takes an inquiring and critical stance;
- integration or linkage between the fi rst three elements; and
- sufficient breadth to include multiple aspects of teaching practice, e.g. course design, teaching, assessment (Trevitt, Stocks & Quinlan 2012; 164-165).

1.4. Using Portfolio

Portfolio has a major role in teaching, learning and assessment activities. Portfolio acts as a mirror in the education process. Because it reflects students' progress. It can be said that portfolio is an evidence about summative evaluation (Baume & Yorke 2002; Brown, 2003). Elwood & Klenowski 2002 point out that summative evaluation not enough in education. Formative and summative evaluation methods must use together for effective assessment. Portfolio can use as a formative evaluation tool.

1.5. Advantages of using portfolio

Portfolio enable to student became active in learning and assessment process (Güven & Aydoğdu, 2009). Because students carve works out frequently. Students research, write reports and present their work to create portfolio. Portfolio supports permanent learning (İzgi & Gücüm, 2012) and improves students' ability of creativity (Katırcı & Satici, 2010). Plus Chang, Liang and Chen's (2013) view portfolio is useful for teachers. Because teachers can determine interest and ability of their students and guide them well. In accordance with this view Klenowski, Askew and Carnell, (2006) specify portfolio is very considerable learning and assessment tool in the higher education. Additionally portfolio is valuable tool for higher education. Because they help students and teachers to know what is occurring in their teaching program and help them unroll on their own failures and inadequacy as well as successes (Winsor, 1994). The data which obtained by portfolio must be reliable and valid for acceptance as a assessment tool (Dubrovich, 2002). Kan (2007) refers that the data which obtained by portfolio must be evaluated not only by a teacher but also other teachers and experts. Teachers' and experts' results must be consistent. In this direction Oskay, Schallies, and Morgil (2008) defined that portfolio is reliable and valid tool in the assessment process.

As regards researchs conducted (Baume & Yorke 2002; Bedir, Polat & Sakacı, Brown, 2003; 2009; Güven & Aydoğdu, 2009; İzgi & Gücüm, 2012; Katırcı & Satici, 2010; Korkmaz & Kaptan, 2002; Shepard, 2000) it can be said that portfolio effective and usefull assessment tool.

In this research aimed to determined students' opinions about portfolio as a significant learning and assessment tool.

2. Method

2.1. Type of research

The purpose of this research is to determine the university students' opinions about application of portfolio. It is also aimed to reveal if there is a diversity of opinions in terms of gender (male or female) , class (3th or 4th) and type of education (I. or II.) of the university students. For this purpose it is the detection of current condition. Therefore, this research is a descriptive research.

2.2. Working Group

The study group consisted of Kırklareli University Faculty of Arts and Sciences Department of Philosophy 3rd grade students (65 female, 24 male, total 89) and 4th grade students (74 female, 26 male, total 100) (totally 189) in the 2013-2014 academic year.

Table 1: Distribution of the working group based on their class, gender and type of education

Type of Education	Gender	Class		Total
		3	4	
I.	female	39	37	76
	male	7	12	19
	Total	46	49	95
II.	female	26	37	63
	Male	17	14	31
	Total	43	51	94

2.3. Application of Portfolio

Portfolio application was carried out in the department of Philosophy at the 3rd grade "developmental psychology" lesson and 4th Grade "psychology of learning" lesson. According to Chang, Liang and Chen (2013; 327) "in portfolio creation, the evaluation of portfolios focuses on content completeness, appropriateness, richness, and organization and presentation". In this context homeworks were given by researcher (lecturer) to the 3rd grade students from the department of Philosophy who were learning "developmental psychology" and 4th grade students from department of Philosophy who were learning "psychology of learning" related to the topics of "developmental psychology" and "psychology of learning" lessons which were thought to develop the skills of students' "liberal education, ability to comment and research skills". Actual life examples and comments were demanded with issues which were given related to the topics for research a week's time was given to students to research and report the topic of research. The research homeworks were analyzed and feedbacked by researcher (lecturer). Feedbacks which were given to the students aimed to motivate and orientate the students more in-depth research and develop their comment ability. Feedbacks which were written on the students' homeworks can guide their later homeworks. After the feedbacks, homeworks are given back to students to hide and put them files. In this way an application was made during fall semester of the 2013-2014 academic year. This application is made over a period. Portfolio which was prepared over a period by students was evaluated and the obtained results have affected the student's course grade.

2.4. Data Collection Tool

For the purpose of the study a form was developed by researcher to determine the students' opinions towards the portfolio which was prepared by them. In the preparation process of the form first the students' opinions -related to implementation and evaluation of a portfolio- were taken. In this context, open-ended questions were directed to the students. Questionnaire include those examples "what do you think about portfolio working?", "What you gain from the portfolio work?", "Do you think that the portfolio work is useful?", "Do you think that inclusion of portfolio work in the evaluation process is fair?" "Did you enjoy this work during the portfolio implementation process?" A form which consist 22 items was prepared according to the students' answers and review of the literature. Five education experts were consulted with this prepared form. According to the consults of the education experts four items were removed from survey. Thus, the survey used as a measurement tool contains 18 items and in the form of triple Likert-type like "I totally agree", "partly agree", "disagree completely".

2.5. Data Analysis

The data obtained by Survey from department of Philosophy students whose were learning "developmental psychology" and "psychology of learning" lessons were analyzed by SPSS 17. For this analysis procedures, percentage, mean and t-test were used.

3. Results and Comments

This part of the research includes findings obtained from analysis results and interpretations.

3.1. University students' opinions regarding the application of portfolio

Mean and standard deviation values were calculated according to the university students' opinions on the application of portfolio which was determined by a survey and results were presented in Table 2.

Table 2: University students' opinions regarding the application of portfolio

Questions	N	\bar{X}	SS.
1. Homeworks which I had done within the scope of the portfolio application contributed me to develop my liberal education	189	2,28	,67
2. Homeworks which I had done within the scope of the portfolio application contiributed me to discover my directions which I need to develop	189	2,12	,73
3. Homeworks which I had done within the scope of the portfolio application contiributed me to relize catchy learning	189	2,30	,71
4. Homeworks which I had done within the scope of the portfolio application contiributed me to use time efficiently	189	2,01	,75
5. Homeworks which I had done within the scope of the portfolio application contiributed me to reinforce the topics which I repeated	189	2,35	,65
6. Homeworks which I had done within the scope of the portfolio application contiributed me to study with diffrent sources	189	2,36	,69
7. Homeworks which I had done within the scope of the portfolio application contiributed me to come to class prepared.	189	2,40	,69
8. Homeworks which I had done within the scope of the portfolio application contiributed me to join the lesson actively	189	2,19	,74
9. Homeworks which I had done within the scope of the portfolio application contiributed me to develop my ability of comment.	189	2,09	,74
10. Homeworks which I had done within the scope of the portfolio application contiributed me to increase my sense of resposibility.	189	2,14	,72

11. Homeworks which I had done within the scope of the portfolio application contiributed me to show my studies better	189	2,18	,67
12.Homeworks which I had done within the scope of the portfolio application contiributed me to learn more things which I do not know	189	2,21	,69
13. Homeworks which I had done within the scope of the portfolio application contiributed me to increase my interest in course	189	2,08	,76
14. Portfolio application contiributed me to have ideas about my development	189	2,15	,77
15. Homeworks which I had done within the scope of the portfolio application contiributed me to have regular studying habits	189	1,92	,74
16. Portfolio application contiributed me to enjoy from doing homework	189	1,83	,77
17. Joining of portfolio application to evaluation process contiributed me to get a reward from my labors	189	2,25	,75
18. Using portfolio in the evaluation process contributed a fair evaluation	189	2,29	,74
Total	189	39,25	9,37

According to table 2 “portfolio applications; contiributed me to study with diffrent sources and contiributed me to come to class prepared” are the most like-minded items of university students. Arithmetic average value of items from the survey about the university students’ opinions regarding the application of portfolio, are changing between 2.40 and 1.83. Considering the values of items vary between 1 and 3 so it can be said values are high. University students’ arithmetic mean total scores which revealed from the survey about the university students’ opinions regarding the application of portfolio were 39.25. This value is high considering the highest values of scale is 54.00. According to this value it can be said that university students’ opinions regarding the application of portfolio are positive.

3.2. University students’ opinions regarding the application of portfolio according to their gender

Mean and standard deviation values were calculated and t-test was done to determine the diffrence whether it was changing by students’ gender according to the university students’ opinions on the application of portfolio. Results are shown on the Table 3.

Table 3: University students’ opinions regarding the application of portfolio by their gender

Survey	Gender	N	\bar{X}	SS	Sd	t
Portfolio opinion	Female	139	38.46	9.74	189	.01
	Male	50	41.46	7.90		

*p<.01

According to table 3, male students' opinions on the application of portfolio are more positive and according to t-test results, difference is not important.

3.3. University students' opinions regarding the application of portfolio according to their classes

Mean and standard deviation values were calculated and t-test was done to determine the difference whether it was changing by students' classes according to the university students' opinions on the application of portfolio. Results are shown on the Table 4.

Table 4: University students' opinions regarding the application of portfolio by their classes

Survey	Class	N	\bar{X}	SS	Sd	t
Portfolio opinion	3	89	37.37	8.85	189	.21
	4	100	40.93	9.54		

* $p < .01$

According to table 4, the 4th grade students' opinions on the application of portfolio are more positive and according to t-test results, difference is not important.

3.4. University students' opinions regarding the application of portfolio according to their type of education

Mean and standard deviation values were calculated and t-test was done to determine the difference whether it was changing by students' type of education according to the university students' opinions on the application of portfolio. Results are shown on the Table 5.

Table 5: University students' opinions regarding the application of portfolio by their type of education

Survey	Type Of Education	N	\bar{X}	SS	Sd	t
Portfolio opinion	I.	94	41.16	8.57	189	.25
	II.	95	37.33	9.79		

* $p < .01$

According to table 5, I. teaching students' opinions on the application of portfolio are more positive and according to t-test results, difference is not important.

4. Discussion and Conclusion

The purpose of this study is to investigate the university students' views on the portfolio that they prepared in "developmental psychology" and "psychology of learning" courses and define relationship of university students' views on the portfolio and their gender (male or female), their classes (3th or 4th) and their type of education (I. or II.). For this purpose, prepared survey was administered to university students. The data obtained

were analyzed. According to analyzing results value it can be said that university students' opinions regarding the application of portfolio are reasonably positive. Especially university students emphasized that portfolio applications; contributed me to study with different sources and contributed me to come to class prepared. In the literature there are studies (Akdağ, Çinicici & Akgün, 2004; Breault, 2004; Ersoy, 2006; Gülbahar & Köse, 2006; Metin, 2012; Mıhladı, 2007; Özyenginer, 2006; Powell, 2013) supporting this result. Also the results show that university students think that it is fair assessment using portfolio.

In order to determine whether university students' opinions on application of portfolio scores differed between genders of university students, an independent-sample t-test was conducted. The independent-sample t-test scores show that there is no significant differences between the university students' opinions on application of portfolio ($t=-.01$; $p<.01$) in terms of gender. According to the scores, male university students have more positive opinions ($\bar{X}=41.46$) on application of portfolio than females ($\bar{X}=38.46$). The results were obtained by Metin (2012) contrast with this study results. Because According to Metin (2012), female students have a little bit more positive opinions towards performance assessment than males.

In order to determine whether university students' opinions on application of portfolio scores differed between university students' classes (3th or 4th), an independent-sample t-test was conducted. The independent-sample t-test scores show that there is no significant differences between the university students' opinions on application of portfolio ($t=-.21$; $p<.01$) in terms of classes. According to the scores, 4th grade students have more positive opinions ($\bar{X}=40.93$) on application of portfolio than 3th grade students ($\bar{X}=37.37$).

In order to determine whether university students' opinions on application of portfolio scores differed between university students' type of education (I. or II.), an independent-sample t-test was conducted. The independent-sample t-test scores show that there is no significant differences between the university students' opinions on application of portfolio ($t=-.25$; $p<.01$) in terms of type of education. According to the scores, I. Teaching students have more positive opinions ($\bar{X}=41.16$) on application of portfolio than II. Teaching students ($\bar{X}=37.33$).

References

- Akdağ, G., Çinicici, A. & Akgün, A. (2014). Fen bilgisi öğretmen adaylarının portfolyo uygulamasına ilişkin görüşleri. *Route Educational & Social Science Journal*, 1(1), 1-16.
- Arter, J. A. & Spandel, V. (1992) Using portfolios of student work in instruction and assessment. *Educational Measurement: Issues and Practice*, 11(1), 36-44.
- Barrett, H. C. (2001). "Electronic portfolios." In educational technology an encyclopedia. [Online]: Retrieved on 20-April-2014, at URL: <http://electronicportfolios.com/portfolios/encyclopediaentry.htm>
- Baturay, M. H., & Daloglu, A. (2010). E-portfolio assessment in an online English language course. *Computer Assisted Language Learning*, 23(5), 413 – 428.
- Baume, D. & Yorke, M. (2002). The reliability of assessment by portfolio on a course to develop and accredit teachers in higher education, *Studies in Higher Education*, 27(1), 7-25.

- Bedir, A., Polat, M., & Sakacı, T. (2009). İlköğretim 7. sınıf fen ve teknoloji dersine ait bir uygulama çalışması: portfolyo. *C.B.Ü Fen Bilimler Dergisi*, 5 (1), 45- 58.
- Birgin, O. (2003). Bilgisayar destekli bireysel gelişim dosyasının uygulanabilirliğinin araştırılması. Unpublished Master's Thesis. Trabzon: Karadeniz Teknik Üniversitesi Fen Bilimleri Enstitüsü.
- Breault, R. A. (2004). Dissonant themes in pre-service portfolio development. *Teaching and Teacher Education*, 20(8), 847-859.
- Brown, S. (2003) Assessment that works at work, *The Newsletter for the Institute for Learning and Teaching in Higher Education*, Summer,11, 6–7.
- Carless, D. (2009). Trust, distrust and their impact on assessment reform. *Assessment and Evaluation in Higher Education*, 34(1), 79 – 89.
- Chang, C. C. (2008). Enhancing self-perceived effects using Web-based portfolio assessment. *Computers in Human Behavior*, 24(4), 1753–1771.
- Chang, C. C., Liang, C. & Chen, Y. H. (2013). Learner self-assessment reliable and valid in a web-based portfolio environment for high school students?, *Computers & Education*, 60, 325 –334.
- Corcoran, C. A., Dershimer, E. L. & Tichenor, M. S. (2004). A teacher's guide to alternative assessment taking the first steps. *The Clearing House*, 77(5), 213-216.
- Dubrovich, M. (2002). A diversify your assesment portfolio. *Principal*, 82(2), 7-56.
- Elwood, J. & Klenowski, V. (2002). Creating communities of shared practice: assessment use in learning and teaching. *Assessment and Evaluation in Higher Education*, 27(3), 243–256.
- Ersoy, A. F. (2006). Öğretmen adaylarının gelişim dosyasına dayalı değerlendirmeye ilişkin görüşleri. *İlköğretim online*, 5 (1), 85 - 95
- Gülbahar, Y. & Köse, F. (2006). Perceptions of preservice teachers about the use of electronic portfolios for evaluation. *Ankara University, Journal of Faculty of Educational Sciences*, 39(2), 75-93.
- Güven, E. & Aydoğdu, M. (2009). Portfolyonun 6. sınıf fen ve teknoloji dersi vücudumuzda sistemler ünitesi'nde başarı ve kalıcılığa etkisi. *Türk Fen Eğitimi Dergisi*, 6 (2), 115 - 128.
- İzgi, Ü. & Gücüm, B. (2012). Fen eğitiminde portfolyo değerlendirme kullanımının sınav kaygısı ve öğrenmenin kalıcılığı üzerine etkisi. *Eğitim ve Bilim*, 37(164), 71-81.
- Kan, A. (2007). Portfolyo değerlendirme. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 32, 133 - 144.
- Katırcı, E. & Satici, A. F. (2010). Interactive physics programında simülasyon ve portfolyo uygulamalarının akademik benlik ve yaratıcılık üzerine etkisi. *Türk Fen Eğitimi Dergisi*, 7(4), 46-59.
- Klenowski, V., Askew, S., & Carnell, E. (2006). Portfolios for learning, assessment and pro-fessional development in higher education. *Assessment and Evaluation in Higher Education*, 31(3), 267– 286.
- Korkmaz, H. & Kaptan, F. (2002).“Fen eğitiminde öğrencilerin gelişimini değerlendirmek için portfolyo kullanımı üzerine bir inceleme”, *Hacettepe Üniversitesi Eği-tim Fakültesi Dergisi*, 23:167-176.
- Leithner, A. (2011). Do student learning styles translate to different “testing styles”?, *Journal of Political Science Education*, 7:416–433.
- Metin, M. (2012). Investigation of primary students' opinions about using performance assessment in science and technology course with respect to the different variables. *Asia-Pacific Forum on Science Learning and Teaching*, 13 (2), 135-159.
- Mıhladız, G., (2007). “İlköğretim fen bilgisi öğretiminde portfolyo uygulamasının öğrencilerin akademik başarılarına ve derse yönelik tutumlarına etkisi.”, Unpublished Master's Thesis., Muğla Üniversitesi Fen Bilimleri Enstitüsü, Muğla.
- Oskay, O., Schallies, M., & Morgil, I. (2008). A closer look at findings from recent publication. *Hacettepe University Journal of Education*, 35, 263 – 272 .
- Özyenginer, E. (2006). Bilgisayar dersinde elektronik portfolyo yöntemi kullanımı üzerine bir çalışma. Unpublished Master's Thesis., Dokuz Eylül University, İzmir.
- Powell, T. (2013). “The importance of assessments: How portfolios can impact students' self-efficacy and comprehension in an online graphic design course”., Unpublished PhD Thesis Capella University, Minneapolis.
- Shepard, L. A. (2000). “The role of assessment in a learning culture”, *Educational Researcher*, 29(7), 4-14.
- Trevitt, C., Stocks, C., & Quinlan, K. M. (2012). Advancing assessment practice in Continuing Professional Learning: toward a richer understanding of teaching portfolios for learning and assessment. *International Journal for Academic Development*, 17(2), 163-175.

Winsor, R. C. (1994). "Learning about portfolio assessment", *Journal of Reading Education*, 19 (3), 12-18.