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THE EFFECT OF PORTFOLIOS ON HIGHER EDUCATION STUDENTS LEARNING

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Abstract

The implementation of the European Higher Education Area (EHEA) has led educators to rethink their way of assessing college students and look for alternative choices. In particular, the use of portfolios as a form of authentic assessment is becoming more popular in higher education settings. Educators have been making a move from traditional type tests to alternate forms of assessments, because they consider student portfolios can be used very effectively. However, determining how a portfolio can be most effectively used to assess students learning can be an excruciating task. The use of such an instrument for assessment is not only meant to evaluate how well students are performing, but also as a way to enhance student learning and create support for student reflection. This study was motivated by some higher education instructors who were interested in implementing the use of portfolios at the Universidad Rey Juan Carlos. A total of 163 undergraduate students across two undergraduate courses participated in this study. These students included prospective early childhood educators and elementary school teachers. A questionnaire-based survey was conducted to inquire into students' views of portfolios as a learning tool, and data collected was examined. As the data reveal, portfolios help students to stay actively involved and motivated in their learning besides encouraging self-reflection. They also help students to take ownership of their own learning and be able to self-assess their abilities. Results also indicate that the use of portfolios promotes critical thinking, analytical and synthesis skills.

Keywords: portfolios, assessment, European Higher Education Area.

1 INTRODUCTION

Over the last decade, there has been a growing interest in the use of portfolios in the European Higher Education Area (EHEA) as a way to promote the advancement of teaching and learning. Although the portfolio is considered a very subjective form of assessment, the implementation of the EHEA has led educators to rethink their way of assessing college students and consider alternate assessment tools. In particular, the use of portfolios as a form of authentic assessment is becoming more popular in higher education settings. Student portfolios can be used very effectively in the teaching and learning process, and they have been used by students in various disciplines such as architecture, nursing and engineering [1].

While some work has been done to measure student perspectives on portfolio integration [1] [2], the identification of baseline evaluation data for portfolios is needed, particularly within higher education institutions, such as the Universidad Rey Juan Carlos, to allow instructors to assess its effectiveness. However, determining how portfolios can be most effectively used to assess students learning can be a daunting task. The use of such an instrument for assessment is not only meant to evaluate how well students are performing, but also as a way to enhance student learning and create support for student self-reflection [1] [3] [4].

From this perspective, this study focuses on the students' attitudes and opinions towards their portfolio experience at the Universidad Rey Juan Carlos and it inquiries into students' views as prospective early childhood and elementary school teachers. It also examines the effectiveness of using portfolios as a learning tool on higher education settings.

2 INTRODUCTION

2.1 Participants

A total of 163 students (70 males and 93 females) participated in the study. These students included prospective early childhood and elementary school teachers from the Universidad Rey Juan Carlos across two 12-week semester classes where the use of portfolios was adopted in the Spring semester

of 2016. The age range of participants was: 17-19 (30.7%), 20-24 (56.4%), 25-34 (10.4%), 35-44 (1.8) and 45 or over (0.6%).

2.2 Procedure

During the first week of the semester, the instructors introduced the portfolios and then integrated its use to facilitate student learning and help them to improve their learning outcomes, as well as using them as a tool to help students to become reflective learners and maximize active learning. At the end of the semester, all students enrolled in the classrooms were asked to participate in the study by taking an online survey to assess overall perception of their portfolios experience at the Universidad Rey Juan Carlos. Participation and responses were completely voluntary and anonymous.

2.3 Instrument and Data Analysis

The instrument used for this study was a questionnaire designed by the primary investigator and a content expert. This questionnaire was reviewed by a group of teachers' educators and then pilot tested. The final version of the survey instrument consists of 29 items that include demographic items and items included for forthcoming analyses. Scale items 5-24 were coded using a four-point Likert scale ranging from 'Strongly disagree' to 'Strongly agree'. For our analyses, 'Strongly disagree' was coded as 1, 'Disagree' as 2, 'Agree' as 3, and 'Strongly agree' as 4. An open question was also given so that students could tell us whether the use of portfolios was helpful for their learning. Students completed the questionnaire after the Spring semester of 2016.

Data analysis was undertaken using the Statistical Package for Social Sciences (SPSS 22.0). Descriptive statistics were calculated via means, standard deviations and percentages where appropriate.

3 RESULTS

Prospective early childhood and elementary school teachers' perceptions towards the portfolios experience are presented in Table 1. One of the major findings was the participants' beliefs that using portfolios helped them improve in their higher education learning experience.

Table 1. Prospective early childhood and elementary educators' responses.

Questions items: <i>The portfolio has helped me to...</i>	Mean (n=163)	SD (n=163)
5. <i>be aware of my evolution of the learning process.</i>	2.72	0.733
6. <i>take responsibility of my learning process.</i>	2.93	0.750
7. <i>know how I learn, what works for me and does not...</i>	2.69	0.774
8. <i>be more autonomous in my learning.</i>	2.90	0.747
9. <i>learn how to self-assess my own progress.</i>	2.74	0.760
10. <i>improve my attention level in class.</i>	2.66	0.890
11. <i>increase my motivation towards learning.</i>	2.43	0.809
12. <i>consolidate the knowledge acquired during the subject.</i>	2.85	0.764
13. <i>decide what I need to do in order to achieve my learning goals.</i>	2.62	0.787
14. <i>improve the planning and organization of my work.</i>	2.85	0.833
15. <i>improve my reading comprehension and vocabulary acquisition.</i>	2.88	0.760
16. <i>establish relationships with other subjects.</i>	2.68	0.799
17. <i>become more interested in the subject.</i>	2.47	0.884
18. <i>use the instructor feedback to improve my work.</i>	2.69	0.829
19. <i>better understand the different methodologies used by the instructor to achieve the proposed goals.</i>	2.65	0.733
20. <i>improve my synthesis capacity.</i>	2.89	0.762
21. <i>improve my analytical capacity.</i>	2.86	0.785
22. <i>improve my critical thinking skills.</i>	2.94	0.731
23. <i>develop an interest in going deeper into certain topics.</i>	2.79	0.857
24. <i>change my way of studying, reasoning and relating more.</i>	2.58	0.867

As expected the use of portfolios helped participants to take ownership of their own learning (79.1%) and stimulated critical thinking skills. Students reported that the portfolio experience was a significant learning experience; it has facilitated students develop their core critical thinking skills by engaging them in analysis (74.9%), synthesis (76.1%), evaluation (68.1%) and encouraging self-reflection. Moreover, portfolios have helped students to stay actively involved and motivated in their learning; participants (75.4%) also believe that portfolios helped them develop into more autonomous and responsible learners. Therefore, portfolios can facilitate students learning and may help students promote critical thinking, analytical and synthesis skills.

As the data also reveal, the use of portfolios increased students' self-awareness (66.2%) and helped them reinforce their reading comprehension and vocabulary acquisition (75.5%). Surprisingly 61.3% ($SD = 0.448$) of the students indicated that the use of portfolios was helpful for their learning and 87.1% ($SD = 0.336$) of them believe the use of academic portfolios should be optional.

While a review of the qualitative data generated is impractical given the scope of this paper, an examination of the content suggests the use of portfolios can serve as a tool to enhance the students learning practice in higher education settings. The results suggest that using portfolios helped prospective early childhood and elementary educators to self-assess their abilities more effectively.

4 CONCLUSION

The use of portfolios to foster learning is still at an early stage in the EHEA. At Universidad Rey Juan Carlos instructors are learning how to promote the use portfolios to improve the learning practice. This study provides further evidence that prospective educators are coalescing towards more personalized learning experiences [6]. The use of portfolios engages students in more practical learning activities and enhance learner autonomy and students' writing skills.

REFERENCES

- [1] A. Tubaishat & A. Lansari, "Using Student e-Portfolios to Facilitate Learning Objective Achievements in an Outcome-Based University", *Journal of Information Technology Education: Innovation in Practice*, vol. 12, pp. 113-127, 2013.
- [2] M. J. Agra-Pardiñas, A. Aggewerc-Barujel & L. M. Montero-Mesa, "El portafolios como herramienta de análisis en experiencias de formación on-line y presenciales", *Enseñanza & Teaching: Revista Interuniversitaria de Didáctica*, vol. 21, pp. 101-114, 2003.
- [3] M. B. Alfageme González, "El portafolio reflexivo: metodología didáctica en el EEES", *Educatio Siglo XXI*, vol. 25, pp. 209-226, 2007.
- [4] M. A. Romero López & E. Crisol Moya, "El portfolio, herramienta de autoevaluación del aprendizaje de los estudiantes. Una experiencia práctica en la Universidad de Granada", *Revista Docencia e Investigación*, vol. 21, pp. 26-50, 2011.
- [5] J. Paz-Albo Prieto, "The influence of simulations on family engagement – prospective early childhood educators' perceptions", *Early Child Development and Care*, 2016. DOI: 10.1080/03004430.2016.1202946