Performance assessment and rubrics in art education: A study of student perceptions

Evaluación del desempeño y rúbricas en la educación artística: un estudio de las percepciones de los estudiantes

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Abstract

Performance assessment is widely applied in university arts courses. However, rubrics are only rarely used in this context. The introduction of new assessment methodologies in the field of arts education has met with some resistance. There is a concern that the specificity of these disciplines requires a kind of connoisseurship model which recently developed assessment methods are unable to provide. This article describes the implementation of a rubrics-based performance assessment in a course taught on the Fine Arts, Design and Conservation/Restoration undergraduate degrees. We performed an empirical study of 94 students' opinions of the use of rubrics. The calculation of basic statistics and correlation coefficients showed that the rubrics helped students to understand the learning environment and to plan and develop their work, and promoted high cognitive learning. However, their usefulness in self-and peer assessment was rated less positively.

Keywords: assessment, rubrics, student perceptions, art education.

Resumen

La evaluación del desempeño está ampliamente extendida en los estudios universitarios de las artes; sin embargo, las rúbricas son todavía poco utilizadas en este contexto. La introducción de nuevas metodologías de evaluación encuentra resistencias en el campo de la educación artística. Existe la preocupación de que la especificidad de estas disciplinas requiere un modelo al que no se adecúan las recientes tendencias de evaluación. El artículo describe la introducción de un sistema de evaluación basado en rúbricas en una asignatura impartida en los grados de Bellas Artes, Diseño y Conservación-Restauración. Se realizó un estudio empírico de las opiniones de 94 estudiantes sobre el uso de las rúbricas. El cálculo de los estadísticos básicos y los coeficientes de correlación mostraron que las rúbricas ayudaron a los estudiantes a entender el entorno de aprendizaje, a planificar y desarrollar desarrollar su trabajo y a promover un aprendizaje de alto nivel cognitivo. Pero su utilidad en la autoevaluación y la evaluación entre iguales obtuvo valoraciones más bajas.

Palabras clave: evaluación, rúbricas, percepciones de los estudiantes, educación artística.

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Introduction

Students' perceptions of their educational experiences (particularly of assessment) powerfully influence their learning approach and as a result their learning outcomes (Biggs, 2003; Boud, Cohen, and Sampson, 1999; Brown, 2004-2005; Entwistle, 1991; Ramsden, 2003). In a recent qualitative study carried out in an interior design programme, Smith (2013) reiterated students' distrust of grades; she found that students may consider grades as direct judgements of themselves and of their future professional careers more than as a review of the results of an assignment. For Smith, students may doubt that grades represent the quality of the work done and may perceive them as excessively arbitrary.

Furthermore, consistent with a student-centered approach, it is widely recognized that the participation of students in assessment has a positive impact on their learning outcomes (Dochy, Segers, and Sluijsmans, 1999). Self- and peer assessment introduces students to specific judgments in their professional field and allows them to play an active role in their learning processes (Lindblom-Ylänne, Pihlajamäki, and Kotkas, 2006). However, the difficulty of issuing judgments on the quality of work is reflected in the disparity of scores between students and also between students and teachers (Orsmond, Merry, and Reiling, 2000; Topping, 2003).

In the light of these two concerns, rubrics may represent a useful educational resource. This study applies a quantitative approach in order to examine the opinions of first-year students studying for degrees in Fine Arts, Design and Conservation-Restoration regarding the use of a rubrics-based assessment system. The purpose was to discern how students rated the usefulness of rubrics and whether they identified learning outcomes that could be directly related to their use.

The contribution of rubrics in arts education

In the debate on the introduction of the assessment culture in higher education, some authors – especially Dineen and Collins (2006) in the field of arts education – have questioned what they see as the excessive emphasis on accountability and its negative effect on the design of teaching and learning models that meet the needs of today's society. Although it is imperative that arts education should promote reflection on assessment and should demonstrate its specific contribution in this regard, there is an alarming lack of research in this area. The prevailing belief among creative arts teachers is that the new assessment paradigm is not suited to the specificity of their discipline. Graham and Sims-Guzenhauser (2009) recorded the widely-held subjective opinion among visual arts teachers that evaluation should be informal and avoided whenever possible. Dineen and Collins (2006) stated that the new culture of evaluation weakens aspects such as ownership, trust, diversity and difference, so important in the field of arts. Recently, Giloi and du Toit (2013) highlighted the fear of many teachers that a rigid system of assessment stifles creative work because aspects such as imagination and originality are difficult to evidence and measure. They also warned

of the risk that an analytical approach to assessment may prioritize easily measurable aspects over higher-order learning outcomes and favour a surface approach to learning. If this analysis is confirmed, higher education is in danger of being reduced to a system that trains students in purely technical skills (Danvers, 2003).

Swanson, Norman, and Linn (1995) and Delandshere and Petrosky (1998) noted that other disciplines such as health education and teacher education present similar problems to those found in arts education when the performance assessment considers higher-order learning outcomes. De la Harpe et al. (2009) stressed the importance of reflective practice, critical thinking, communication skills and team work in architecture, art and design studies. In design education, Giloi and du Toit (2013) highlighted reflective and critical thinking and the aspiration to promote self-regulated and life-long learning. Researchers have also stressed the concern that students should integrate theory and practice in order to adapt their performance to social and professional environments and demonstrate their problem-solving ability in real contexts. Given the complexity of these learning outcomes, it is not surprising that the connoisseurship model of assessment, which the creative arts regard as their own (Parkes, 2010; Smith, 2013), is actually the best suited to the challenges of higher education.

Successful performance depends not only on the skill of the practitioner but also the existence of appropriate conditions for the satisfactory development of the activity. For Knight (2006), this means that the assessor's judgment of student performance is determined by actual professional practice but also by the educational context in which the learning outcomes are achieved. The challenge in the assessment of complex performances is to identify the values and procedures that underlie judgments regarding a professional culture. Complex performances require the refined and educated judgment of the connoisseur: not arbitrary or subjective, but discretional, deriving from the intersubjectivity characteristic of any discipline. In the educational context it is important to discuss, define, and apply in a consensual way the assessment practices that characterize a professional culture; what is more, this must be done considering the processes of teaching and learning, because these are the processes that regulate the progressive introduction of the student into the particular culture.

The points raised above stress that arts education courses should explore the assessment practices used in other disciplines. In fact, in the field of the arts, calls are now being heard for authentic assessment (Giloi and du Toit, 2013); for the recognition of the importance of assessing the process as well as the product in order to promote a deep approach to learning (De la Harpe et al., 2009; Ehmann, 2005; Ellmers, 2006, Lindström, 2007); for continuous assessment in which the feedback (and feedforward, Knight and Yorke, 2003) can assist students in the slow learning processes that complex learning achievements require (Parkes, 2010). These reflections coincide with some of the five characteristics that Shepard (2000) summarized as comprising good assessment:

for instance, assessment should be dynamic and ongoing, it should offer feedback, and it should promote new knowledge. However, these approaches do not include the characteristics most directly related to the explicitness of criteria (i.e., transparency) or students' responsibility for assessment. This absence is even more significant if we consider that one of the preconditions of this feedback is that it should be based on what students are expected to achieve and on their own perceptions (Gibbs and Simpson, 2004-2005). This places the spotlight firmly on the issue of assessment criteria.

Assessment criteria must comply with the requirements of transparency, fairness, transference, content quality and comprehensiveness (Linn, Baker, and Dunbar, 1991). The literature has recognized the educational benefits of rubrics and a number of empirical studies have also been performed in the field of music education (Ciorba and Smith, 2009; Parkes, 2010) and visual arts (Powell, 2001). Rubrics can provide students with high quality information on criteria, levels of performance, and its relation to the grades (Hafner and Hafner, 2003; Meier, Rich, and Cady, 2006; Reeves and Stanford, 2009). This is a key factor in improving feedback and feedforward (Stevens and Levi, 2005), in strengthening the students' confidence in the teacher and in the assessment system (Andrade and Du, 2005), in helping students to regulate their effort (Andrade, Wang, Du, and Akawi, 2009) and to promote metacognitive processes (Fluckinger, 2010).

Method

Sample

The sample comprised undergraduate students enrolled in a first and second semester course on the degree of Fine Arts, Design and Conservation-Restoration at the Faculty of Fine Arts in a large Spanish public university. Three-quarters of the sample (75.53%) were female and 24.46% male, with a mean age of 20 years, a median of 19 and a mode of 18. Most students (70.21%) were studying full time, while the other 29.78% combined their studies with some kind of professional occupation.

Instructional Setting

The students' task was to draw on the artistic content of their degree course to design a Service-Learning project for helping a group at risk of social exclusion. The students worked on their projects in groups of five, in three phases distributed throughout the semester. Each phase culminated in a public presentation in which students and teachers evaluated the projects using a system comprising three different rubrics. In the second and third phases, the students improved their productions from the previous phase by working on the feedback received from peers and teachers. Moreover, as the phases progressed, students integrated new aspects that completed the structure and development of the project. Thus, the results of one phase became the starting point for the processes undertaken in the next phase.

The assessment system comprised three analytic rubrics with varying numbers of dimensions or criteria (six in the first phase, seven in the second and nine in the third) organized in two blocks. In the first block, the content of the project was assessed: the title, the purpose, the objectives, the study of the group at risk of social exclusion and of the context of application of the project (in all three rubrics); sources and documents consulted (in all three rubrics); selection and study of similar projects (in rubrics 2 and 3), and detailed description and discussion of the project's activities (rubric 3). In the second block, key aspects of oral communication skills such as adaptation to the audience, adaptation to the time available, diction, grammar, and eye contact were judged; these criteria were included in the three rubrics. All dimensions comprised four performance levels, and the quality definitions in each level included the descriptions of the previous level and others of a higher cognitive demand. Regarding the scoring strategy, dimensions appearing for the first time received a higher weighting than those present at earlier stages.

In this pioneer study, a rubrics-based assessment model was applied in the faculty for the first time. At the time of the study there was no standardized model in use either at the level of the faculty or in individual degree courses or departments: teachers applied different criteria and assessment procedures depending on the characteristics of their courses. However, the most frequent teaching model was based on workshops in which students conducted projects and the grades reflected the results of a performance assessment.

Design

The article describes an empirical study based on surveys of students' perceptions of their experience with a system of rubrics. A 26-item questionnaire was designed to collect feedback from students regarding the design of the rubrics and their usefulness in the educational context. This study focused on the students' opinions of the educational value of the rubrics (as reflected by the 15 items listed in Table 1). Participation was voluntary. Ninety-four students returned completed questionnaires coinciding with the end of the two semesters. Most of the questions were closed-ended and valued numerically on a rating scale from 0 to 10 which is standard in the Spanish educational system. Questions 1 and 4 were closed-ended and dichotomous, and question 5 was closed-ended and multiple choice.

First, measures of central tendency and dispersion were obtained. Then, correlations were calculated using Pearson's method in order to estimate the possible causal links in the students' ratings.

Table 1. Rubrics assessment questionnaire

Nº	Question
1	Had you ever used a rubrics-based assessment system prior to this course?
4	Did you change your use of rubrics during the course?
5	If so, why?
14	In general, rate the level of agreement between your assessments and those of your classmates.
15	In general, rate the use of rubrics as an evaluation system
16	Were the rubrics helpful as a reference for planning and developing your work?
17	Rate the rubrics as a tool to reduce arbitrariness in the assessment
19	Rate the rubrics as a tool to clarify the learning of the subject matter
20	Do the rubrics focus on the aspects that should be valued in your course work?
21	Rate the rubrics as a tool for understanding what and why the teacher evaluates
22	Rate the importance of having information on the assessment system from the beginning of the course
23	Would you extend the rubrics-based assessment system to other subjects on the degree?
24	Did you agree with your peers' evaluations of your work?
25	Did the rubrics help you to understand the assignments?
26	Rate what you have learned with the use of rubrics

Fuente: original de los autores.

Results

Table 2 shows the statistical analysis of students' opinions regarding the usefulness of rubrics.

Table 2. Usefulness of rubrics

Question	Mean	Median	Mode	SD
14	6.71	7.00	8.00	1.58
15	6.81	7.00	8.00	2.16
16	8.18	9.00	10.00	1.88
17	7.48	8.00	8.00	1.94
19	6.64	7.00	7.00	1.89
20	7.00	7.00	7.00	2.18
21	7.66	8.00	8.00	1.93
22	8.63	9.00	10.00	1.47
23	5.55	6.00	5.00	2.95
24	7.17	8.00	8.00	1.64
25	7.14	7.00	8.00	1.76

Fuente: original de los autores.

Students reported that rubrics were useful for planning and carrying out their work (question 16 had a median of 9 and a mode of 10) and for understanding the assignments (question 25). The lower score received on the latter question may suggest that the rubrics worked better in defining the learning outcomes and the regulation of effort than in the clarification of the learning activities. The rubrics as an assessment system (question 15) received slightly lower scores although students noted the importance of having information on the assessment system from the beginning of the course (Question 22). Responses to Question 20 (whether the rubrics focused on what should be evaluated in the course) were only moderate, but the standard deviation above 2 for this question indicated that there was a marked difference of opinion. Students only rarely recommended the extension of a rubrics-based assessment to other subjects (Question 23); however, this question showed the highest standard deviation of the entire questionnaire (2.95). Additionally, Questions 17 and 21 (whether the rubrics reduce arbitrariness, and understanding why the teacher evaluates) received intermediate ratings, indicating a recognition of the importance of rubrics in the assessment.

Questions 14 and 24 may clarify the controversy over the usefulness of the rubrics in assessment. In a peer assessment context, the students found it more difficult to use them to judge the work of their peers (Question 14) than to interpret the ratings received on their own work from peers and teachers (Question 24); that is, they had more problems when taking on a responsibility that did not conform to their educational experience and their identity as a student. The lower scores assigned to rubrics in the assessment should actually be attributed to the fact that the system included self- and peer assessment activities with which they were unfamiliar. In summary, students' perceptions reflected the surprise and discomfort caused by two novel experiences. The first is the assessment not only of products but of processes. Students needed time to get used to activities that generated products which then became processes in the successive phases of the project. This may explain the moderate rating assigned with regard to the rubrics' ability to clarify the learning objectives of the course (Question 19). Second, their participation in the assessment of their own work and that of their peers required them to take on new responsibilities which had hitherto been the exclusive domain of the teacher. All this led to a certain confusion among this group of relatively new students. In fact, 84.04% reported having changed their use of rubrics during the course for the reasons stated in response to Question 5 (Table 3).

The results show that students changed their use of rubrics because they had a clearly idea of what should be evaluated. But if this is so then the rubrics must have been useful to clarify the learning objectives, which conflicts with the responses to Question 19. The similarity of the percentages of the reasons noted in second, third and fourth place is also significant. The students gained familiarity with the use of rubrics, became aware of how the teacher used them, and gradually recognized their usefulness in peer assessment. Thus, the rubrics not only promoted a better understanding of what should be evaluated but also improved the students' assessment practices.

The answers to Question 26, on the learning outcomes directly linked to the use of rubrics, definitively clarify the issue.

Table 3. Changes in the use of rubrics

Reasons	Percentage
Greater familiarity with the instrument	17.53
The need to adapt to the way the teachers uses them	18.18
Their importance for improving the work of my peers	12.33
Adjustments in response to the assessments of my peers	9.74
Greater understanding of what should be evaluated	38.01
Others	5.19

Fuente: original de los autores.

Table 4. Learning outcomes obtained using rubrics

Responses	Mean	Median	Mode	SD
Self-assessment	7.24	8.00	8.00	1.90
Autonomous learning	6.88	7.00	7.00	1.84
Working with quality criteria	7.92	8.00	8.00	1.45
Generating assessment criteria	7.93	8.00	8.00	1.53
Critical capacity	7.54	8.00	8.00	1.65
Group work	6.44	7.00	8.00	2.50

Fuente: original de los autores.

The students stated that contact with the rubrics had helped them generate assessment criteria, to raise the quality of their work, and to improve their self-assessment and critical capacities (Table 4). Medians and modes were identical, the means very similar and standard deviation always below 2. We conclude that the students found that rubrics helped them to reflect on the assessment based on previously agreed criteria. The lower scores for autonomous learning and group work are not consistent with the other answers, for two reasons. First, the reflection and the ability to judge are crucial components of autonomous learning; second, because the students worked in groups and evaluated the results of the working groups. Possibly, these two aspects presented to students less conceptual affinity with the others and autonomy and group work could even be perceived as contradictory.

Finally, the correlation coefficients between questions were analysed. In only two cases were coefficients above.70 found. A correlation of .71 was found between the evaluation of the rubrics as an assessment system (Question 15) and as a resource to clarify the learning of the course (Question 19), and one of .75 between Question 15 and Question 20 (whether the rubrics focused on what should be evaluated in the course). These coefficients reopen the discussion on the usefulness of rubrics, since they establish a connection between their low value for understanding the learning

objectives, their relevance to the learning environment of the subject and their functioning in the assessment. All this is at odds with what we stated above, that is, the recognition of their usefulness to clarify assignments (Question 25), to reduce the arbitrary nature of grading and to clarify the reasons for the teacher's assessment (Questions 17 and 21), to better understand the purpose and assessment criteria (Question 5), and to promote learning directly involved in the assessment (Question 26).

Discussion

The study showed that students judged the rubrics not on the basis of their usefulness in the assessment but as tools to enable them to understand the learning environment (see Reynolds, 2009). This result contrasts with those of other studies in which students valued the rubrics most highly in the area of assessment (Andrade and Du, 2005; Bolton, 2006), which is consistent with the idea that assessment influences the learning approach that students adopt (Entwistle, 1988, 1991, 2005; Ramsden, 2003). Perhaps, the scores that students assigned to the rubrics as an assessment instrument represented a more complex issue.

First, their usefulness in the assessment may have been influenced by the difficulty of the object under analysis: the oral presentations of the projects in their three phases of development. In accordance with Habron, Goralnik and Thorp (2012), the rubrics were integrated in an assessment that included ongoing feedback from teachers and students, a procedure which increased student awareness of the complexity of the phenomenon evaluated. Although the rubrics guided the student in the completion and assessment of the projects, they did so by emphasizing the high-level cognitive processes that these activities required. It is likely that students criticized the difficulty of the assessment process by assigning lower scores to the rubrics.

Second, this lower rating of the rubrics in the field of assessment may also reflect a resistance to take on a new responsibility – namely, self- and peer assessment. This possibility is based on the finding that students rated the rubrics more highly as a means of understanding their peers' opinions of their work than as a means for them to assess the work of others, and agrees with the results of other studies which have reported students to be reluctant to participate in assessment processes (Connor, 2004-2005; Hanrahan and Isaacs, 2001; Macdonald, 2004-2005). Self- and peer assessment may be disconcerting for students because it is alien to their previous educational experience and to their expectations of the course, and is aimed at objects that are difficult to evaluate. Other studies have found that students reject novel learning environments which make greater demands on them and which pursue unfamiliar learning outcomes (Baeten, Dochy and Struyven, 2008; Biggs, 2003; Birenbaum and Rosenau, 2006, Entwistle, 1991). Quite possibly, this is also why hardly any students recommend that the use of rubrics should be extended to other subjects.

The second issue analysed concerned the learning outcomes that the students associated with the use of rubrics. The resistance they showed did not appear to harm their assessment of the educational benefits of rubrics. In fact, the students' opinions recorded were very similar to those reported in previous research: a better understanding and critical application of criteria (Maxwell, 2010) and a deeper reflection on their own work (Goodrich, 1997) which highlight the usefulness of rubrics with regard to metacognitive dimension of the learning process (Tractenberg, Umans and McCarter, 2010). If students did not assign a similar rating to the contribution of rubrics to independent learning, this may be because they perceived that their responsibility in the assessment was regulated by an instrument that was alien to them. Surprisingly, the rubrics did not appear to promote teamwork: the role of rubrics to guide the development of group activities and assessment by students and teachers proved to be insufficient. The conclusion drawn from these last two findings is that students should work together with teachers on the discussion and refinement of the rubrics.

The study presents two main limitations. The first was the small sample size, which reduces the study's representativeness and the possibility of generalizing the findings to a broader context. More teachers need to be encouraged to use rubrics, in order to obtain larger samples for future studies. The second limitation is the fact that the study was restricted to students' perceptions. In order to discern whether students' views of their learning outcomes were consistent with the learning achievements, the study needs to be completed with an examination of the scores assigned by students and teachers in each of the phases of the projects, including an analysis of the validity and reliability.

Conclusion

In the field of arts education as elsewhere, students' perceptions reinforce the positive impact of the rubrics in the understanding of learning environments, in the regulation of effort and in strengthening the metacognitive dimension of the learning process. However, their perceptions also reflect the need to establish educational contexts in which rubrics do not appear as disconcerting foreign elements. To achieve a satisfactory context for rubrics-based performance assessment, students' participation in the application of the assessment systems and, if possible, in the process of discussion, negotiation and refinement of the rubrics, is extremely important. In arts education, rubrics should respond to higher-order learning outcomes that define their area of knowledge and professional practice. It is here that their quality definitions organized into performance levels have most to contribute, in order to encourage understanding of the educational goals and to promote good learning strategies in the case of the students, and to regulate the teaching processes in the case of the teachers. Rubrics should not be used to evaluate easily observable and measurable aspects; they should aid in the reflection on the profession and on the particular way in which students assimilate professional practice, as this is the defining aspect of autonomous learning.

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References

Andrade, H. & Du, Y. (2005) Student perspectives on rubric-referenced assessment, *Practical Assessment, Research & Evaluation*, *10*(5), 1–11.

Andrade, H. L., Wang, X., Du, Y., & Akawi, R. L. (2009) Rubric-Referenced Self-Assessment and Self-Efficacy for Writing, *The Journal of Educational Research*, *102*(4), 287–302.

Baeten, M., Dochy, F., & Struyven, K. (2008) Students' approaches to learning and assessment preferences in a portfolio-based learning environment, *Instructional Science*, *36*(5-6), 359–374.

Biggs, J. (2003) *Teaching for Quality Learning at University* (2nd ed.). Buckingham & Philadelphia: Society for Research into Higher Education and Open University Press.

Birenbaum, M. & Rosenau, S. (2006) Assessment preferences, learning orientations and learning strategies of preservice and inservice teachers, *Journal of Education for Teaching*, *32*(2), 213–225.

Bolton, C. F. (2006) Rubrics and Adult Learners: Andragogy and Assessment, *Assessment Update*, *18*(3), 5–6.

Boud, D., Cohen, R., & Sampson, J. (1999) Peer learning and assessment, *Assessment & Evaluation in Higher Education*, *24*(4), 413–426.

Brown, S. (2004-2005) Assessment for learning, *Learning and Teaching in Higher Education*, *1*, 81–89.

Ciorba, C. R. & Smith, N. Y. (2009) Measurement of instrumental and vocal undergraduate performance juries using a multidimensional assessment rubric, *Journal of Research in Music Education*, *57*(1), 5–15.

Connor, C. (2004-2005) An Aligned Assessment to Promote Learning About Collaboration Between Health and Care Professionals, *Learning and Teaching in Higher Education*, *1*(1), 98–101.

Danvers, J. (2003) Towards a Radical Pedagogy: Provisional Notes on Learning and Teaching in Art & Design, *Journal of Design & Art Education*, *22*(1), 47–57.

De la Harpe, B., Peterson, J. F., Frankham, N., Zehner, R., Neale, D., Musgrave, E., & McDermott, R. (2009) Assessment Focus in Studio: What is Most Prominent in Architecture, Art and Design?, *International Journal of Art & Design Education*, *29*(1), 37–51.

Delandshere, G. & Petrosky, A. R. (1998) Assessment of complex performances: Limitations of key measurement assumptions, *Educational Researcher*, *27*(2), 14–24.

Dineen, R. & Collins, E. (2006) Killing the Goose: Conflicts between Pedagogy and Politics in the Delivery of a Creative Education, *International Journal of Art & Design Education*, *24*(1), 43–52.

Dochy, F., Segers, M., & Sluijsmans, D. (1999) The Use of Self-, Peer- and Co-assessment in Higher Education: A Review, *Studies in Higher Education*, *24*(3), 331–350.

Ehmann, D. (2005) Using assessment to engage graphic design students in their learning experience, Paper presented at the Making a Difference: 2005 Evaluations and Assessment Conference, Sydney. Retrieved from http://www.researchgate.net/publication/228672232_Using_assessment_to_engage_graphic_design_students_in_their_learning_experience.

Ellmers, G. (2006) *Assessment Practice in the Creative Arts: Developing a Standardised Assessment Framework*. Teaching and Learning Scholars Report, Faculty of Creative Arts, Wollongong: University of Wollongong.

Entwistle, N. J. (1988) Motivational factors in students' approaches to learning, in R. R. Schmeck (Ed.) *Learning strategies and learning styles*. New York: Plenum Press, pp. 21-51.

Entwistle, N. J. (1991) Approaches to Learning and Perceptions of the Learning Environment. Introduction to the Special Issue, *Higher Education*, *22*(3), 201–204.

Entwistle, N. J. (2005) Contrasting perspectives on learning, in F. Marton, D. Hounsell & N. Entwistle (Eds.) *The Experience of Learning. Implications for teaching and studying in higher education* (pp. 3–22). Edinburgh: University of Edinburgh, Centre for Teaching, Learning and Assessment.

Fluckiger, J. (2010) Single Point Rubric: A Tool for Responsible Student Self-Assessment, *Teacher Education Faculty. Publications. Paper 5*. Retrieved from http://digitalcommons.unomaha.edu/tedfacpub/5.

Gibbs, G. & Simpson, C. (2004-2005) Conditions under which assessment supports students' learning, *Learning and Teaching in Higher Education*, *1*, 3–31.

Giloi, S. & du Toit, P. (2013) Current Approaches to the Assessment of Graphic Design in a Higher Education Context, *International Journal of Art & Design Education*, *32*(2), 256–268.

Goodrich, H. (1997) Understanding rubrics, *Educational Leadership*, *54*(4), 14–17.

Graham, M. A. & Sims-Guzenhauser, A. (2009) Advanced Placement in Studio Art and Secondary Art Education Policy: Countering the Null Curriculum, *Arts Education Policy Review*, *110*(3), 18–24.

Habron, G., Goralnik, L., & Thorp, L. (2012) Embracing the Learning Paradigm to Foster Systems Thinking, *International Journal of Sustainability in Higher Education*, *13*(4), 378–393.

Hafner, J. C. & Hafner, P. M. (2003) Quantitative Analysis of The Rubric as an Assessment Tool: An Empirical Study of Student Peer-group Rating, *International Journal of Science Education*, *25*(12), 1509–1528.

Hanrahan, S. & Isaacs, G. (2001) Assessing Self- and Peer-assessment: The Students'views, *Higher Education Research & Development*, *20*(1), 53–70.

Knight, P. T. (2006) The local practices of assessment, *Assessment & Evaluation in Higher Education*, *31*(4), 435–452.

Knight, P. T. & Yorke, M. (2003) *Assessment, learning and employability*. Maidenhead: Society for Research in Higher Education and the Open University Press.

Lindblom-Ylanne, S., Pihlajamäki, H., & Kotkas, T. (2006) Self-, Peer- and Teacher-Assessment of Student Essays, *Active Learning in Higher Education*, *7*(1), 51–62.

Lindström, L. (2007) Understanding the creative mind: portfolio assessment in the visual arts, Paper presented at the13th International Conference on Thinking, Norrköping, Sweden. Retrieved from www.ep.liu.se/ecp_article/index.en.aspx?issue=021;vol=1;article=012.

Linn, R. L., Baker, E. L., & Dunbar, S. B. (1991) Complex, performance-based assessment: Expectations and validation criteria, *Educational Researcher*, *20*(8), 15–21.

Macdonald, A. (2004-2005) Student self-evaluation of coursework assignments: A route to a better perception of quality, *Learning and Teaching in Higher Education*, *1*(1), 102–107.

Maxwell, S. (2010) *Using Rubrics to Support Graded Assessment in a Competency Based Environment. Occasional Paper*. Adelaide: National Centre for Vocational Education Research.

Meier, S. L., Rich, B. S., & Cady, J. (2006) Teachers' Use of Rubrics to Score Non-traditional Tasks: Factors Related to Discrepancies in Scoring, *Assessment in Education: Principles, Policy and Practice*, *13*(1), 69–95.

Orsmond, P., Merry, S., & Reiling, K. (2000) The Use of Student Derived Marking Criteria in Peer and Self Assessment, *Assessment and Evaluation in Higher Education*, *25*(1), 23–38.

Parkes, K. A. (2010) Performance Assessment: Lessons from Performers, *International Journal of Teaching and Learning in Higher Education*, *22*(1), 98–106.

Powell, T. A. (2001) *Improving assessment and evaluation methods in film and television production courses*. PhD Theses. Hong Kong, Capella University. Retrieved from http://sunzi.lib.hku.hk/ER/detail/hkul/2699476.

Ramsden, P. (2003) *Learning to Teach in Higher Education*. London & New York: RoutledgeFalmer.

Reeves, S. & Stanford, B. (2009) Rubrics for the Classroom: Assessments for Students and Teachers, *The Delta Kappa Gamma Bulletin*, *76*(1), 24–27.

Reynolds, J. et al. (2009) BioTAP: A Systematic Approach to Teaching Scientific Writing and Evaluating Undergraduate Theses, *BioScience*, *59*(10), 896–903.

Shepard, L. (2000) The role of assessment in a learning culture, *Educational Researcher*, *29*(7), 4–14.

Smith, K. M. (2013) Assessment as a Barrier in Developing Design Expertise: Interior Design Student Perceptions of Meanings and Sources of Grades, *International Journal of Art & Design Education*, *32*(2), 203–214.

Stevens, D. D., & Levi, A. J. (2005) *Introduction to Rubrics. An Assessment Tool to Save Grading Time, Convey Effective Feedback and Promote Student Learning*. Sterling: Stylus Publishing.

Swanson, D. B., Norman, G. R., & Linn, R. L. (1995) Performance-based assessment: Lessons from the health professions, *Educational Researcher*, *24*(5), 5–11.

Topping, K. (2003) Self- and Peer-assessment in School and University: Reliability, Validity and Utility, in M. Segers, F. Dochy & E. Cascallar (Eds) *Optimising New Modes of Assessment: In Search of Qualities and Standards* (pp. 55–87). Dordrecht: Kluwer Academic Publishers.

Tractenberg, R. E., Umans, J. G., & McCarter, R. J. (2010) A Mastery Rubric: Guiding Curriculum Design, Admissions and Development of Course Objectives, *Assessment & Evaluation in Higher Education*, *35*(1), 17–35.

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