

# The Use of Rubrics in Higher Education and Competencies Evaluation. Scientific Study about Characteristics of Rating Scales Used by Professors

By Velasco-Martinez, Leticia C. y Tójar Hurtado, Juan-Carlos  
University of Malaga. Spain

Competency-based learning in Spain has achieved a reconfiguration of higher education to meet the current demands of training. In this regard, institutions and different university regulations promote a "constructive alignment" of the essential elements from the curriculum (Biggs, 2005), giving to the competencies the role of curricular model which gives coherence to the new design of degrees.

However, it's enough to review the majority of Educational Programming to detect that it has not been resolved its inclusion in the curriculum (Mateo y Vlachopoulos, 2013) or that, in the most of the case, It only involves comply with the mere process of enunciating a set of competencies (Escudero, 2008), without any strategic-methodological approach in how to integrate the different subjects.

Moreover, the educational proposals made by the European Higher Education Area (EHEA), such as the use of active methodologies, the self-regulated and independent learning-oriented teaching, the diversification of learning activities (simulations, portfolios, forums), along with the consideration of the multidimensional competencies, require new evaluation tools more dialogic and more comprehensive than the traditional paper and pencil tests (Ibarrera y Rodríguez-Gómez, 2010; Padilla y Gil Flores, 2008).

In the university context, scoring rubrics are considered an innovation tool to collect evidences of competency acquisition (Baryla, Shelley and Trainor, 2012, White, 2011; Cebrián, 2012; Andradre and Reddy, 2010). Its potential lies in the ability for issuing adjusted valuations about the quality of student's works in a wide range of subjects or tasks (Blanco, 2008).

In the student's new models competency development, the curriculum isn't structured as thematic units, but by learning activities (Mateo, 2006). Regarding the activities or tasks evaluated, a question arises: what activities are assessed with assessment rubrics? Are the usual assimilative and reproductive activities, typical of the traditional approach, or more focused tasks to organize and share information, participate in a simulation, self-evaluation a report, etc..?

To get the answers we took as reference the following classification of activities given by Marcelo, Yot, Mayor, Sánchez, Murillo, Rodríguez-Lopez and Pardo (2014): assimilative, information management, application, communication, production, experiential and evaluative.

Moreover, Villa y Poblete (2011, 151), point out that "the difficulty in the evaluation of competencies can be very different depending on the same competencies because some of them are more 'saturated' with knowledge, skills and values than others". As a result,

considering the concept and classification of generic competence by Tuning Project (González and Wagennar, 2003), we propose the following question: What kind of generic competencies are more assessed with rubrics?

Regarding the type of rubric, Blanco (2008, 176) notes that "the selection from one kind or another of rubric depends mainly on the use you want to give to the outcomes, that is, if the emphasis is more focused on the formative aspects or on the summative ones. Other factors to consider: the required time, the nature of the task itself or the specific performance criteria which are being observed". Based in these assumptions it is studied: What kinds of rubrics are used by teacher: analytic (formative) or holistic (summative)? Do professors know the pedagogical and techniques requirements needed to design rubrics?

These and other issues represent the educational paradigm change with respect to new approaches and tools for evaluating competencies. In this theoretical framework it is set up a research in order to know the aims pursued by professors when designing an evaluation rubric. In addition, we analyze the types of rubrics that professors use to support and guide the teaching and learning processes.

## Method

Two hundred rubrics from six different Spanish public universities were analyzed. Sampling was intentional, considering the public access to them and compliance with some minimum requirements: identification data and basic elements of their structure according to the specialized literature. This research combines quantitative and qualitative methodology. The quantitative perspective is part of ex post facto correlational studies, and qualitative perspective was established through inductive-deductive procedures of categorization from the units of analysis (the rubrics). The category system was developed through a qualitative content analysis of the rubrics, as proposed by Miles and Huberman (1985, cited in Tójar, 2006). These authors consider the qualitative analysis as a set of tasks that interact itself. a) Reduction of information. It was made before data collection in order to define the conceptual framework of the study, preliminary purposes, the first hypotheses and the implicit questions in the theoretical foundations. Further analysis procedures and data processing were implemented. This phase is composed of a series of processes that also interact between itself: – The separation in units was made through the analysis of information (rubrics), considering the different thematic criteria which emerged from the authors proposal's who explained the uses and technical requirements of this tool. – The identification and classification of units was made using a mixed model of categorization (Pinto and Grawitz, 1967, cited in Tójar, 2006, 476) to develop predefined categories (deductive), derived from the specialized literature on rubrics, and ad hoc categories (inductive), which were constructed from the observation itself. Tree diagrams for the categorization were used. – The synthesis and grouping of the units was produced from the mixed categorization process (deductive-inductive) to construct a useful system of categories for collecting data contained in rubrics. Macrocategory 1. Purposes of evaluation rubrics: quizzes, activities and generic competencies. Macrocategory 2. Branches of knowledge. Macrocategory 3. Kinds of rubrics: introduction, kinds of analytical rubrics, explanation, coherence, homogeneity, continuity, parallelism, amplitude, levels of execution, tag and scales. a) The organization and transformation of data. In this phase, the information was

specified and organized with descriptive table. b) The extraction and verification of conclusions allowed the identification of regularities and patterns, resulting in certain generalizations, typologies and models.

### Expected Outcomes

In relation to the purposes of the professor in the design of rubrics, the tasks more evaluated are written documents about the acquisition of skills in a traditional way (e.g. Written reports). In contrast, simulation tests are less evaluated because they involved higher integration and change of cognitive resources on the real contexts (e.g. "internships"). This type of evidence is more consistent with competency-based training that aims to integrate into the labor market. Regarding the types of evaluated activities, the productive nature is best evaluated in than the experiential one. A possible lack of applicability and transferability principles promoting EHEA stands. With regard to the generic competencies, the results warn that professors can be evaluating only instrumental competencies, or in conjunction with the systematic ones, omitting interpersonal competencies considered of equal or greater importance in the academic and professional training. In addition, technical and / or pedagogical criteria that consider professors when designing rubrics are: parallelism in language, an adequate number of levels of performance or consistency, uniformity and continuity of the evaluation criteria. By contrast, the rubrics that have more ambiguity in their interpretation are the specific ones, with a disciplinary character, with punitive tags, which contain a minimum range in the description of the competence or lacking an explanation of the criteria evaluation. Por último, respecto a la relación entre categorías, las rúbricas analíticas específicas son más utilizadas para evaluar documentos escritos debido a que solo evalúa la adquisición de conocimientos disciplinares o habilidades instrumentales. Finally, regarding the relationship between categories, the specific analytic rubrics are more used to assess written documents because they only evaluate the acquisition of disciplinary knowledge and instrumental competencies.

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