

ACADEMIC PERFORMANCE IN TERMS OF THE APPLIED ASSESSMENT SYSTEM

*[El rendimiento académico en función del sistema de evaluación
empleado]*

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Arribas, José María (chema2@pdg.uva.es)

Abstract

This paper examines the academic performance depending on the evaluation and rating system used in the university. The sample under study consists of 30 subjects -taught by 35 professors to 2192 students from 7 different degrees at 14 universities of all Spain-. The results confirm that continuous assessment is the one that best results not only in terms of rate of return and success rate but also in terms of grades.

Keywords

Academic performance, continuous assessment, participatory assessment, self assessment, shared grading, control tests.

Resumen

En este trabajo se estudia el rendimiento académico en función del sistema de evaluación y calificación empleado en el ámbito universitario. La muestra objeto de estudio está formada por 30 asignaturas -impartidas por 35 profesores a 2192 alumnos de 7 titulaciones diferentes en 14 universidades de toda España-. Los resultados obtenidos confirman que la evaluación continua es la que propicia los mejores resultados no solo en cuanto a la Tasa de Rendimiento y a la Tasa de Éxito, sino también en cuanto a las calificaciones obtenidas.

Descriptores

Rendimiento académico, evaluación continua, evaluación participativa, autoevaluación, evaluación compartida, pruebas de seguimiento.

Talking about continuous assessment and academic performance leads to the two main functions of assessment: the formative and the *certifying* function.

Both training and certifying functions are not at all mutually exclusive but complementary (Villardón, 2006; ANECA, 2003, Taras, 2005). Educational assessment includes these two functions: the training, pedagogical function which is usually in concert with that other sanctioning, certifying, enabling function expressed as a

grade with serious repercussions for the student.

According to what many other authors point out, these circumstances unavoidably determine the entire teaching-learning process to a greater or lesser extent (Biggs, 2005; Sans, 2005; Cabaní and Carter, 2003; De Miguel, 2005; Sigalés and Badia (2004).

The issue of assessment has been examined in detail in the recent pedagogical literature, in its wide scope _see, for instance, the

bibliographic review on the subject by Buscà et al. (2011).

The formative dimension of assessment should be supplemented by the merely certifying function (Lopez, 2009). Hence assessment must be more student-centred (Goñi, 2005; Falchikov, 2005) instead of following a teaching-centred approach. Taking as a starting point that students must be the main protagonists of their own learning process, then they should take part in their assessment process (Squire, 2010; Lopez, 2009) in any of its forms: peer assessment, self-assessment, shared grading... (Breton, 2008, Perez, Julian and Lopez, 2009).

Formative assessment necessarily involves continuous assessment which must be understood not as a succession of isolated and improvised tests but as a process carefully planned in all its details (Cabrera, 2003; Delgado, Borge, Garcia Oliver & Solomon, 2005) since this is how students develop a well distributed practice. Such a practice promotes the progressive assimilation of content and a greater interaction with the teacher. Consequently, the implementation of one of the most important aspects of formative assessment, feedback, is enabled and the awareness of students about their own propaedeutic learning appears (Weaver, 2006; Boud, 2007, Nicol & Macfarlane-Dick, 2006).

There are numerous studies demonstrating that more satisfying and qualitative learning for students can be fostered. This is reached by using active methodologies along with a system of formative assessment where students must be highly involved as well as teamwork work, peer-assessment or self-assessment (Brockbank & McGill, 2002, Brown & Glasner, 2003; Biggs, 2005, Sharp 2006; Walsh, 2007).

Nevertheless, as Bordas & Cabrera (2001) pointed out, there is still an immense ocean between the pedagogical theory regarding

assessment and the educational instruction. This discrepancy may sometimes be due to a lack of training or a lack of will to implement innovative practices (Lopez Fuentes, 2001).

If the main concern of assessment about its formative dimension is how to become a tool for improving learning, the concern about its certifying dimension is its validity, reliability and practicality regarding the level of attainment of objectives as well as academic and professional competences. It is closely linked to the concept of academic performance, which is as polysemic as controversial, but in the end, as Rodriguez & Ruiz (2011) stated when people are talking about academic performance they generally mean just grades. Yet, do these grades given by professors and universities actually show the level of academic and professional competence attained by students? With this regard, as it is mentioned in this article, there are numerous authors who question, for many reasons, the validity and reliability of grades as an accurate measure of performance.

Mentioning what Turull (2010, p5.) noted, maybe "policies that pursued only the improvement of academic performance at any price were designed". Otherwise, it is also possible that "certain educational and academic policies could stimulate demand, rigour and the quality of teaching without getting better academic results." The key point is "a significant increase in the academic performance of students within a framework which promotes qualitative teaching in concert with educational demand and rigour."

Resolving this issue is not the aim of this research. Anyway, presently, the students' academic performance is determined by the teachers' grades which are given according to their own assessment and evaluation criteria. Such academic performance is usually expressed, on the one hand, by the

Rate of Return (ROR): the number of students who passed out of the number of students enrolled; On the other hand, it is the Rate of Success (RS): the number of students who passed out of the number of students who attended; In addition to the Academic Performance Rating (APR), which is the weighted average ($0.7 \text{ ROR} + 0.3 \text{ RS}$) of the two previous indicators.

The ROR is useful in many other respects, although it is not very accurate in measuring academic performance since it is determined by multiple variables. The RS is more accurate because it takes into account the number of passes out of those who attended. Thus, it is more reliable, even more when considering different assessment systems which precisely vary in the number of students attending as in the case at hand.

The APR is a rare indicator, even though ANECA uses it in its system to evaluate the teaching activity of the academic staff. Our reason to use it is that the ROR and the RS are sometimes so different from each other that the APR reduces this distance considering both measures and giving us a global approach. Therefore, the comparison of results is facilitated.

The aim of this paper is to highlight the impact of the different means of assessment on academic performance. *How to assess* may be considered as a minor concern, even though the most important question in the teaching activity is not so much what is done compared to how to do it. It is like this even to the extent that the means of assessment shapes the way students learn and it directly affects the emotional scope: motivation, attributional style, self-efficacy, self esteem, etc.

The way a student studies is not a trivial matter since it models him (or it deforms him). He will either memorize or study intelligently, looking forward to understanding and linking to related knowledge depending on the type of control

tests or questions. The teacher not only controls what the student does in class (listening, exercise, etc.) but he also controls how the learner studies or works at home or anywhere else when preparing control tests and assignments (Morales, 1998, p. 25) .

The academic and professional competences (specific as well as general ones) to be assessed are a complex amalgam of skills, attitudes, motivation... Hence those means of assessment which are supposed to measure the attainment of these competences must be complex and precise enough in order to do it properly. Consequently, non-traditional assessment tools must be taken into account such as portfolios, assessment diaries or rubrics since they are suitable tools to assess complex competences instead of specific skills at a certain time. The decision on one or another assessment instrument cannot be a capricious choice, but it must depend on what it is intended to measure, adjusting the parameters of validity, reliability and practicality. There is abundant and interesting literature on the subject where not only an extensive reference list can be found but also their suitability depending on the competency (Marquez, 2011, De Miguel, 2004, 2006; Sierra, 2008; Gairín, 2008; Montanero, 2006).

Furthermore, it is desirable to bear in mind also some other practical considerations targeting at an effective and coherent assessment with regard to the remaining elements of the teaching-learning process (Zabalza, 2001, Bolivar, 2007; Gairín, 2008; Sierra, 2008; Alvarez, 2001; Trillo, 2003).

There are plenty of studies on academic performance based on different variables: sex, grade, attendance, etc. Nonetheless, in Spain, there are hardly researches interrelating directly both variables: academic performance depending on the method of assessment. We would like to highlight among them Lopez (2008) who carries out a descriptive-statistical analysis of

the results considering the workload of both students and teachers and considering the academic performance of students in relation to different types of assessment offered. The academic results that he finds are positive in the case of continuous assessment; Turrul (2010) considers, among other variables, the incidence of the kind of assessment on the academic performance of the students of law from UAB. Similarly, the findings show a positive correlation between both of them. Zaragoza, Louis-Pascual & Manrique (2008) abound in this same idea: high academic performance associated with systems of continuous assessment.

Object of study

The aim of this paper is to highlight the different academic results obtained by students depending on the diverse assessment and rating systems used by professors in the university. We will examine not only each of these systems but also the preferences of students when they are given the chance to choose. Moreover, one specific example of formative assessment and shared grading will be considered: consensus on the assessment criteria and even on the grading ones among teachers and students.

Method

Participants and instruments

The data used to create this paper come from the information provided in the semi structured reports on the teaching activity conducted by a group of professors who have implemented a system of formative assessment and shared grading for the academic year 2008-09, the year with the latest information available. Among other elements, the activities and assessment tools used are included along with their incidence in the grades. Furthermore, the different means of assessment as well as the assessment criteria for each of the competences and the criteria for grading are also included. There is a share grading with the students too. Moreover, advantages and

disadvantages of a formative assessment are also examined, in addition to the academic performance depending on each of the assessment procedures available. Finally, a reflection on the degree of attainment of the intended objectives together with a proposal to improve in the future are presented.

All this information has been analyzed, quantified and arranged in six sections that revolve around different aspects of the two variables used in the study: the implemented assessment system and the academic performance of students:

- Assessment and rating systems given by professors.
- The students' choice among the different methods of assessment proposed.
- The percentage of students attended out of the students enrolled.
- Percentage of professors who negotiate the assessment criteria and/or use share and discussed grades with students.
- Academic Performance: Rate of Return, Rate of Success and Academic Performance Rating of each of the assessment methods.
- ROR, RS and APR according to the different segments of grades obtained by the students.

The sample under study, as shown in Table 1, is composed of 30 subjects, taught by 35 professors to 2192 students from 7 different degrees, most belonging to the field of education in 14 universities. The sample comprises all the reports received from the professors belonging to the *Network of Formative Assessment in Higher Education* on the subject taught for the year 2008-09, the year with the latest results available. One goal of this *network* is the use of such reports for the creation of articles to disseminate innovative experiences implemented in formative assessment, purpose which is known by all the informants.

Table 1. List of subjects, degrees and colleges under study

	SUBJECT	N ^{er} . ss	DEGREE / FACULTY / UNIVERSITY
1	Physical Education in Secondary Education	21	Faculty of Science in Physical Activity and Sport. University of León.
2	Physical Activity and Sport Teaching	109	
3	History of Physical Education	18	Primary Education Degree Faculty of Education of Salamanca
4	Psychology of Education and Development	122	Infant School Education Degree Univ. of Burgos
5	Physical Education Teaching	42	Physical Education Degree Faculty of Education and Social Work (UVA)
6	History of Art and Culture	18	Primary, Infant School, Musical and Physical Education Teacher APRining College of Segovia (UVA)
7	Mathematics I	32	
8	Motor Learning and Development	145	
9	Musical APRining	86	
10	Physical Education Teaching	84	
11	Experimental Science and Teaching Methods	22	
12	Motor Games and Recreational Activities	52	
13	Development of Mathematical Thought and Teaching Methods	107	
14	Developmental Psychology	87	
15	Body Language in Secondary Education	84	Science in Physical Activity and Sport. University of Alcalá De Henares
16	Theory and History of Sport	90	M.A. in P.E. INEFC. University of Lleida
17	Psychomotor Development	49	Teory and History of Sport. Faculty of Education. University of Murcia
18	Practicum II	25	Physical Education Degree. Facultat de Formació del Professorat. U. De Barce.
19	Knowledge of the Natural Environment	110	Physical Education Degree, Teacher APRining College
20	Physical Activities for People with Motor and/or Sensory Disabilities.	15	Science in Physical Education and Sport. Faculty of Science in Health and Sport Campus of Huesca. U. of Zaragoza
21	Labour and Social Security Law.	35	Faculty of Social Science and Communication. Jerez de la Frontera, U. of Cádiz
22	Biological and Physiological Bases of Human Movement.	115	Physical Education Degree. Facult. of Education. U. of Almería
23	Teaching Team Sports.	122	
24	Psychomotor Development	41	Infant School Education. Facultat de Ciències de L'educació. (UAB)
25	Music and their teaching	74	Foreign Language Education. Facultat de Formació Del Professorat. (UAB)
26	Teaching of Physical Education and Sports	76	Faculty of Education. Universitat De Vic
27	Fundamentals and Teaching of P.E.	74	Physical Education Faculty of Teachers APRining. (UAB)
28	Practicum III and IV	10	
29	Assessment of Physical Education within the Curriculo	48	Science in Physical Activity and Sport U. of Lleida
30	Research Project – II'	36	
31	Body Language Activities	52	Science in Physical Activity and Sport. Faculty of Science in Health and Sport
32	Physical Activity and Sport Teaching	35	Science in Physical Activity and Sport. Faculty of Teacher APRining. (UAM).
33	Physical Activity and Sport Teaching II	23	
34	Theory and Practice of Motor Games	80	Teacher Specialist in Physical Education.
35	Theoretical Bases and Physical Education Teaching.	53	Faculty of Education. U. of La Laguna

Variables

Our two dependent variables are academic performance and the assessment system used for such performance.

- *Academic Performance*. Let us consider three indicators: Rate of Return (ROR): number of passes out of the number of students enrolled; the Rate of Success (RS): number of passes out of the number of students attended and Academic Per-

formance Rating (APR), which is the weighted average (0.7 ROR + 0.3 RS) of the two previous indicators.

Besides, the ROR and RS and APR have been considered regarding different segments of grades obtained by the students and also available in the reports provided by the professors: number of students with satisfactory, outstanding or excellent marks out of the number of students enrolled or attended.

The data presented show the averages of the ROR, RS and APR in all subjects which have been analyzed.

- *Types of assessment:* We will consider mainly three types of assessment: continuous assessment, mixed assessment and final assessment. The system used is sometimes difficult to classify with this three labels. Consequently, they won't be considered in the analysis of the results, although their features can be seen in Table 2.

Table 2. *Types of Assessment*

Continuos Assessment	<ul style="list-style-type: none"> - Assessment and evaluation of the assignments of the students throughout the learning process. - There is an extremely wide range of assignments and assessment tools. Yet the most common ones are presented as follows, after being weighted in the final grade to some degree according to the criteria of each professor: <ul style="list-style-type: none"> * Tutored Project * Individual assignments (with or without public presentation) * Team assignments (with or without public presentation) * Reviews of articles * Portfolio/ assessment folder/ learning notebook - Case studies, mid-term control tests or final papers are rarely used as assessment tools. - Final exams are hardly undertaken - Attendance at lectures is compulsory. - In a high percentage, the assessment criteria are negotiated with students. In many cases, not only the grades of the different assignments are agreed between the teacher and the student but also even the final grade. Talking about the team assignments, peer-assessment is a widespread practice among the members of the group, which is considered and respected by the professor.
Final Assessment	<ul style="list-style-type: none"> - It consists generally in undertaking a written exam at the end of the term. It is for those students who, generally because of working reasons or due to the incompatibility with other subjects, cannot or are unwilling to attend regularly at lectures and to follow a continuous teaching-learning process.
Mixed Assessment	<ul style="list-style-type: none"> - It is usually implemented to those students who do not reach the degree of assistance and participation that is required in continuous assessment. They have certain involvement in the course submitting assignments, attending sporadically at lectures, and so forth. In these cases, most professors supplement the grade obtained along the term with the final exam.
Other Types	<ul style="list-style-type: none"> - Continuous assessment and final evaluation are sometimes combined. Thus, the final rating comes from the average of both grades, as long as the requirements of both types of assessment are fulfilled by the student.

Results

Types of Assessment and Rating Systems provided by Professors

A large majority - 87% - of professors offers students the opportunity to be assessed through continuous assessment. For the 14% of them, this is the sole option due to the

nature of some subjects, such as Practicum, in which is difficult to assess timely. In addition, 68% provides a final exam too, even though just 3% of them provide it as the sole possibility. The 11% proposes three different types to measure the assessment. These possibilities and the rest of the combinations provided are shown in Table 3.

Table 3. % of professors providing the different types of assessment

Con. Ass.	Mix. Ass.	Fin. Ass.	Con. Ass. Mix. Ass.	Con. Ass. Fin. Ass.	Mix. Ass. Fin. Ass.	Con. Ass. Mix. & Fin. Ass.
14%	6%	3%	11%	51%	3%	11%

Preference of students regarding the assessment procedures offered

As shown in Table 4, when students are offered the choice among different forms of assessment (continuous or mixed, continuous or final) most of them, about 80%, prefer continuous assessment. When the choice is between mixed or final assessment, most of them, by 72%, choose mixed evaluation. When three possibilities (continuous, mixed and final assessment) are available, the

results are slightly more balanced, although 58% chose continuous assessment, anyway.

According to the teachers' comments in their reports, this small percentage of students choosing the final assessment procedure, in most cases, prefer this either forced by circumstances __ because of working reasons, due to incompatible timetables... __ or simply as a result of the lack of will and perseverance that is required in continuous assessment.

Table 4. % of students who choose each of the assessment procedures offered

Con. / Mix. Ass.	Con. / Final Ass.	Mix. / Fin. Ass.	Con. / Mix. / Fin. Ass.
78% (continuous) 22% (mixed)	80% (continuous) 20% (final)	72% (mixed) 28% (final)	58% (continuous) 19% (mixed) 23% (final)

Percentage of students who attend with respect to the students enrolled in each option

The percentage of students who attended out of the number of students enrolled is distributed, as follows in Table 5, according to each of the assessment procedures. Those who "attended" __in other words, they meet the requirements of this assessment procedure: regular attendance, continuous work, participation...__ are 92% of those who chose continuous assessment, 77% of those who chose mixed assessment mode and slightly more than a half, 51%, of those who chose final exam as the assessment choice.

Table 5. % of students attended out of those enrolled on each possibility

Continuous Assessment	Mixed Assessment	Final Assessment
92%	77%	51%

Percentage of professors who negotiate the assessment criteria and / or carry out a shared and negotiated grading with students

We find that using continuous assessment, a high percentage of professors, 65%, expressed in their reports that they negotiate their assessment criteria with students, reaching, in many cases, consensus on the grades of the different assignments and even on the final grade after a reflective dialogue. With respect to the team assignments, peer assessment among the members of the team often takes place. Therefore, each one is given a grade depending on the degree of involvement that the rest of peers have observed. Such rating is usually considered and respected by the professor. On the other hand, several of them state in their reports that peer assessment is really close to the one given by professors and that peers are sometimes even harder than the own professor.

Academic Performance: Rate of Return, Rate of Success and Academic Performance Rating

As shown in Table 6, the **Rate of Success** varies significantly depending on the assessment procedure implemented: almost all the students, 93%, who are assessed through continuous assessment pass the subject; this percentage decreases to 71%, three quarters, in the case of the mixed choice and it is finally reduced up to 58%, slightly more than a half, in the case of who attend only at a final control test.

Respecting the **Rate of Return**, after having considered as enrolled students those who have chosen each of the procedures, the results among different groups are even more disparate. The vast majority, 86% of students "enrolled" in the continuous assessment

mode success. This percentage decreases to 55% in the case of "enrolled" students in the mixed mode but it is reduced to little more than a quarter, 29%, for those who are undertaking a final control test.

Academic Performance Rate considers both variables, although in different proportions: 70% for the Rate of Return and 30% for the Rate of Success. That is why it lies somewhere in between but closer to the Rate of Return than to the Rate Success, being as follows: the academic performance of continuous assessment is 0.88; mixed assessment, 0.60 and 0.38 for the final one.

Regardless of the chosen assessment mode, the Rate of Return and the Rate of Success are at 0.72 and 0.87, respectively taking into account the total number of students.

Table 6. Rate of Return, Rate of Success and Academic Performance Rating

	Continuous Assessment	Mixed Assessment	Final Assessment	Total
Rate of Return	.86	.55	.29	.72
Rate of Success	.93	.71	.58	.87
Academic Performance Rating	.88	.60	.38	.76

ROR, RS and APR based on grades segments achieved by students

Another interesting analysis that emerges from the results is the study of ROR, RS and the APR according to the marks obtained.

The scores in each of the assessment procedures are revealing data about the degree of attainment of objectives as well as the level of development of basic competences that students have achieved for each subject according to their professors.

Table 7. ROR, RS y APR based on grades segments.

	HON./EXC.			OUTSTANDING			SATISFACTORY		
	ROR	RS	APR	ROR	RS	APR	ROR	RS	APR
Cont. Ass.	.16	.17	.16	.41	.45	.42	.29	.31	.30
Mix. Ass.	.00	.00	.00	.18	.24	.20	.37	.47	.40
Fin. Ass.	.05	.09	.06	.10	.21	.13	.14	.28	.18
Total	.12	.14	.13	.33	.40	.35	.27	.32	.29

Firstly, we must convey not only that excellent and honors grades mean the achievement of these goals in the highest degree but also that the outstanding one does

it in a more than satisfactory way. At this point, it can be stated that, on the one hand, only 9% of the students undertaking the final assessment reached either excellent or honors grades and 21% was outstanding in

comparison with 17% and 45%, respectively, of the students attending the continuous assessment. With respect to the number of students enrolled the difference is even greater: 5% and 10% received excellent or honor grades and outstanding respectively following the final assessment, versus 16% and 41% who obtained these scores through continuous assessment. Finally, the marks obtained within the mixed procedure are at an intermediate point between these. Since the APR is a weighted average, it is placed

logically at an intermediate point between the two indicators but closer to the ROR, considering its greater weight comparing to the RS.

The rate of return and the rate of success applied to the total number of students, regardless of the chosen type of assessment, are higher in almost 10%, 0.72 and 0.87 respectively, with regard to the usual results in the university __see Table 8.

Table 8. ROR y RS depending on areas in the university (CRUE, 2008).

	Humanit.	Social	Experim.	Health	Technic	Total
Rate of Return	0.65	0.63	0.60	0.75	0.54	0.62
Rate of Success	0.87	0.80	0.78	0.85	0.65	0.77

Discussion

A large majority of professors, 87%, provides students the opportunity to be continuously assessed and graded throughout the learning process, dispensing with the final control test in most cases. 68% of professors also enables another option to obtain grades through final assessment. This is the sole procedure only for 3%. Contrary to these results are those found in other researches (Olmos and Rodriguez-Conde, 2010). They showed how numerous are those who are still using the final control test as the sole source of assessment: 31.8%. Nevertheless, there is a significant percentage of professors from the sample, 57.9%, who incorporate continuous assessment into their teaching. This discrepancy may be due to the higher awareness of innovation in methodology and assessment which has been developed by these professors comparing to professors in general terms. On the other hand, it is remarkable that, broadly speaking, the method of continuous assessment is the prominent one when considering a sole procedure in order to assess objectives and competences. In most cases, a final assessment with summative character is rejected regardless of considerations such as

the nature of the subject, the year of the degree when the subject is taught, etc.

Concerning students, when these are given the opportunity to choose how to be assessed, the vast majority, 80%, is choosing continuous assessment. Otherwise, mixed assessment is their preference. Only a small percentage, 20%, that in most cases, is pressured by reasons beyond their control, for instance, incompatible timetable, working reasons, etc... is opting for a final control test. These results are in concert with those findings of similar studies (Varea et al, 2009, 10).

The overwhelming majority of students, 92%, choosing continuous assessment "attended", of course. The own nature of continuous assessment, requires all the students who are "enrolled" to submit all the assignments to be assessed throughout the learning process. Thus, the number of students "enrolled" is very near the number of students "attended" since, otherwise, they would be transferred to a different type of assessment method. Whereas, in the case of mixed assessment, this percentage decreases to 77% and it is reduced to slightly more than a half, 51%, which is the number of

students enrolled in the final procedure attending at the corresponding control test.

There is a very sharp and graded decrease in the Rate of Success obtained corresponding to the different types of assessment implemented. The best results were achieved through continuous assessment, 0.93, and the worst ones are for the final assessment: 0.58.

Considering the Rate of Return, that difference is even more obvious due to the effect of the assessment method on the percentage of students enrolled who finally undertake the exam. Hence, in this case, final assessment is being further penalized: 0.86 for the continuous procedure compared to 0.29 for the final one.

This is because the higher the percentage of students who attended __it is the case of continuously assessment_, the ROR and the RS are closer. Consequently, these indicators are revealing similar information. On the contrary, when the percentage of students attended differs greatly from that of students enrolled __it is the case of the mixed option and even more of final assessment__ the ROR and the RS become distant. Therefore, the information provided by each of the indicators is relevant depending on the analysis that it is intended. That is why it is necessary to know both of them to assess the academic performance properly.

These results are in accordance with those obtained in other studies (Lopez, 2010, Turull, Roca and Alberti, 2010) which also highlight that the use of continuous assessment encourages greater academic performance than the final assessment.

Having applied the ROR and the RS to the grades of the students, the same results are confirmed. 62% of students continuously assessed get excellent, honors or outstanding grades compared to 30% of the students who attended at the final exam. Once again, if it is calculated considering the number of students enrolled the differences are even

greater. The grades obtained within the mixed assessment are at an intermediate point in between. It is the same case as the APR relating to grades. Taking into account that is a weighted average, it is also logically placed at an intermediate point in between the two indicators, although it is closer to the ROR, given its greater weight in comparison with the RS.

Continuous assessment enhances active participation of students throughout the whole teaching-learning process. It can be observed, for instance, after a reflective dialogue between the professor and the students, when both parties reach a consensus not only on the assessment criteria and on the grades of several individual and team assignments but even on the final grade.

The difference of ROR and RS corresponding to the sample with respect to university in general terms may be due to the fact that this sample of professors who taught the subjects under investigation is involved precisely in projects on formative assessment. This fact would encourage them to have a tendency towards innovation in methodology, which promotes better academic performance according to what can be concluded.

In a nutshell, the results obtained in this study show that the implementation of a system of evaluation and assessment __which involves different criteria, assignments, assessment tools...__ has a huge impact on academic performance. Furthermore, this study confirms that the procedure of continuous assessment promotes the best results not only in terms of ROR, RS and APR but also in terms of grades.

This research is an innovative study, on the one hand, due to the subject of study __there are scarce studies showing the connection between academic performance and the assessment system__ and, on the other hand, because of the extent of the sample. It is thus

a valuable tool for those teachers and especially for professors interested in implementing a methodology and a system of active and participatory assessment that results in greater academic performance and especially in a more satisfying and lasting learning.

In respect of the limitations of the research, it could be indicated if the difference in grades is explained mainly by the nature of the implemented assessment system as well as how important is the impact of other factors such as personal features and circumstances of students who are choosing the different assessment methods. Another objection, perhaps the most important one in terms of the reliability of the results, is the lack of an external assessment. It could be assured the attainment of the objectives as well as the development of basic and specific competences according to the corresponding programmes of the subjects, either regardless or complementarily to the assessment of the teaching staff.

These limitations which have been observed are simultaneously an invitation to the development of new research that further deepen and clarify even more the relationship between academic performance and the assessment and rating system.

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ABOUT THE AUTHORS / SOBRE LOS AUTORES

Arribas, José María (chema2@pdg.uva.es) is a professor in the Department of Education for the University of Valladolid, at the Education Faculty in Segovia. He holds a PhD in Education and Hispanic Studies. He is currently researching academic failure, quality in education, academic and institutional assessment, both in the school and at university level. Besides, he is nowadays involved, among others, in a research project on university teaching within the European Higher Education Area and teacher training. His mail adress is C/ Pedro Laín Entralgo, 8, nº 29. 28660-Boadilla del Monte, Madrid (Spain). [Buscar otros artículos de este autor en Google Académico /](#)

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ARTICLE RECORD / FICHA DEL ARTÍCULO

Reference / Referencia	Arribas, José María (2012). Academic performance in terms of the applied assessment system. <i>RELIEVE</i> , v. 18, n. 1, art. 3. http://www.uv.es/RELIEVE/v18n1/RELIEVEv18n1_3eng.htm
Title / Título	Academic performance in terms of the applied assessment system. [<i>El rendimiento académico en función del sistema de evaluación empleado</i>].
Authors / Autores	Arribas, José María
Review / Revista	RELIEVE (Revista ELectrónica de Investigación y EValuación Educativa), v. 18, n. 1
ISSN	1134-4032
Publication date / Fecha de publicación	2012 (Reception Date: 2011 September 20 ; Approval Date: 2012 May 17. Publication Date: 2012 May 30).
Abstract / Resumen	<p><i>This paper examines the academic performance depending on the evaluation and rating system used in the university. The sample under study consists of 30 subjects -taught by 35 professors to 2192 students from 7 different degrees at 14 universities of all Spain-. The results confirm that continuous assessment is the one that best results not only in terms of rate of return and success rate but also in terms of grades.</i></p> <p>En este trabajo se estudia el rendimiento académico en función del sistema de evaluación y calificación empleado en el ámbito universitario. La muestra objeto de estudio está formada por 30 asignaturas - impartidas por 35 profesores a 2192 alumnos de 7 titulaciones diferentes en 14 universidades de toda España-. Los resultados obtenidos confirman que la evaluación continua es la que propicia los mejores resultados no solo en cuanto a la Tasa de Rendimiento y a la Tasa de Éxito, sino también en cuanto a las calificaciones obtenidas.</p>
Keywords / Descriptores	<p><i>Academic performance, continuous assessment, participatory assessment, self assessment, shared grading, control tests.</i></p> <p>Rendimiento académico, evaluación continua, evaluación participativa, autoevaluación, evaluación compartida, pruebas de seguimiento.</p>
Institution / Institución	Departamento de Pedagogía. Universidad de Valladolid (España).
Publication site / Dirección	http://www.uv.es/RELIEVE
Language / Idioma	Español & English version (Title, abstract and keywords in English & Spanish)

RELIEVE

Revista **EL**ectrónica de **I**nvestigación y **EV**aluación **E**ducativa
E-Journal of Educational Research, Assessment and Evaluation

[ISSN: 1134-4032]

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