

# Using online rubrics to foster student agency

Teachers can use collaborative software to easily set up a digital rubric with their colleagues and students and combine teacher, peer and self-assessment.

## Summary

A Spanish teacher developed a Google Sheet plugin for a free online rubric tool. Teachers can work together with students or other colleagues to build the rubric criteria. Used by many teachers in Spain, the tool helps to gather these different ways of assessment in one place, so that they can also be graded for a summative assessment. The criteria for different performance levels in the rubric can be viewed while making the assessments, and these criteria can be defined either by the teacher, by the student or collaboratively.

## The policy context

Spain defines by law that the assessment of students should be continuous, formative, and integrated. For the Ministry of Education and Vocational Education and Training, it is important that teachers include technology in their daily educational practice, as well as in the evaluation of the students' results.

The national curriculum includes opportunities for self-and peer-assessment in, for example, Spanish, foreign languages, biology, science and technology and physical education. All subjects have strategies to develop key competences and basic skills. The Spanish curriculum guidance recommends teachers to incorporate strategies that include student participation in the evaluation of their achievements, such as self-assessment or peer assessment. This encourages students to reflect on and evaluate their own difficulties and strengths and participate in collaborative activities. It also favours personal reflection and autonomous learning by monitoring their own progress, which reinforces their motivation to learn and self-efficacy.

The National Institute of Educational Technologies and Teacher Training (INTEF) is the unit of the Ministry of Education and Professional Training responsible for the integration of ICT and Teacher Training in non-university educational stages. To help teachers incorporate formative assessment in their teaching, INTEF's [website](#) offers a repository of publically available teaching practice examples. INTEF encourages the creation of open educational resources and promotes transition to innovative pedagogies through these in schools, with the aim of improving student learning and promoting student-centred



and autonomous learning approaches in schools. INTEF offers educational resources under many categories (e.g. online learning resources).

CoRubrics is one example practice that can be found under the category “Educational Technology Observatory”. This is a virtual library of articles, created by teachers for teachers about digital innovation in the classroom. Each article presents an educational digital tool, with its didactic and methodological application, ending with an assessment by the author and a final recommendation. The observatory is receiving many viewers, with over 4000 views for the CoRubrics article within the previous year.

### Digital tools used

CoRubrics is a free Google Sheets add-on (available languages: EN, ES, FR, CA, EUS). It supports self-, peer- and teacher assessment of students alone or in groups, using a rubric designed by their teacher.

CoRubrics automates the entire process of creating and using rubrics in DFA. First, teachers create the rubric they want to use in Google Sheets, then they add the students' names and their email addresses (which can be imported from Google Classroom). The add-on then automatically creates a Google Form with the contents of the rubric; emails the form to students or provides the link to the teacher; processes the data once the form is filled out (by students or the teacher); and sends the results to students. Each student receives only their own results, together with a personalised comment added by the teacher.

The tool, created by Jaume Feliu, a teacher at Salas i Xandri (Sant Quirze del Vallès) can be found here. The source code is also freely available to anyone [here](#).

Other teachers in the school's physical education department use different tools, e.g. [Additio App](#), [iDoceo](#). These tools include the possibility of using rubrics although not everybody in the department uses them. CoRubrics however offers more clear information and possibilities than these applications.

In other departments, such as Mathematics, rubrics have been used for specific activities through the grading of tasks offered by Moodle.



## The school context

The school is in the Asturias region and has around 700 students and 80 teachers. A significant percentage of students have learning difficulties and almost half lack study habits, spending no more than two hours a week on school assignments. Only one third of parents help children with their studies, although there is considerable use of private lessons.

The Asturias regional administration in northern Spain creates different goals for schools in the region each year. One of them is encouraging the development of students' and teachers' digital competence and the development of digital technologies in schools as a transversal element that supports the process of educational innovation. CoRubrics is a tool adopted by the school to this end.

## Challenges

Teachers need an easy rubric tool that can be integrated with graded summative assessment. CoRubrics tackles this challenge with a template that can easily integrate self, peer and teacher assessment, and can also easily transform qualitative assessment into a graded score. Furthermore, it is an easily scalable practice because CoRubrics is a free Google Sheet add on, allowing easy collaboration on a shared Google Sheet between teachers in the same school.

### Research - Designing and using rubrics for assessment

Rubrics help to set out clear expectations and criteria for student assessment. They may also support students to reflect on and assess the quality of their own and their peers' work. In one approach, [Company and colleagues \(2017\)](#) describe a generic web-based system to 'adaptable rubrics', which provide feedback (with detailed scores and levels of performance on request); are adaptable to different learning needs (e.g. with more or less detail); collect metadata on the student's learning; and provide automated management of weights among scoring criteria during rubric creation.

Other research supports the use of rubrics to structure and guide online self-and peer-assessment, based on the specific learning objectives. Students may also have opportunities to adopt or develop their own criteria for self-and peer assessment ([Eyal, 2012](#)).



Challenges within the school are issues of low achievement, lack of motivation and poor study habits. Teachers try to address these by designing activities that encourage students' social and meta-cognitive skills: to be active agents and co-responsible for their learning, through planning activities, monitoring, and self-assessment. Physical education lessons presented an opportunity to implement these strategies.

## Enabling factors

Both the curriculum and regional targets include references to peer evaluation and self-assessment. In local community teacher centres, there are professional development courses for teachers on creating rubrics and forms.

In the school, students had access to laptops and the school allowed students to use their own device. CoRubrics, a Google Sheets add-on created by a local teacher, was installed on devices. Wi-Fi coverage in the school is good and includes outdoor sports areas.

## Example activity

One of the assessment criteria in the physical education curriculum is to self-assess and peer assess student performance during a game (i.e. a sports match) with the help of a rubric. This kind of assessment involves a change in methodology because teachers need to organise collaborative activities.

In a series of physical education lessons on volleyball, the teacher spends 4-5 sessions covering technical and tactical aspects of the sport using the 'Teaching Games for Understanding' methodology. This is an approach to games teaching where the play of a game is taught before skill refinement. It focuses on teaching students tactical understanding before dealing with the performance of skills, emphasising game performance over skill performance. Conversely, a "technique" approach focuses first on teaching students the skills to play the game then introduces tactical understanding once a skill base has been developed.

The teacher uses CoRubrics to create three Google sheets containing rubrics defined by the teacher (i.e., expectations for an assignment listing the success criteria and describing or scoring achievement levels), students' names and emails and teachers' names. It is easy to use and can be used on laptops or students' own devices – whichever they prefer.



	EXCELENTE	BUENO	REGULAR	BÁSICO	PESO
	4	3	2	1	
3.5 Proponer y resolver situaciones de juego reducido: 2x2, 3x3, superioridades	Propone ideas originales, soluciones y participa de forma activa.	Propone distintas actividades aunque con pequeños fallos. Participa de forma activa	Las actividades que propone en numerosas ocasiones no se pueden llevar a cabo. A veces se despista y no colabora.	No propone ninguna idea. Interfiere y molesta en el trabajo del equipo.	25%
3.6 Autoevaluar y coevaluar el nivel de juego con ayuda de planillas técnicas. Papel de observador	Hace observaciones coherentes, corrige con criterio de acuerdo a los gestos técnicos a observar.	La mayoría de las veces corrige de forma adecuada. Entiende el papel de observador.	Realiza observaciones pero la mayoría de las veces sin criterio, sin atender a aspectos técnicos.	Realiza muy pocas correcciones y apenas participa. No entiende el papel de observador.	25%
4.4 Realiza de forma correcta los ejercicios de técnica propuestos. (Toque de dedos, antebrazos, saque bajo y saque alto)	Realiza todos los ejercicios de forma coordinada, con bastante precisión.	Realiza casi todos los ejercicios técnicos con precisión aunque puede que alguno le cueste un poco más. Se esfuerza y lo intenta.	Realiza pocos ejercicios técnicos de forma coordinada. Apenas esfuerzo en corregir y practicar.	No es capaz de realizar ninguno de los gestos técnicos.	25%
8.3 Mostrarse colaborador, atento y respetuoso, coordinando sus acciones con las del resto de las personas implicadas.	Trabaja en grupo, se muestra colaborador y atento en todo momento.	Trabaja en grupo pero en ocasiones le cuesta coordinarse con los otros compañeros.	Trabaja dentro del grupo pero sin iniciativa, en numerosas ocasiones hay que recordarle la tarea.	Le cuesta trabajar en grupo, evita estar dentro del grupo.	25%

Figure 1 A rubric for a physical education lesson (volleyball), showing domains (e.g., 4.4: “Correctly performs the technique exercises such touch of fingers, forearms, low serve and high serve”); expectation statements at different levels (e.g., Regular: “Performs a few of the exercises in a coordinated way. Not much effort to correct and practice”); and weightings (25% for each domain).

In two sessions, the teacher shows graphics showing situations in sporting activities which students in groups of 6-8 analyse, one acting as the observer who analyses the responses of the others using the rubrics defined by the teacher, noting, and giving feedback to teammates as they discuss the graphic.

In the first session, students interpret a graphic and organise both the material and their classmates. In the second, students design exercises in groups to work on different technical-tactical aspects. After that, other groups use the graphics created and assess both themselves and each other. Finally, both the quality of the activities designed by other groups and the observer role within each group are evaluated.

Num	Student/Group	Number of ratings			Aspect to evaluate			Aspect to evaluate			Aspect to evaluate			Aspect to evaluate			Aspect to evaluate			Quantitative score (counting only the lowest item)			Quantitative score (using the weighted average of the items)			Overall Grade			Teacher
		Coev	Self	Teach	20%			20%			20%			20%			20%			Max grade	100	100%			Coev	Self	Teach		
					Coev	Self	Teach	Coev	Self	Teach	Coev	Self	Teach	Coev	Self	Teach	Coev	Self	Teach			Coev	Self	Teach					
1	Student 1	10	1	1	3.7	4	4	3.2	3	3	2.5	3	3	3.1	4	3	2.2	4	3	55	75	75	73.5	90	80	78.4	Nice!		
2	Student 2	12	1	1	3	3	3	3.7	4	4	2.2	2	2	3.4	3	3	2.3	3	3	55	50	50	73	75	75	74.2	You have to improv		
3	Student 3	11	1	1	2.1	2	2	2.1	2	2	1.8	2	2	3.6	4	4	2.4	3	3	55	50	50	60	65	65	63	Not bad		

Indicates the number of people who have completed the assessment (classmates, self-assessment, teacher).

Rating given for a certain evaluation indicator (classmates, student and teacher).

Indicates the % for each criteria.

Figure 2 Formative assessment scoring on the Google Sheet. The rubric score of each student is based on self-assessment, peer assessment (co-evaluation) and teacher assessment. Each criterion has a column for each type of assessment.

## Outcomes

DFA as applied in this case study encouraged discussions between students and between teachers and students. CoRubrics enabled students to quickly compare their perception of themselves to the teacher's grade. Students received relevant information about their progress, reinforcing their motivation and self-esteem to continue learning, favouring personal reflection and autonomous learning. They learnt to assess their own and their classmates' performance, as well as giving feedback to them, and to assess collaboratively. Students' motivation and engagement increased when given the opportunity to design and implement their own activities. Their self-efficacy behaviour improved, and they understood better which actions they needed to change. Students realised how difficult it is to evaluate and work as a team.

The tool is also being used in different languages in Spain and in Europe. You can find [usage statistics](#) on the author's page.

## Reflections

Currently, six teachers are actively using the tool in the school. The school head thinks the CoRubrics tool is interesting and could be included in future whole school professional development sessions. Another teacher conducted similar activities but on paper; he thought the tool was useful but lacked time to use it and encountered technical difficulties. Teachers who used the rubrics on paper can use the tool to transfer assessments to the digital environment. This ensures that assessments that took place at different points in time are collected in one place and available for later reference

A challenge remains that not all teachers have started to use the tool either because they lack the knowledge about it, or because they believe the use of technology is complicated and are more comfortable using the assessment tools they already know. In Spain it is easier to share experiences and resources with other teachers in primary school than in secondary school. In primary school coordination between teachers is possible, whereas in secondary school sharing and getting to know each other seems harder (this school has about 100 teachers). Each department has its own coordination timings, which makes it very difficult to work in an interdisciplinary way and, therefore, to share knowledge with other departments.



## Fostering a school-wide approach to DFA

Although related to only one subject, the approach in this case study is transferable to other subjects and age groups and could be implemented school-wide: creating rubrics, making use of the CoRubrics tool or a similar product, organising collaborative activities, making time for self-, peer-assessment during the activity, and modifying lessons and rubrics based on the evidence gathered.

A few things can be considered to extend the use of the tool for digital formative assessment throughout the school. First, trainings for the use of the tool should be adapted to the reality of the classroom and clarify concepts so that everyone has the same understanding. Second, when teachers carry out interdisciplinary projects, the assessment method should accommodate using collaborative software like CoRubrics to encourage its use. Third, having a dynamic group of teachers can help with initiatives such as using a new tool and supporting other teachers in the school.

Other useful steps are peer training at the beginning of the school year, having one session a term to share innovative or interesting experiences (this happens in primary schools and is effective) and creating common timeslots in the schedule enabling departments to coordinate, for example, an hour at the end of the school day.

The teachers in this case found that peer exchanges work well in terms of encouraging teachers to adopt such new practices. However, in schools, it is increasingly difficult to carry out peer training and reach a broad group due to administrative workload and few hours available to share these types of experiences and ideas.

