Rubrics: Empowering Students' Performance During Self and Peer-Assessment in Lower Grades

## *Rúbricas: Potenciando el rendimiento de los alumnos en edades tempranas durante la autoevaluación y la coevaluación*

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#### Abstract

During my experience as an elementary teacher, I have come to realize of the importance of assessment as an essential part in the teaching-learning process. Involving our young students in this process, although highly beneficial, it is proved to be very complicated due to a lack of self-managing skills. In order to overcome that handicap, we can provide our students with a tool that assists them to focus on the assessing task by facilitating a set of expectations and guidelines: a rubric. In addition to the use for assessing, we can also use the rubrics to take advantage of the clear expectations provided by it in favor of enhancing our students' performance on the soon to be assessed task due to the explicit of the objectives.

**Key words:** Motivation, assessment, self-assessment, peer-assessment, rubrics, clear expectations.

#### Resumen

Durante mi experiencia docente, he podido darme cuenta de la enorme importancia que tiene la evaluación en el proceso de enseñanza-aprendizaje. El conseguir hacer partícipe a nuestros alumnos de primeros cursos de primaria, demuestra ser muy beneficioso, pero a su vez, resulta muy complicado, ya que los recursos organizativos son muy limitados. Con el fin de solventar este obstáculo, podemos facilitar a nuestros alumnos una herramienta que les permita centrarse en la evaluación mediante una guía que hace explícita la tarea a evaluar: esta herramienta es una rúbrica. Dicha rúbrica, además de ayudar en la evaluación, puede ser utilizada para mejorar el rendimiento de los alumnos, debido a la claridad con la que se muestran los objetivos a evaluar.

**Palabras clave:** motivación, evaluación, autoevaluación, coevaluación, rúbricas, claridad de objetivos.

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## 1. INTRODUCTION

Assessment helps the students to move on from where they are to where they need be by reflecting on their work and progress, while showing them the best way to achieve their goals (Ketabi & Ketabi, 2014). Traditionally, the responsibility of assessing the students fell exclusively on the teacher; how-ever, the students can be a very important resource, both to achieve their learning objectives and to assess their own work.

In opposition to more classical teacher-centered, students take an active role in their learning by being involved in deciding what to learn, how to learn it and reflecting upon the results (O'Neill & McMahon, 2005). Through this reflection, the students can assess their own performance; thus, helping them to move forward on their learning. In furtherance of this, the students can be very helpful as well as very critical when they are entrusted with the task of assessing their peers; whereas the students can be vehement while reflecting on their own work, they turn to be very critical and demanding when they have to reflect on their peers'.

However, a problem arises when it comes to the first stages of elementary: students' self- managing skills are fairly limited due to their age. As consequence of this, I have decided to use rubrics in order to provide the students with the necessary set of procedures, and clear expectations to carry out autonomous tasks. By using rubrics, the students are made aware of what to do, how to do it, what to evaluate along with how it has to be evaluated.

This study addresses the following research questions: Can I improve my student's task performance by using rubrics during self and peer assessment? And what is more, does the use of a rubric ensure a reliable source of data to evaluate the students?

The above questions led me to the following hypothesis: In spite of their age, the use of rubrics during self-assessment and peer-assessment can help the students to move on their learning by reflecting on their work. By using rubrics, the students can focus their assessing efforts on the targeted objective; therefore, warranting the assessed outcome as a trustworthy collection of data.

The objectives of my research consist of introducing rubric during, first, selfassessment tasks, and then, peer-assessment, in order to help the students to assess different activities. Subsequently, I will collect and interpret the results

in pursuance of finding evidence on the impact of the rubrics on the students' performance. Finally, I will draw reasonable conclusions on how the use of self-assessment and peer-assessment affected my students' performance, as well as the role of the rubrics regarding the reliability of the assessing praxis.

## 2. RATIONALE

Assessment is a very important part of the teaching-learning process. By assessing our students, we can identify their needs necessary in order to help them to move forward on their learning.

When it comes to a learner-centered assessment, students take an active role in their learning by making key choices regarding their learning such as «what is to be learnt, how and when it is to be learnt, with what outcome, what criteria and standards are to be used, how the judgments are made and by whom these judgments are made» (Gibbs, 1995, p. 1). Furthermore, Brandes & Ginnis (1986) argue that a student-centered assessment benefits from being part of a student-centered learning since:

The learner has full responsibility for her/his learning, the relationship between learners is more equal (promoting growth, development), the teacher becomes a facilitator and resource person, the learner experiences confluence in his education (affective and cognitive domains flow together). (pp. 13-18).

Students can be included and made responsible of the process by utilizing self-assessment and peer-assessment. Let us discuss each in turn. Self-assessment refers to the students judging their own work so they can reflect upon it in order to move forward on their learning. More specifically, Andrade and Du (2007) define self-assessment as follows:

Self-assessment is a process of assessment during which students reflect on and evaluate the quality of their work and their learning, judge the degree to which they reflect explicitly stated goals or criteria, identify strengths and weaknesses in their work, and revise accordingly. (p. 160).

According to Spiller (2012, pp. 4-5), students can benefit from self-assessment considering that it develops conclusions that relate to the development of one's individual learning is essential to the learning process. In addition to

this, self-assessment promotes reflection within the students' personal education resulting in the promotion of responsibility and independence encouraging ownership in the learning. Finally, the diversity of a learner's willingness, experience and backgrounds can be accommodated by self-assessment.

Although sharing several aspects with self-assessment such as the promotion of responsibility, independence or reflection on the students' own work, peerassessment adds a social dimension to the student-centered assessment. Peer-assessment is defined by Yurdabakan (2011) as «the process in which individuals in a group assess their peers» (p. 156). A number of scholars detail some benefits of using peer assessment. For instance, Race (1998) and Zariski (1996) focus on different benefits such as the transfer of the skills required to assess (necessary for life-long learning), the focus on profound learning rather than superficial, or the use of the external assessment to improve the student's self-assessment.

Following this line of thought, Spiller (2012) suggests that peer-assessment promotes joint-learning through transactions regarding what compiles good quality work, while the students can assist each other in making sense of the inconsistencies of their learning as well as develop a more refined grasp of the learning process. Moreover, by receiving positive criticism from their peers, the students can acquire a more developed range of ideas that encourage the development and enhancement of their work, influencing them to specify, revise and evaluate their own individual ideas. Spiller (2012) also claims that power imbalances between teachers and students can be decreased through peer-evaluation and the student's status in the learning process can be increased as well (Spiller, 2012, pp. 10-12).

Albeit self-assessment and peer-assessment can prove to be very beneficial regarding the students' learning, they both can be troublesome to be successfully implemented, especially when it comes to young learners. Boud (1995) distinguished two main features in relation to assessment; deciding the standards of performance regarding students' expectations, and judging the quality of that performance using the predefined standards. In peer feedback, specifically, the students will be reflecting on their peer's work, therefore in order to provide the assessment with a sense of validity, these predefined standards can be presented in form of a rubric. Popham (2006) defines the term rubric as «a scoring guide used to evaluate the quality of students' constructed responses» (p. 3).

In regard to benefits, using rubrics free the students from teacher dependence since they are taking the role of assessor, helping them to achieve a deeper understanding of the criteria when they describe the quality of the assessed work (Harris & Brown, 2013, p. 2).

Regarding the creation of a rubric, Popham (2006) states the three essential features of a rubric, being the evaluative criteria, quality definitions, and a scoring strategy. The first feature refers to the parameters intended to judge the students' outcome; if there are four items that the teacher considers essential to proof the students' knowledge, there have to be four evaluative criteria (p. 10). The second feature is related to the level of quality each evaluation criteria can display; highest quality, lowest quality and levels in between.

Finally, the last essential feature of a rubric is the scoring strategy. Regarding this topic, Popham argues that the scoring strategy can be holistic; where the scorer assesses the product as a whole, or analytic, where the product is separated into individual parts to be sum as a whole at the end.

# 3. METHODOLOGY

In this section, I will provide some information regarding the description of both the research group and the control group, as well as the context of the school, and the process involving the design and creation of the rubrics. After that, I will detail the implementation of the rubrics, including objectives of the rubric, the type of assessment, the objectives of the activity and its execution.

# 3.1. Groups

The research is conducted in two different second grade groups in a C.A.M bilingual school located in San Fernando de Henares, Madrid (population 40.000).

This is the second year that both of the groups have been part of the bilingual program; therefore, they are accustomed to communicate in English and learn through a different language.

Twenty-three students form the research group. There are not any special needs or immigrant students among them although one of the students

comes from a low-income family. However, their socio-cultural background is not affecting their academic performance. The students have interiorized the procedures, rules and routines of the class.

The control group assembles twenty-five students. Three of these students come from Romanian families, and one student from a Moroccan family. Despite Spanish not being their first language, all of them have acquired an age appropriate level of the language of instruction. There is one student in the class that displays a very distracted behavior impeding him to follow the class on normal basis. Although he has not been diagnosed yet, I have assigned him a bilingual pair who is in charge of helping him, keeping him on task, translating, or serving as a model during the instruction. This group has interiorized the procedures, rules and routines of the class as well. As a last remark, the students are distributed in six groups of four members each in order to promote collaborative and cooperative learning and improve self-managing skills.

### 3.2. Rubric design

Being the involvement of our students in the teaching learning process one of the main reasons for using the rubrics to assess the students' tasks, I wanted to ensure that the rubrics are adapted to suit my students' needs and capabilities. In the interest of this, I designed three different sets of rubrics that range from a simple rubric that contains only one evaluative criterion to a rubric that includes all three components present in rubric; the evaluative criteria, the quality definitions, and the scoring strategy.

Getting accustomed to the use of rubrics is a process that needs practice time therefore requiring a certain amount of time. In pursuance of providing the mentioned practice, I designed two simple rubrics that contain a single evaluative criterion with different levels of quality definition to help them maximize their practice with this component of the rubric. The next step on the process is the creation of a rubric that holds three different items of evaluative criteria reflecting the objectives of the activities. Although the evaluative criteria are essential for the students due to the clear expectations that they provide, they are become even more important when it comes to peer-assessment. As Boud (1995) entails, in order to provide a sense of validity to the assessment made by a peer, it is strictly necessary that the students have

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the expectations regarding the activity very clear. Considering that I want to focus my students' attention on using these clear expectations, the second set of rubrics incorporate only one gradation of quality that indicates the minimum standards required to score. Finally, the last two rubrics embrace the three main aspects of a rubric. More specifically, the rubric includes three, or six different evaluative criteria, four different levels of quality definitions, and a analytic scoring strategy.

In the following lines, I will provide information regarding the three different sets of rubrics including the description of each individual rubric; the objectives of the rubrics regarding the research, the evaluative criteria, the quality definitions and the scoring strategy.

The first set is constituted by two different rubrics. Each rubric assembles one evaluative criterion and three different quality definition. These rubrics will serve as an access tool in pursuance of the students' initiation due to their simple nature.

- Rubric 1:
  - Research Objective: To enhance the students' performance on the task.
  - *Evaluation Criteria:* Number of words regarding the creation of a sentence.
  - *Quality Definitions:* 1-2 words, 4-5 words, 6-7 words.
  - *Scoring Strategy:* Holistic. 1 check, 2 checks, 3 checks.
- Rubric 2:
  - *Research Objective:* To enhance the students' performance on the task. To authenticate the validity of students' self-assessment data.
  - *Evaluation Criteria:* Number of sentences and use of different prepositions.
  - Quality Definitions: 1-2 sentences, 3-4 sentences, 4 sentences using four prepositions.
  - *Scoring Strategy:* Holistic. 1 check, 2 checks, 3 checks.

The second set of rubrics consists of two different rubrics containing one quality definition and three different evaluative criteria. After the students practice the use of rubrics with the previous and simpler set, this new set of rubrics will focus on the variety of evaluative criteria. This array of criteria differs from what the students are accustomed to do when it comes to assessment; thus, the quality definitions are reduced to one in order to ensure the students' undivided attention to the criteria.

- Rubric 3:
  - *Research Objective:* To enhance the students' performance on the task. To authenticate the validity of students' peer-assessment data.
  - Evaluation Criteria: Name, Complete, Correct.
  - *Quality Definitions:* Name (Yes, No). Complete (4 transports for people, 4 transports for goods, 2 transports for both). Correct (3 transports for people, 3 transports for goods, 1 transport for both).
  - *Scoring Strategy:* Analytic. 1 check, 2 checks, 3 checks.
- Rubric 4:
  - *Research Objective:* To enhance the students' performance on the task. To authenticate the validity of students' peer-assessment data.
  - *Evaluation Criteria:* Complete, Correct, Prepositions.
  - *Quality Definitions:* Complete (6 answers). Correct (4 correct answers). Prepositions (4 different prepositions).
  - *Scoring Strategy:* Analytic. 1 check, 2 checks, 3 checks.

The final set compiles two different rubrics containing three or six evaluative criteria along with four different quality definitions. These rubrics are more complex than the previous sets; however, the students have been able to practice the elements of the rubrics one by one, therefore allowing them to gain experience.

- Rubric 5:
  - *Research Objective:* To enhance the students' performance on the task. To authenticate the validity of students' peer-assessment data.

- *Evaluation Criteria:* clothes, clothes names, clothes colored.
- Quality Definitions:
  - 4 points. 8 or more clothes, 8 or more clothe names, ALL clothes colored.
  - 3 points. 7 or 6 clothes, 7 or 6 clothes names, 6 or 5 clothes colored.
  - 2 points. 5 or 4 clothes, 5 or 4 clothes names, 4 or fewer clothes colored.
  - 1 point. 3 or fewer clothes, 3 or less clothe names, 1 cloth colored.
- *Scoring Strategy:* Analytic. Points 1-12.
- Rubric 6
  - Research Objective: To enhance the students' performance on the task. To authenticate the validity of students' peer-assessment data.
  - Evaluation Criteria: Materials, properties, change of shape, correct materials, correct properties, correct shapes.
  - Quality Definitions:
    - 4 points. 6 materials, 4 different properties, 4 different changes of shape, 4 materials, 4 properties, 4 shapes.
    - 3 points. 4 or five materials, 3 different properties, 3 different changes of shape, 3 materials, 3 properties, 3 shapes.
    - 2 points. 2 or 3materials, 2 different properties, 2 different changes of shape, 2 materials, 2 properties, 2 shapes.
    - 1 point. 1 material, 1 property, 1 change of shape, 1 material, 1 property, 1 shape
  - Scoring Strategy: Analytic. Points 1-24.

### 3.3. Rubric implementation

Every rubric mentioned before was used to assess a specific activity. In the following lines, I will describe the general procedures followed by the students before, during and after the activity. After that, I will provide a description of those activities including their objectives, assessment process, and troubles encountered during the process.

All the activities are modeled in order to provide a clear expectation of its outcome. Both the research and the control group receive the same explanation and modeling, although the former group is also debriefed on the rubrics and its mechanics. During the activity, I monitor the students' progress while facilitating information at their request. The students are arranged in groups of four students, or pairs depending on the activity requirements. Once the activity is finished, I assist the students during the assessment process, varying the type of assistance depending on the activity's needs. Finally, I will assess the same samples using the same rubrics in order to verify the validity of the students' assessments.

The first rubric was used to assess an activity aimed to the constructions of sentences related to the location of different people in a picture. Five different sentences regarding the picture are displayed on the blackboard; where is the woman with the baby? How many pineapples are there in the fruit shop? How many cats are there in the pet shop? Where is the boy? What color is the car between the bus and the blue car? The activity has a time limit of fifteen minutes, after that, the students will share their sentences with the group under my supervision to review the answers before start assessing with the help of the rubric. The activity developed without any incidents, and the students easily followed the rubric considering that they are already familiar with counting checks in order to assess. However, it was necessary that I emphasized the need of striving towards the highest quality gradation in pursuance of best score.

The second activity aims to write sentences regarding the position of different people on an auditorium using different prepositions. The students have ten minutes to fulfill the task. Once the task is completed, the outcome is shared with the class for assessment. Doing so requires my assistance by helping the students to confirm that their contributions are correct. The students grade their work using the rubric, on the other hand, the control group also assesses their samples; however, the scores are not specified. Regarding the troubles encountered, as it happened in the previous rubric, the students did not find difficult to apply the rubric, but at the same time, a constant reminder of the desired outcome was required during the task.

The third activity requires the creation of a Venn's diagram in order to classify different means of transportation into means used for transporting people, transports used for transporting goods, o transports that can be used for both options. The students, under my supervision, will share the outcome with the class to review the means of transportation after fifteen minutes. For the first time, the students in the research group needed extra help to deal with the rubric since it has three different evaluative criteria. Three teams required assistance throughout the course of activity and the assessment by constantly reminding them to pay attention to the rubric. As a result of the students being accustomed to counting check marks, an ongoing reminder of the rubric's mechanics was essential to the activity success. The rubric used in this activity disregarded the relation between the number of checks and the final score by setting a standard with each evaluative criterion; if the criterion were met, the students would achieve only one check.

During the forth activity, the students pursued to write sentences regarding the location of different buildings in a map with the assistance of different prepositions. Once the twenty-minute time limit expires, the students will assess their work by using the rubric (research group), or their own criteria (control group). As to problems encountered, the students in the research group required certain procedures to help them differentiate the correct sentences from the correct prepositions, considering they are only used to *checks*. Nevertheless, the situation was solved by using dots on the correct sentences and underlining the prepositions. In addition to these procedures, some groups continued to need to be reminded to base their task on the rubric's requirements in order to achieve the maximum score. Withal, all the assistance caused me to be involved and active during the whole activity; therefore, interfering with the students' self-managing skills.

The fifth activity consisted of drawing different clothing items, then, naming them, and finally coloring them. There is a twenty-minute time limit to the

activity. Subsequently, the students in the research group will assess their work using the rubric whilst the students in the control group will use their own criteria. Due to the fact that this was the first complete rubric the students faced, the research group needed some extra modeling during the first section of the rubric so they can get used to its mechanics. However, most of the students in the research group automatically used the rubric as a reference in the interest of achieving the best score possible, with the exception of two groups that have been in need of extra assistance throughout all the previous rubrics. In addition to this, it is also worth mentioning that the students in the control group based their assessing procedure on deducting one point per mistake.

Finally, the last activity required the students to name an object and subsequently, name the materials it is made of as well as attribute the properties of those materials and how their shape can be changed. After the thirty-minute deadline, the students use the rubric to assess their work. Due to the complexity of the rubric and its six evaluative criteria, the students were a bit confused at first and needed assistance through the assessment of the first evaluative criteria. After that, all the teams except one proceeded to assess the task independently. One of the teams required the teacher assistance throughout the whole rubric.

# 4. DATA ANALYSIS AND RESULTS

This section is aimed at describing the data collected from the students' work samples. In order to do so, I will specify the objectives of the rubric, I will provide a brief description of the activity, and compare the numbers of the research group to the numbers of the control group. After that, I will reflect on the results and analyze the possible causes responsible of the differences among the research and control groups.

### 4.1. Rubric 1

On the one hand, the objective of the rubric is to enhance the students' performance regarding the task, as well as verify the reliability of the students' self-assessment by comparing it with the teacher assessment. On the other hand, the objective of the activity is to write sentences using the most words possible regarding the location of people or building in a picture.









Source: Author.

The data collected shows that the research group managed to write 184 words, whereas the control group scored 108 words (Figure 2). As for the reliability of data, after I assessed their work using the same rubric, one hundred percent of the worked assessed by the research group matched my own assessment of the same work (Figure 1).

During this activity the research group scored more words since they had a clear standard of quality on the rubric. The students in the research group completed the sentences using all the language that they could gather so they could achieve the ten words mark. On the other hand, although being correct, the sentences of the control group were short since they only replied to the location of the subject without providing more details. As for the matter of assessment, the research group assessed their own task using the rubric. All the scores matched my own assessment of the task.

## 4.2 Rubric 2

The objective of the rubric is to enhance the students' performance regarding the task, as well as verify the reliability of the students' self-assessment by comparing it with the teacher assessment. In addition, the objective of the activity is to write sentences about the location of people in a picture using the maximum number of prepositions.





Figure 4. Represents the amount of prepositions used by the students in their sentences and the number of matches between the tasks assessed by the teacher and the tasks assessed by the students. Source: Author.



The performance numbers show that the research group wrote twenty-two sentences, of which, sixteen sentences are correct (Figure 3). At the same time, the control group scored twenty sentences, of which, sixteen are correct. As regard of the use of different prepositions, three out of six teams used all four prepositions whereas the other three teams used three different prepositions (Figure 4). On the other hand, none of the teams in the control groups use all four prepositions, while two teams used three different prepositions; thus, leaving four teams using only two prepositions (Figure 4). Finally, 5 out of 6 teams in the research group scored the task as I did, when the control group only matched two (Figure 4).

This activity shows a minimal difference between the sentences produced by the research group, and the control group. However, the research group outper-

formed the control group in quality work by using more different prepositions. The focus of the activity was the use of all the pre-defined prepositions; thus, it was incorporated in the last of the quality definitions. Even though I emphasized on the use of all the prepositions during the explanation of the activity, the control group used only the prepositions that they felt more comfortable using and repeated them in the rest of the sentences. Finally, the only one of the students' corrections in the research group didn't match my own assessment due to a misuse of a preposition. As far as the control group is concerned, they assessed their tasks using their own criteria despite my emphasis on the use of all prepositions. Due to the lack of knowledge regarding the quality definition, the control group's assessments only matched two of my own.

### 4.3. Rubric 3

The objective of the rubric is to enhance the students' performance regarding the task and verify the reliability of the students' self-assessment by comparing it with the teacher assessment. Furthermore, the objective of the activity is to write different means of transportation as well as classify them according to the nature of their cargo.







Figure 6. Represents the number of teams achieving the different evaluative criteria. *Source*: Author.

In this first multi-criteria rubric, the research group scored ninety-four words, of which sixty-nine are spelled and located properly in the diagram (Figure 5). On the other hand, the control group accomplished to write one hundred and two words, of which seventy-six are spelled and classified correctly (Figure 5). Analyzing the numbers by evaluation criteria (Figure 6), the results show that in the research group, nine out of ten wrote their names while only two out ten did in the control group. The results of the second criteria, complete, show that seven out of ten teams of the research group accomplished to write four transports for people, four transports for goods and two transports that can be used for both. At the same time, no team achieved that criterion in the control group. The third and last criterion (correct) that implies that the students had to write and classify at least three transports for people, another three transports for goods and one transport that can be used for both, was achieved by five out of ten teams in the research group whereas in the control group, only one of the teams managed to score a check in that criterion. Finally, eight out ten teams in the research group matched my assessment versus the two matches resulted from the control group (Figure 7).



**Figure 7.** Represents the number of matches between the tasks assessed by the teacher and the tasks assessed by the students. *Source*: Author.

This results show that the research group displayed a better performance clear regarding quality work by besting their control group peers in al the evaluative criteria (Figure 6). Moreover, the evaluative criteria related to the completion and the correction of the activity forced the students in the research group to focus a most of their efforts on the classifying part of the task rather than merely naming different kinds of transportation. If we reference Bloom's Taxonomy, this attention to classifying required a higher thinking process, moving the students from the first stage «remembering» (knowledge) to the third stage, emphasizing on classifying (application). Even more, thinking about transports that could be used for both people and goods required the students to analyze the different transports; therefore, reaching the fourth stage of Bloom's Taxonomy: analysis.

However, this extra effort affected the number of vocabulary that they managed to achieve; whilst the research group was focus on classifying, the control group was only concerned about naming the maximum amount of transports thus overall scoring more vocabulary than the research group. The assessment reliability, again, favored the research group since eight teams assessed the work samples as I assed them. On the contrary, the control group only two teams corresponded my assessment. It is also worth mentioning that seven of the control group's samples managed to achieve none of the evaluative criteria hence I was not able to score them (Figure 7).

## 4.4. Rubric 4

On the one hand, the objective of the rubric is to enhance the students' performance regarding the task, verify the reliability of the students' self-assessment by comparing it with the teacher's assessment. On the other, the objective of the activity is to write sentences regarding the location of different buildings on a map while using different prepositions.





**Figure 9.** Represents the number teams using of different types of prepositions in the research group. *Source*: Author.



This rubric displays three different evaluative criteria: first, it has to be completed by at least writing six sentences. Second, four sentences must be locate the different places in the map correctly. Finally, four different prepositions have to be used to locate the places in the map. When it comes to the first criterion, it was achieved by seven teams (out of eleven) in the research group and by four teams of the control group (Figure 8). The second criterion requirements were met by seven teams in the research group and three teams in the control group (Figure 8). Finally, the third criterion was achieved only by the research group, with six teams managing to use four different prepositions (Figure 9).





Figure 11. Compares the use of the different amount of prepositions in both groups. *Source*: Author.





Figure 12. Represents the number and accuracy of the sentences achieved by the students regarding the location of different buildings on a map. *Source*: Author.

Regarding the total number of sentences and use of prepositions, the research group wrote sixty sentences, of which, thirty-six were correct (Figure 12), and six teams used four different prepositions, four teams used three different prepositions, and one team used only one preposition (Figure 11). On the other hand, the control group wrote forty-six sentences, being thirty-eight correct (Figure 12). In addition to this, none of the teams used four prepositions, three teams used three prepositions, seven teams used two prepositions, and one team used only one preposition (Figure 10).





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As far as data validity is concerned, nine out of eleven tasks assessed by the research group matched my own assessment, when none of the samples assessed by the control group agreed with my assessment (Figure 13).

Although having achieved similar results in two evaluative criteria, by analyzing the results we can observe how having the expectations clear specified on the rubric helped the research group to widely outperform the control group in using all four prepositions (Figures 9 & 10), which was the focus of the activity. At the same time, the research group managed to write twenty-four more sentences due to the need to have extra sentences just in case they make mistakes while using the most difficult prepositions (behind and between) prepositions (Figure 8). It is worth mentioning the difference between my assessment and the control group's; only one team's assessment concur with my own since, despite my insistence on prepositions, they based their assessment criteria on the quantity of sentences rather that the quality related to the use of different prepositions. On the other hand, the research's group assessment (Figure 13).

#### 4.5. Rubric 5

On the one hand, the objective of the rubric is to enhance the students' performance regarding the task, and verify the reliability of the students' self-assessment by comparing it with the teacher assessment. On the other hand, the objective of the activity is to draw, spell correctly, and color different clothing items.

The numbers in this rubric show that the every team in the research group (eleven) achieved the maximum level of quality gradation in the first evaluative criterion regarding the number of clothes that the students had to draw thus earning four points. On the other hand, only six teams in the control achieved that level, leaving the other five teams reaching the three points threshold (Figure 14). The results of the second criteria (Figure 15) show nine teams in the research group scoring four points, one team scoring three points, and one more team scoring only one point. Meanwhile, the control group had two groups accomplishing four points, three teams scoring three points, five teams scoring two points and one team scoring one point in the same criterion. Finally the last criterion's results show all the teams in the research group scoring four points, one team score the same score. Of the rest of the teams in the control group, one team scored three points, leaving four teams without scoring any points (Figure 16). As regard of

the assessment, the research group assessed a total of one hundred and twenty-eight compared to the one hundred twenty-seven assessed by the teacher. Meanwhile, the control group graded their work with one hundred and ten points versus the teacher's one hundred and three total score (Figure 17).





Figure 15. Represents the different quality gradations achieved by the teams regarding the second evaluative criterion.

Source: Author.



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Figure 17. Represents the number of matches between the tasks assessed by the teacher and the tasks assessed by the students.

Source: Author.



The graphs illustrate how the research group outperformed the control group in all the evaluative criteria. What is more, all the teams in the research group achieved the maximum score in two of the evaluative criteria (Figures 14 & 16), once again, because the assessment expectations were clear to them during the task due to the presence of the rubric. It is worth mentioning that the evaluative criterion regarding the coloring of the clothes was not even scored in four of the teams in the control group even though it is the easiest to comply, and I insisted on its completion during the explanation and modeling of the activity. When it came to assessing, the research group required assistance through the first section of the rubric, and sporadically, in different sections to different teams. However, the students' assessment regarding the researched group matched my own by almost one hundred percent. On the other hand, the control group assessment was very close to my own, although, with a lower performance (Figure 17).

## 4.6. Rubric 6

The objective of the rubric is to enhance the students' performance regarding the task and verify the reliability of the students' self-assessment by comparing it with the teacher assessment. Furthermore, the objective of the activity is to write different objects indicating the material they are made of, the properties and possible change of shape of each material.





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**Figure 19.** Represents the different quality gradations achieved by the teams regarding the second evaluative criterion. *Source*: Author.



In the last rubric, we can find six different evaluative criteria. The results of the first criteria regarding the materials (Figure 18) show that all the eleven teams that formed the research group achieved the maximum level of gradation with four points. At the same time, most of the control group teams (eight) scored the second best last level of gradation with three points, whilst only two teams managed to meet the requirements necessary to achieve the four points.



Figure 20. Represents the different quality gradations achieved by the teams regarding the first evaluative criterion. *Source*: Author.

The second criterion (Figure 19) follows the same trend as the previous one with most the research team reaching the top gradation; nine teams scored four points, and two teams scoring two points comparing to the four teams scoring four points, four teams scoring three points, two teams scoring two points and one team scoring one point in the control group.





**Figure 22.** Represents the different quality gradations achieved by the teams regarding the fifth evaluative criterion criterion. *Source*: Author.



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Figure 23. Represents the different quality gradations achieved by the teams regarding the first evaluative criterion. *Source*: Author.

On the third criterion related to the change of shape, three teams in the research group scored four and three points, two teams scored two points, one team scored one point and another team did not scored any points whatsoever. As for the control group, only one team achieved the highest gradation, four teams the second best level of gradation and five teams the third level thus scoring two points (Figure 20). The fourth and fifth evaluative criteria displayed very similar results regarding the research and control group's performances (Figures 21 & 22); all the teams in the research group met the requirements to score four points whereas ten teams in the control group matched that performance, and one team scored one gradation below. However, on the fifth criterion, all the teams in both groups scored four points (Figure 22). Finally, on the last evaluative criteria regarding the correct shapes, six teams in the research group scored four points, four teams scored two points, and one team did not score at all; whereas one team scored three points, three teams scored two points, four teams scored one point and three teams did not score a single point in the control group (Figure 23). On

the matter of the students' assessment validity, the research group assessed an overall of two hundred thirty-one points versus the teacher's assessment of one hundred twenty-eight points (Figure 24).



Figure 24. Represents the number of matches between the tasks assessed by the teacher and the tasks assessed by the students.

Analyzing the previous results we can observe how the research group outperformed the control group once again since the teams scored the highest level of quality gradation fifty-one times, in comparison with the twentyseven times achieved by the control group. Such feat was accomplished as a result of having the rubric as a reference of the expected outcome. Withal, both groups featured similar results in the forth and fifth criteria due to the nature of those criteria; the criterion was strictly related to their actual knowledge on the subject. This same nature also ruled the sixth criterion yet the rubric helped to improve the quality encouraging the students in the research group to write all four of the changes of shape. Finally, bringing us back to the subject of assessment validity, the works assessed by the research group matched my own with an overall difference of three points; two hundred thirty-one points assessed, versus my assessment resulting in one hundred twenty-eight points.

## 5. CONCLUSIONS

After collecting, comparing and analyzing the data resulting from using rubrics in two different second grade groups, I have gathered enough evidence to answer the questions that I formulated in my hypothesis: first, can I improve my student's task performance by using rubrics during self and peer assessment? Second, does the use of a rubric ensure a reliable source of data to evaluate the students?

Analyzing the results, it is revealed that the students can improve their performance if they use rubrics whilst working on a task on account of the research group - outperforming their peers in the control group in seventeen out of nineteen graphs that compared the performances between the two groups.

When it comes to the second question related to the reliability of the assessment carried out by the students using the rubric, the data results show that the data collected can be indeed reliable since forty out of forty-eight assessed task gathered from the research group concur with my own assessment of the mention tasks. More over, the samples of the two tasks that were assessed using points, showed a minimal difference of four points between the students' assessment and my own.

Based on the research's outcome I can state that the use of rubrics is a very useful tool to be used in a classroom, even in lower grades. Even though rubrics required clear procedures, and a previous training in order to succeed in their implementation, rubrics provide certain benefits that can make a difference in the students' learning. Rubrics clearly specify what is expected from the students' performance therefore helping them to strive towards the highest standard of quality. In addition to this, the use of rubrics entrusts the students with the responsibility of assessing themselves or their peers, involving them deeper in the teaching learning process, and allowing the teacher to optimize the time in the class by reducing the time spent on assessing every student task since the assessment data resulted from them is reliable and trustworthy.

Providing the students with a total autonomy when it comes to task completion and its assessment is the desirable objective that I would like to achieve with my students in the future. The mastery and normalization of the use of rubrics in my classes can help me accomplish that goal. Moreover, rubrics could also be used to set standards regarding writing, notebook organization, science and art projects or even mathematics, thus helping the students to move forward on their learning in a wide variety of areas.

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