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The Impact of Rubrics-Based Self-Evaluation Training on Students' Performance and Self-Evaluation

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Abstract
The study aims to investigate the effect of rubrics-based self-evaluation training on students' performance and self-evaluations. It was conducted on senior students (n = 72) of Business English at the Faculty of Languages and Translation at the University of Aden. The students were distributed into two groups: control and experimental groups. The latter participated in the creation of the rubrics and was trained on using them to evaluate their own academic performance in writing research papers. The control group received no training, and they did not even receive the criteria. Both groups' self-evaluations were compared with their instructor's evaluation. The results demonstrate that the performance mean values of the trained students' scores (M = 53.29, SD = 4.76) are greater than those of the un-trained students' mean values (M = 35.84, SD = 10.09). They also indicate that the experimental group's self-evaluation demonstrated a strong positive correla-tion with their instructor's evaluation (r = 0.717) with no statistically significant differences between the mean values (p = 1.930). On the other hand, there is a weak positive correlation (r = 0.061) between the untrained group's evaluation and the instructor's evaluation, with markedly significant differences between their mean values (p = 8.298). This indicates that there is a significant statistical difference in the academic performance of the trained students compared with their untrained peers in favor of the trained students and it also indicates that the poor performers, the control group here overestimate their own achievements.
Keywords: self-assessment, rubric- based self-evaluation, self-regulated learning
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1. Introduction

Scholars believe that involving students to actively participate in the creation of the evaluation criteria and to take part in judging their own performance and achievements play a crucial role in developing their writing skills (Becker 2016). Students' skills, competency, and life-long learning are improved when they are aware of the rubrics formation and use. Such practices will enable the students to bridge the gap between their actual performance and the desired learning outcomes and promote their self-regulated learning.

Accordingly, the present study was designed to address the role played by the participation of students in rubrics formation and training them to use these rubrics to evaluate their performance on improving their achievements. It also investigates the role such practices might play in bridging the differences between students' self-evaluation and the instructor's evaluation. We should mention here that we use the terms self-evaluation and self-assessment interchangeably. We had made it clear to the students that their self-evaluation and the scores they awarded themselves would not be counted for their final grades. Self-evaluation was used as self-assessment for the purpose of raising the students' awareness of the key elements they need to focus on while performing their tasks, to recognize their strengths and weaknesses so they can improve their own performance, and to be self-regulated and independent students.

1.1 Problem Statement

Scholars believe that traditional ways of assessing and scoring students' performance do not support students' academic advancement. They lack transparency (Elander 2003, Wride 2017 & Wolf & Stevens 2007), and towards the end, students might find themselves still unable to learn from their own mistakes because they are unaware of them and because they lack the metacognitive skills that enable them to recognize their weaknesses. These all, as we believe, can be overcome by involving the students in the formation of the evaluation marking standards and training them on using these standards to evaluate their own performance. These practices are believed to enhance the students' metacognitive abilities in spotting and recognizing their own faults and enable them to perform better towards achieving the desired learning out-comes.

1.2 Research Importance

Rubric-based self-evaluation training has been scarcely investigated. The study sheds light on how encouraging students to infer, suggest, and co-create the marking rubrics and training them on using these rubrics for self-evaluation can positively impact their academic performance. It is believed that introducing these procedures into

the curricula of educational courses in schools and universities helps plant and develop the metacognitive skills students need in order to be aware of their actual performance and acquire career and life-long learning skills. Such a procedure can also be a very helpful tool in the implementation of distance learning, where students need to be more self-regulated and self-dependent.

1.3 Limitations of the Study

The study was restricted to a total of 72 fourth-year Business English students at the Faculty of Languages and Translation, University of Aden, in the first semester of 2022-2023. They were distributed into two groups: Group A, the experimental group, with 35 students, and Group B, the control group, with 37 students. One of the researchers was the instructor for the two groups, which helped conduct the research smoothly with fewer obstacles. The course the students were studying was "Introduction to Research Writing", with 3 credit hours.

1.4 Objectives of the Study

The study aims to investigate the impact of involving students in creating rubrics and training them on using these rubrics to evaluate their own performance in writing a research paper. The students were aware that their self-evaluation and assigning themselves scores do not count for their final grades. We believe that such implementations in the curriculum design would improve the students' academic achievements. It will also minimize the differences between their self-evaluation and the instructor's evaluation, which can be regarded as an indication of their achieving the expected learning outcomes. This procedure will enable the students to acquire the necessary metacognitive skills that will enable them to recognize their own shortcomings in the areas that need further study, and improvement. It will enable them to efficiently manage their time while studying and will create a positive atmosphere in which the students feel fairness and transparency towards the grades they are awarded. It will also provide students with life-long skills that can be practiced in their social lives as well as their professional careers.

1.5 Research Hypotheses

- There is no significant difference in the academic performance of students who have been trained on using rubrics for self-evaluation and their peers who have not been trained.
- There is a significant correlation between the self-evaluation of students who have been trained on using rubrics and their instructor's evaluation.
- There is no significant correlation between the self-evaluation of students who have not been trained on using rubrics and their instructor's evaluation.

2. Review of the Literature

Though assessment has a great impact on students learning, it usually takes place out of their sight and without their participation (Rust, 2002, cited in Elander, 2003), (Taras, 2015, cited in Wride, 2017).

When assessment is done in secret with tutors keeping to themselves the grounds upon which they make assessment decisions learners can find themselves in a client role and this may breed distrust and a feeling of 'us and them'. (Brow et al., 1995; p. 81 cited in Wride, 2017)

Scholars have emphasized transparency in grading students' assessments. They argue that students have the right to know how their essays are graded and the basis upon which they have been awarded the scores (Miller, Imrie, and Cox 1998, p. 113, as cited in Elander, 2003). "A good rubric can take the mystery out of assignments for all students" (Wolf and Stevens , 2007).

In addition to the importance of having clear evaluation criteria, involving students in peer and self-assessment can improve students' perceptions of the fairness of the evaluation (Rust et al., 2003, as cited in Wride, 2017).

Wride (2017) perceives self-assessment as 'the involvement of learners in making judgments about their achievements and the outcomes of their learning'. Similarly, Andrade & Boulay (2003, cited in Andrade 2010) argue that through self-assessment, students judge the quality of their academic performance and the extent to which they achieve their learning outcomes.

For Wride (2017) and Andrade (2010, 2007), self-assessment supports learning when it is a formative assessment. Formative self-assessment includes many processes that support learning, such as practice, feedback, revision, and making criteria. These all help develop students' knowledge and skills (Panadero et al., 2014 and Boud 1995a &b cited in Andrade, 2019). It is an important skill that is required for future professional development and life-long learning.

Traditional evaluation practices that focus on scores and certificates can hinder students' ability to judge their own performance (Boud and Falchikov, 2006, cited in Wride 2017). Students can become passive recipients of externally imposed assessment practices.

Enabling students to have continuous and immediate access to their own performance is the primary source

of feedback they have to receive. With self-regulated learning, students identify their learning goals, and monitor their cognition, motivation, and learning behavior in order to learn better and improve their performance (Andrade 2010, 2007).

Coutinho et al. (2020) found that students with the poorest performance were the most likely to overestimate their performance and to deviate from their instructor's evaluation. Involving students in the assessment process enables them to think about their learning, how to self-assess, and motivates them to learn. It helps them become "independent, self-directed, life-long learner", and adds benefits "to their learning behaviors and improve performance." (Davies, & Le Mahieu, 2003).

McMillan and Hearn (2008) argue that self-assessment takes place when students recognize the differences between their actual performance and the target performance based on clear criteria and aim to improve their product.

Thus, both self-regulated learning and self-assessments have revealed that they are associated with academic improvements (Zimmerman & Schunk, as cited in Andrade, 2019).

Papanthymou & Darra (2018) state the importance of involving students' in self-assessment. They argue that it improves self-regulating learning, enhances self-confidence, encourages students to seek advice from their instructors and help from their peers, improves self-efficacy and students' recognition of self-assessment ability and self-monitor, makes students change attitudes towards courses, prepares students for career skills, minimizes assessment anxiety, increases students' commitment to their learning, provides them with critical skills for their work, and develops their critical thinking abilities.

Andrade (2019) involved students in the self-assessment of stories, essays, or mathematical word problems according to rubrics or checklists with criteria. In two of her studies, the students were asked to highlight the elements of a written assignment in accordance with the standard articulated in the rubrics, which the students them-selves co-created. If the students did not find that particular element in their writing, they had to add it in their final drafts. The students followed this process for every criterion, which reflected itself in their scores for each self-assessed criterion mentioned on the rubrics. This indicates that self-assessment based on co-created criteria helped the students write more effectively.

When students understand the value of self-assessment, learn how to do it, share their instructor's understanding of quality (Sadler, 1989 as cited in Andrade, 2007), and have the needed support to perform better, they can assess themselves accurately and improve their work effectively. To implement these practices efficiently, students should be told that their self-assessments would not be counted for their grades. Students' comments on self-assessment indicated that such procedures helped them "feel prepared, improved the quality of their work, and gave them a better under-standing of what they had achieved". Furthermore, specific perceived benefits included enhancing the ability to focus on core items of the task, better recognition of strengths and weaknesses in their work, and higher motivation (Andrade 2007).

Integrating self-assessment into instruction helps students actively participate in the learning process and share responsibility for assessment with instructors, instead of being solely assessed by others. Self-assessment helps students better understand their own learning needs, priorities, and advantages and use appropriate learning strategies (Yan 2023).

Assessment criteria in self-evaluation help students be more self-regulated than those in the control groups (Panadero et al., 2012, 2013 & 2014, as cited in Andrade, 2019), which improves student learning and achievement (Elander, 2003; Mowl & Pain, 1995; Rust, Price & O'Donovan, 2003). It was also found that students who were actively involved in formative self-assessment, such as creating their own criteria for an effective self-assessment (Bourke, 2014), or using a rubric or checklist to guide their evaluation and then improving their work (Huang & Gui, 2015; Wang, 2017), developed positive perceptions towards self-evaluation. Olson and Krysiak (2021) indicate the importance of rubrics in building the quality of academic programs rather than measuring the level of quality. They also perceive using rubrics as a means through which students can engage in independent and self-directed learning.

3. Methodology

Permission to conduct the study was obtained from the Vice Dean for Academic Affairs as well as from the Head of Business English Department in the Faculty of Languages and Translation, University of Aden.

A quasi-experimental design was adopted for this study using the equivalent groups approach. The respondents were distributed into two equivalent groups: the experimental and the control groups. The students were asked to voluntarily participate in the study. The data collected from them were used to investigate the independent variable, rubric-based evaluation training, on two dependent variables: the students' performance in writing research papers and their self-evaluation.

3.1 Research Population and Participants

The population of the current study was represented by full-time students in the fourth grade of the Business

English program at the Faculty of Languages and Translation, University of Aden. They were divided into three groups: two morning classes named A and B, and one evening class named C.

The morning classes were chosen to represent the study respondents. This was due to many reasons: one of the researchers was their instructor which would ease carrying out the study, to mentor the homogeneity of the study sample as the morning classes have shared characteristics which are different from the evening class.

The total number of the students in the morning classes were 109 male and female students as registered in the Admission and Registration Department for the academic year 2022 - 2023. The older students, those who repeated the academic year be-cause of failure, and those students who did not regularly attend the classes were excluded from the study. The final sample consisted of 72 students, 8 males and 64 females. Group A was randomly chosen to be the experimental group that co-participated in creating the evaluation rubrics and was trained on using them for self-evaluation. Group B was chosen to represent the control group, which received no training at all on using the rubrics. The demographic distribution of the students is shown in Table 1 below.

Table 1. Students Demographic Distribution

Group	No.	%
Control Group	37	51.4
Experimental Group	35	48.6
Total	72	100
Gender	No.	%
Male	8	11.1

Table 1 shows the demographic information of the research sample. The table indicates that the control group comprised 51.4% of the study sample and the experimental group comprised 48.6% of the sample. The table also indicates that 11.1% of the students were males and 88.9% were females.

3.2 The Two Groups Equivalence

After excluding the older students who failed the previous academic year and those who did not regularly attend the lectures, the two groups statistical equivalence was calculated. This was carried out in order to avoid the effect of other variables that might affect the dependent variables, and consequently, the results of the study if they were included. Equivalence was measured by finding out the mean differences of the students' chronological age as well as their previous academic year achievements (2021 - 2022).

3.3 The Students' Chronological Age Equivalence

The t-test was used to examine the significance of the differences between the mean ages of the experimental and control groups. Table No. 2 shows the equivalence in the chronological age variable.

Table 2. The Students' Chronological Age Equivalence

Group	Mean	SD	T- test	Significance
Control	22.457	0.5054	0.438	0.663
Experimental	22.405	0.4977		

Table 2 shows that the mean age of the students in the experimental group was (M = 22.405) with a standard deviation (SD = 0.4977), whereas the mean age of the students in the control group was (M = 22.457) with a standard deviation (SD = 0.5054). To find out the significance of the differences between the mean ages of the two groups, the t-test was calculated as (0.438) at (p = 0.663). The result indicates that the two groups' chronological ages were equivalent.

The scores of the students' academic achievements for the previous academic year (2021 - 2022) were collected from the records of the Admission and Registration Department. The significance of the differences between the mean scores of the experimental and control groups were calculated accordingly. The results are shown in Table3.

Table 3. The Students' Chronological Age Equivalence

Group	Mean	SD	T- test	Significance
Control	78.784	10.241	0.343	0.733
Experimental	77.971	9.850		

Table 3 shows that the mean scores of the students in the experimental group were (M = 77.971) with a standard deviation (SD = 9.850), whereas the mean scores of the students in the control group were (M = 78.784) with a standard deviation (SD = 10.241). The t-test was (0.343) at a p value of (0. 733). The result indicates the two groups' previous academic achievements were equivalent.

3.4 Monitoring Other Extraneous Variables:

- Differences in Choosing the Sample

The students' homogeneity was monitored as both groups belong to the same social class, the middle class, and have the same cultural background. They were all from Aden Governorate. There were no refugees, migrant students, or people from the countryside. They were all single and did not work.

- Research Tool

The evaluation rubrics were the only research tool used to measure the students' performance in writing the research paper.

- Research Timeline

The duration of the experiment was the same for the students of the experimental and control groups, as it lasted for 15 weeks, starting from 3rd September 2022 and ending on 2nd January 2023.

- The Instructor

One of the researchers was the instructor for the two groups, which added a degree of accuracy and objectivity to the research.

- Lecture Time and Place

All environmental conditions were similar, as both groups were taught in the same hall on the same days and within the same period, the morning classes, with 3 credit hours.

3.5 Research Procedures

The course the students were studying was "Introduction to Research Writing", with 3 credit hours in the first semester of the academic year 2022 - 2023 at the Business English Program at the Faculty of Languages and Translation, University of Aden. The course learning outcomes prepare the students to write their research paper at the in the next semester.

3.6 The Research Tool (Self-Evaluation Rubrics Construction)

The initial form of the evaluation criteria to evaluate the students' performance in writing the research paper was prepared by the researchers using the 3-point Likert Scale. They took into consideration the criteria to be observed in writing the research paper in accordance with the course syllabus.

- Validity of Research Tool

The evaluation rubrics were distributed to Ph.D. holders to survey their opinions regarding their content validity. Changes were made accordingly.

- Reliability of Research Tool

The inter-rater reliability of the evaluation rubrics was used to measure the reliability of the research tools. A sample of five students' research papers were given to a Ph. D. holder to be checked based on the evaluation rubrics that were created by the researchers. Then Cohen's kappa equation was used to find out the percentage of agreement points between the two evaluators:

$$k = \frac{\text{the number of agreement scores} * 100}{\text{the total number of scores}}$$

$$\frac{91 * 100}{100}$$

Calculating the evaluators scoring revealed a high agreement between them (k = 0.91)

3.7 Conducting the Study

The study began on 03rd September 2022 and ended on 02nd January 2023. Participants overall class attendance ranged from 80% to 95% of the lectures. Students whose attendance was less than 80% were excluded from both groups.

The students of both groups were thoroughly taught how to write the title, the re-search objectives, questions, limitations, the literature review, designing and conducting the research methods, collecting and analyzing data, stating the findings, the discussion, the conclusion, the recommendations, the references, and finally formatting the whole research paper.

The lecture began with an explanation and clarification of the part of writing the research according to what is specified in the course syllabus, for example, how to choose the title of the research and how to write it. Throughout open discussions, the students of the experimental group were encouraged to infer and suggest the evaluation criteria of the research title based on what had previously been studied. Although the rubrics were prepared before the start of the experiment, the instructor directed the students to extract them based on what was carried out during the lecture. The rubric was formed.

When the students of the experimental group understood how to formulate the research title and the criteria

for evaluating it, they were trained on using the rubric through models of different research titles under the instructor's supervision. They were given samples of good and poor research titles from ex-students to evaluate. They were asked to assign scores to them. The grades ranged between 3 and 1, where 3 was the highest score, according to which no amendment was required. 2 indicated that the element needed a few modifications, whereas 1 indicated that the element needed more modifications based on the criteria. Assigning scores had to be discussed and justified. Training for the experimental group took place in every class through-out the whole semester. It varied from individual work to pair work and group discussion. All students in the experimental group were aware that their self-evaluations would not be counted for their final grades. The process was repeated throughout the different research elements, starting with the title and ending with the formats.

The control group did not undergo any kind of rubric formation or training on using them for peer review or self-evaluation. In other words, the control group studied the course in the traditional method the instructors usually used in teaching the course, which was explanation, clarification, and discussion of given examples, but they were not aware of the rubrics.

The students in both groups then started writing their research papers individually. The students of the experimental group were asked to refer to the evaluation criteria, which they themselves co-created, in order to write their assignment. If a student in the experimental group found that the element in the paper was not similar to the criteria in the rubrics, she / he had to rewrite it in her / his final draft. The control group did not receive the rubrics to guide them in writing the assignment. Finally, both groups were asked to grade their performance. The control group only referred to the elements of writing the research paper in their textbooks as they studied during the course, whereas the experimental group used the rubrics in which they participated in its creation and upon which they were trained.

4. Data Analysis and Results

The data obtained were analyzed using SPSS. The means, standard deviation, T-value, and its significance were obtained, as well as the Pearson's correlation coefficient between the students' self-evaluation and their instructors' evaluation.

4.1 Results of the First Research Hypothesis

To test the first hypothesis, "There is no significant difference in the academic performance of the students who have been trained on using rubrics for self-evaluation and their peers who have not been trained", the mean, standard deviation, correlation coefficient, and t-test of the students' scores were calculated. The results are shown in Tables 4 and 5:

Table 4. Descriptive Statistics of the Mean Values of the Trained and Untrained Students' Performance

Data	Mean	N	Std. Deviation
Trained Students' Performance	53.29	35	4.76
Untrained Students' Performance	35.84	37	10.09

Table 4 shows the descriptive statistics of the trained students' scores (experimental group) compared with the untrained students' scores (control group). The table indicates that the mean value of the trained students' scores (M = 53.29) with a standard deviation of (SD = 4.76) is different from the mean value of the untrained students' scores (M = 35.84) with a standard deviation of (SD = 10.09). This reflects a noticeable difference in the mean values between the two groups.

To find out whether this difference in the mean values is significant or not, the t-test for the independent samples was used. The results are shown in Table 5 below:

Table 5. The Significance of the Relationship between Trained and Untrained Students' Scores.

Variables	Mean Differences	T-test	Df	Sig. (2-tailed)
Trained Students' performance & Untrained Students' performance	17.447	9.293	70	0.000

Table 5 indicates that the calculated T-value (9.293) > the T critical value (1.994) at (0.05). This finding indicates that there is a significant statistical difference in the academic performance of students who have been trained on using rubrics for self-evaluation compared with their untrained peers in favor of the trained students with the highest mean value (53.29).

4.2 Results of the Second Research Hypothesis

To test the second hypothesis "There is a significant correlation between the self-evaluation of the students who have been trained on using rubrics and their instructor's evaluation", the mean values, standard deviation, correlation coefficient, and t-test of the trained students' and their instructor's scores were calculated. The results are shown in Tables 6, 7, and 8.

Table 6. Descriptive Statistics of the Mean Values of Rubric-Based Trained Students' Self-Evaluation and the Instructor's Evaluation

Data	Mean	N	Std. Deviation
Trained Students' Self-Evaluation	54.37	35	3.73
Instructor's Evaluation	53.29	35	4.76

Table 6 shows the descriptive statistics of the experimental group's self-evaluation scores compared to the instructor's evaluation scores. The table indicates that the mean value of the students' scores (M = 54.37, SD = 3.73) in the experimental group is approximately similar to the instructors' scores (M = 53.29, SD = 4.76).

Table 7. Correlation Coefficient between Trained Students' Self-Evaluation and Instructor's Evaluation

Data	N	Correlation	Sig.
Trained Students' Self-Evaluation & Instructor's Evaluation	35	0.717	0.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7 shows the Pearson correlation coefficient (r = 0.717). This value indicates that there is a high positive correlation between the students' self-evaluation and the instructors' evaluation. Furthermore, the p-value is reported as 0.000, indicating that this correlation is statistically significant at the 0.01 level.

Table 8: The Relationship between Trained Students' Self-Evaluation and Instructor's Evaluation

Variables	Differences		T-test	df	Sig. (2-tailed)
	Mean	SD			
Trained Students' Evaluation & Instructor's Evaluation	1.085	3.328	1.930	34	0.062

Table 8 shows that a paired sample t-test was calculated to determine if the difference in the mean values between students' scores and the instructor's scores is statistically significant. The table indicates the calculated t-value (1.930) with a corresponding p-value of (p = 0.062). As the p-value exceeds the significance threshold of (0.05), this indicates that there is no significant statistical difference between the experimental group's self-evaluation and their instructor's evaluation.

4.3 Results of the Third Research Hypothesis

To investigate the third hypothesis "There is no significant correlation between the self-evaluation of students who have not been trained on using rubrics and their instructor's evaluation", the mean, standard deviation, correlation coefficient, and t-test of the untrained students' and their instructor's scores were calculated. The results are shown in tables 9, 10, and 11.

Table 9: Descriptive Statistics of the Mean Values of Untrained Students Self-Evaluation and the Instructor's Evaluations

Data	Mean	N	Std. Deviation
Untrained Students' Self-Evaluation	51.33	37	5.85
Instructor's Evaluation	35.84	37	10.09

**. Correlation is significant at the 0.01 level (2-tailed).

Table 9 shows the descriptive statistics of the control group scores compared with the instructor's scores. The table indicates that the mean value of the untrained students' scores (M = 51.33, SD = 5.85) is different from their instructor's scores (M = 35.84, SD = 10.09).

Table 10: Correlation Coefficient between Untrained Students' Self-Evaluation and the Instructor's Evaluation

Data	N	Correlation	Sig.
Untrained Student Self-Evaluation and Instructor's Evaluation	37	0.061	0.721

Table 10 shows that the Pearson correlation coefficient is 0.061. This value indicates that there is a very weak correlation between the untrained students' and the instructor's evaluations.

Table 11: The Significance of the Relationship between Untrained Students' Self-Evaluation and the Instructor's Evaluation

Variables	Differences		T-test	df	Sig. (2-tailed)
	Mean	SD			
Untrained Students' Self-Evaluation and Instructor's Evaluation	15.492	11.356	8.298	36	0.000

Table 11 shows the results of the paired sample t-test that was calculated to find out if the mean difference between the untrained students' self-evaluation and their instructor's evaluation (15.492) is statistically significant. The table also shows that the calculated t-value (8.298) is significant at the level (0.05). This result indicates that there is a significant statistical difference between the untrained students' self-evaluation and their instructor's evaluation.

5. Discussion

The findings of the study reveal that the students who participated in the formation of the evaluation rubrics and were trained on using them excelled in their academic performance in writing the research paper compared with their untrained peers who did not participate in the creation of the evaluation rubrics and did not receive any kind of training on using these rubrics.

Accordingly, it can be argued that by providing the students with clear guidelines and evaluation criteria and training them to use these criteria to evaluate others performance as well as their own, it will enable them to recognize their shortcomings. Rubric-based training enhances students' metacognitive abilities which consequently helps them invest their time and effort effectively. Such techniques prepare students to become independent learners which also might facilitate online education.

Rubrics-based training helps students perceive the differences between the target performance and their actual performance and make more accurate judgments. This is consistent with Andrade (2019, 2010, 2007), McMillan and Hearn (2008), and Zimmerman & Schunk, 2011(cited in Andrade, 2019).

Another psychological factor is that such techniques also enhance the students' perception of the evaluation transparency and fairness (Rust et al., 2003, as cited in Wride, 2017) and help them overcome the feeling of being underestimated.

The findings do not support the first hypothesis, which assumes that there is no significant difference in the academic performance of the students who have been trained on using rubrics for self-evaluation and their peers who have not been trained.

On the other hand, the findings provide support for the second hypothesis claiming that rubric-based self-evaluation training enhances the alignment between students' evaluations and their instructor's evaluations. The study highlights the importance of including the students in co-creating the evaluation criteria and training them on how to use rubrics effectively for self-assessment. Training students on self-assessment enhances their performance and help them evaluate themselves accurately (Sadler, 1989 as cited in Andrade, 2007).

Poor students in this study who appeared to be the untrained students tend to deviate from their instructor's evaluations. They overestimate their performance which indicates that they were unaware of the target learning outcomes. Such ignorance of self-performance immensely affects students' progress since they cannot recognize their own weaknesses. This is in congruent with the findings of Coutinho et al. (2020) who found that the poor performers were the most likely to overestimate their performance. Thus, results indicate the validity of the third hypothesis as well.

It can be argued that these findings highlight the importance of providing rubric-based self-evaluation training to be used as a valuable tool for promoting students' accuracy in academic performance as well as in self-evaluation.

The procedures that were followed in the formative self-assessment used in the study, including participation in the creation of evaluation criteria, training on using these criteria to evaluate others performance as well as one's own, and adding the missing elements to their work, allowed the students to receive feedback on their progress and make the necessary amendments accordingly. It guided them to be independent and self-directed learners (Panadero et al., 2012, 2013 and 2014, as cited in Andrade 2019) and improve the student's learning and achievement (Elander, 2003; Mowl & Pain, 1995; Rust, Price, & O'Donovan, 2003).

Training the students to use the rubrics as guidance to assess their own performance will promote their metacognitive abilities. This can be achieved by adopting goal-setting, and self-monitoring strategies. Incorporating metacognitive practices into teaching and curriculum design will enable students to develop a deeper understanding of their strengths and areas that need improvement.

Students also need to be encouraged to seek feedback from multiple sources, such as their peers, and to compare it with their own in order to avoid potential biases.

It is important to emphasize the belief that intelligence and abilities can be developed through effort and practice. Rubrics-based training merges both learning and assessment to produce a better self-dependent learner.

6. Conclusion

The results of the study indicate that involving students in creating the evaluation rubrics and training them to use theses rubrics to evaluate their peers as well as their own performance help enhance students' performance as well as enhance their self-evaluation.

Self-evaluation training plays an important role in creating independent self-regulated learners with life-long learning skills and abilities.

7. Recommendations

- Brainstorming and staff grouping to decide a detailed assessment criterion.
- Integrating students' rubric-based training for self-evaluation into education and curriculum design will promote student-centered learning and self-regulation learning skills.

- Devoting a good amount of time to negotiate and discuss the criteria with students and involving them in deciding what they need to learn and what criteria should be used to evaluate their learning product.
- Incorporating regular formative assessments into the curriculum design along with delivering satisfying feedback for the students.
- Fostering the students' self-awareness of their own strengths and weaknesses through activities such as self-reflection exercises, peer feedback, and goal-setting strategies.
- Training instructors' on providing effective feedback and supporting the students for self-evaluation techniques.
- Ensuring that students understand what self-evaluation means, its implementation, and its purposes.

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