

International Scientific-Methodological Electronic Journal "Foreign Languages in Uzbekistan", 2024, vol. 10, No 2, pp. 195-207

https://journal.fledu.uz ISSN: 2181-8215 (online)

"FIVE COLOURED PENCILS" TECHNIQUE AS A SELF- AND PEER-ASSESSMENT TOOL

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"BESH RANGLI QALAM" TEXNIKASI OʻZ-OʻZINI VA OʻZARO BAHOLASH INSTRUMENTI SIFATIDA

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ТЕХНИКА «ПЯТИ ЦВЕТНЫХ КАРАНДАШЕЙ» КАК ИНСТРУМЕНТ САМООЦЕНКИ И ВЗАИМНОЙ ОЦЕНКИ УЩАЩИХСЯ

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For citation (Iqtibos keltirish uchun, для цитирования):

Begmatova Kh. A. Five Coloured Pencils Technique as a Self- and Peer-Assessment Tool. //Oʻzbekistonda xorijiy tillar. — 2024. — 10-jild, № 2. — B. 195-207.

https://doi.org/10.36078/1715856639

Received: February 23, 2024 Accepted: April 17, 2024 Published: April 20, 2024

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DOI: 10.36078/1715856639



Abstract. Instructional rubric plays an essential role in the learning process of writing as it might be used not only for the marking process by teachers but also by students in developing writing skills in the classroom. As some university students tend to experience challenges when starting to write and feel anxious about the writing tasks, they usually come unprepared for the feedback sessions. This paper reports on the results of a study that aimed to explore first-year university students' use of rubrics to self-assess and peer-assess their writing with the help of the Five Coloured Pencils technique. The students at Westminster International University in Tashkent (WIUT) self-assessed and peer-assessed a reflection essay in the classroom. Two groups, one control (n=23) and one treatment (n=23) group, were involved in checking the effectiveness of the coloured technique used in formative assessment sessions. The control group had the conventional approach during the university's feedback sessions. The treatment group has been taught how to self- and peer-assess their work using the instructional rubrics and the Five Coloured Pencils technique to promote their understanding of the instructional rubric. This paper will describe the Five Coloured Pencils technique, the pilot test results on the quality of the essays, and students' satisfaction with the technique. The recommendations for using the *Five Coloured Pencils* technique for self- and peer-assessment in EFL classes will be presented at the end of the report.

Keywords: formative assessment; self-and peer-assessment; rubric; writing skills; university students.

Annotatsiya. Yozishni oʻrganish jarayonida mezon matritsalari (rubrikatorlar) muhim rol o'ynaydi, chunki u nafaqat o'qituvchilar tomonidan baholash jarayonida, balki sinfda yozuv koʻnikmalarini rivojlantirishda talabalar tomonidan ham qoʻllanilishi mumkin. Universitetning ba'zi talabalari yozishni boshlash jarayonida qiyinchiliklarga duch keladi va yozish bilan bogʻliq vazifalarni bajarishda biroz sarosimaga tushadi, sababi bu talabalar formativ baholash jarayoniga tayyor boʻlmaydi. Maqolada birinchi kurs talabalari tomonidan "Besh rangli qalam texnikasi" yordamida o'z yozuvlarini baholash va oʻzaro baholash uchun mezon matritsalaridan foydalanishni o'rganishga qaratilgan tadqiqot natijalari keltirilgan. Toshkentdagi Xalqaro Vestminster universiteti talabalari sinfda o'zoʻzini va oʻzaro baholash yuzasidan esse-mulohaza oʻtkazdilar. Ikki guruh, biri nazorat (n=23) va ikkinchisi eksperimental (n=23) guruh formativ baholashda qoʻllaniluvchi "rangli" texnika samaroadorligini tekshirishga jalb qilindi. Nazorat guruhi universitet o'qituvchisi bilan qayta aloqa oʻrnatishda an'anaviy yondashuvdan foydalandi. Eksperimental guruhga esa formativ baholash mohiyatiga tushunishlari maqsadida baholash mezonlari va "Besh rangli qalam" texnikasidan foydalangan holda mustaqil va oʻzaro baholash o'rgatildi. Maqolada "Besh rangli qalam" texnikasi, esse yozish sifatining sinov natijalari va mazkur texnikani sinfda qoʻllash bo'yicha talabalar fikrlari bayon etildi. Shuningdek, o'z-o'zini baholash va sinfda o'zaro baholash uchun "Besh rangli qalam" texnikasidan foydalanish boʻyicha tavsiyalar ham keltirildi.

Kalit soʻzlar: formativ baholash; oʻz-oʻzini baholash va oʻzaro baholash; mezon matritsalari (rubrikatorlar); yozish qobiliyatlari; universitet talabalari.

Аннотация. Критериальные матрицы (рубрикаторы) играют важную роль в процессе обучения письму, поскольку они могут использоваться не только преподавателями для выставления оценок, но и учитываться студентами при развитии навыков письма. Поскольку некоторые студенты университетов, как правило, испытывают трудности, когда начинают писать, и испытывают беспокойство по поводу письменных заданий, они обычно не подготовлены к формирующему оцениванию. В статье представлены результаты исследования, целью которого было изучение использования студентами-первокурсниками критериальных матриц для самооценки и взаимной оценки своего письма с помощью техники «Пять цветных карандашей». Студенты Международного Вестминстерского университета в Ташкенте классе самооценивание проводили взаимооценивание на основе эссе-размышления. Две группы, одна контрольная (n=23) и одна группа экспериментальная (n=23), были привлечены к проверке эффективности «цветовой» техники. используемой формирующем оценивании. В Контрольная группа использовала традиционный подход для обратной преподавателем университете. связи c R Экспериментальную группу обучали самостоятельной взаимной оценке с использованием критериев оценивания и техники «Пять цветных карандашей», чтобы способствовать пониманию формирующего оценивания. В статье описана техника «Пять цветных карандашей», результаты тестирования качества написания эссе и мнения студентов по применению данной техники на занятиях. Рекомендации по использованию техники «Пять цветных карандашей» для самооценивания и взаимной оценки на занятиях также представлены в статье.

Ключевые слова: формирующее оценивание; самооценка и взаимное оценивание; критериальные матрицы (рубрикаторы); навыки письма; студенты вузов.

Introduction

Assessment is an integral part of any teaching and learning process. It allows students to learn and improve their knowledge and skills. One of the essential assessment types is formative assessment, which evaluates students' understanding during the learning process and assists them in achieving academic success (5).

What is formative assessment?

Formative assessment is a regular and informal activity in the classroom that teachers use to monitor and evaluate students' progress by providing constructive feedback toward completing the assignment. It is a crucial part of the learning journey, and educators require a lot of energy and time to organise it, especially in large classes. As the key element of the formative assessment is feedback, most students depend entirely on teachers' comments and suggestions. This may lead to a situation when teachers do not have enough time to provide feedback to most students in the class. For this reason, self- and peer-assessment sessions could be integrated into the learning process as research demonstrate the effectiveness of these sessions for both teachers and students (3, Andrade, Du and Wang, 2008; 12).

Self – and peer-assessment sessions

Self-assessment is a process in which students monitor their progress independently. This type of assessment is an essential element of self-regulation as it involves awareness of the assignment's goal and management of students' learning process (4; 11). Another effective process is peer assessment which involves the active participation of two students in giving feedback to each other. This assessment type teaches students to provide constructive feedback to their peers and share their experiences about the task. However, both assessment sessions should be well-developed and guided by teachers. For the navigation of this process, it is suggested that instructional rubrics be employed to make the assessment process, criteria, and standards clear for the learners. The efficacy of the instructional rubrics during the self- and peer-assessment sessions among students in a writing class has empirical evidence with a noticeable improvement in writing (5).

The role of rubrics in the learning process

An instructional rubric is a document with a list of the required criteria and performance level descriptors for different ranges of points from low to high (1; 8; 7). It is one of the most widely used tools among teachers in the

grading process. However, rubrics can also be implemented for learning purposes and during self- and peer-assessment sessions as they can quickly assist students in the completion process of the task (2; 3; 7; 10). In addition, students may build self-confidence and autonomy in managing the learning process independently (2; 9).

The guided self- and peer-assessment activities in the classroom support students' understanding of the writing assignment. Andrade, Du, and Mycek (5) highlight the benefits of a self- and peer-assessment activity, which includes a rubric with coloured pencils technique in writing essays among US high school students. The coloured pencils technique requires students to use coloured pencils to underline the criterion inside the written work when self- or peer-assessing their work. This self- and peerassessment tool can teach students to use rubrics and pay attention to assessment criteria. This method was used for a self-assessment session in a seventh-grade classroom. Students were guided in using the coloured pencils technique to find which criteria from the rubric they had and did not have in their written works (6). Before the self-assessment process, students coded their rubric using coloured pencils and after that, students coded the sample essays together to understand how to process in the feedback provision session. The coloured pencils technique assisted high school students in observing which criteria they were good at and which ones they must consider and improve for the next feedback session. In addition, this technique allowed students to enjoy the self-assessment process and learn how to meet the requirements of the written task by using the rubric. The results showed that this technique promoted the understanding of the rubric and made the learning process more productive (Andrade, Du and Wang, 2008).

The coloured pencils technique has proven to be one of the practical tools for self-and peer-assessment sessions in writing classes. Although it has been used in different learning contexts, more research needs to be conducted to analyse its effectiveness in the learning environment of Uzbekistan. Therefore, the purpose of the current research study is to explore the use of coloured pencils technique with rubrics and identify its efficacy in the writing process of university students.

Task description

The current research was conducted among first-year university students at Westminster International University in Tashkent (WIUT) in the Developing Professional Identity (DPI) module. The students who took the classes were required to submit a written portfolio, which included three parts. The first part was a curriculum vitae (CV) for a specific job offer that students could select online. The second component of the portfolio was a logical continuation of the first one, as students were asked to write a 250-word job application letter for the chosen position and persuade the company representatives about their candidacy. The last part of the portfolio was a 650-word reflection essay about the job searching cycle. The portfolio description with its assessment criteria was provided to the students and uploaded to the university learning management system (LMS) at the beginning of the semester.

As part of their learning journey, the students were supposed to learn how to evaluate their progress and give feedback to each other. As the students are new to the university, they usually face difficulties employing the university assessment criteria for the completion of various assignments. Moreover, most students tend not to read the assessment description and its criteria before submitting the task. Instead, they entirely relied on the teachers' feedback and became dependent on it. Therefore, the chosen *Five Coloured Pencils* technique and user-friendly instructional rubric based on the existing assessment criteria, were introduced to students in the classroom and used in the self- and peer-assessment sessions.

Participants

Initially, the current study had one treatment (n=23) and a control group (n=23) to evaluate the effectiveness of the selected technique. To check the effectiveness of the chosen technique for the self- and peer-assessment session with the new instructional rubric, students who expressed willingness to participate in the experiment were included. They had various anticipated majors such as business, economics, information systems, finance, and commercial law. For the first feedback session only thirteen students out of twenty-three in the treatment group had their written works to participate in the peer-assessment session. For this reason, only thirteen students were selected from the control and treatment groups for the final analysis of the current study. The results of the online survey's demographic data in the treatment group show that seventeen male and six female students participated at the beginning of the current study. Seventeen students were 18, four were 19, and one was 20 and 21 years old.

Instruments and Procedures

The participants of the study were informed about the research topic, its aim, and its value in learning. All students signed the consent form and were informed that they could withdraw from the study at any time as per ethical research practice. The participants were assured that their participation, written tasks, and results would be used only for research study purposes and kept confidential. As the third part of the portfolio, the reflection essay was the longest and most challenging for students to complete, it was chosen for this study.

First, the participants studied the material with the assessment description and its criteria on the university learning management system. While studying the assessment criteria provided by the university, they showed anxiety as they did not understand how to use it. To help students understand the criteria and assessment process better, they were asked to analyze the university assessment criteria on LMS and tell what important elements they must include while writing the reflection essay. After analysis, it was revealed that this written task had five important elements that students were required to have in their works, all these required criteria such as the self-exploration process, the skills development process, the interview process, the reflective language, and the structure of

the reflection essay were written on the board and coded with one colour (see Figure 1).

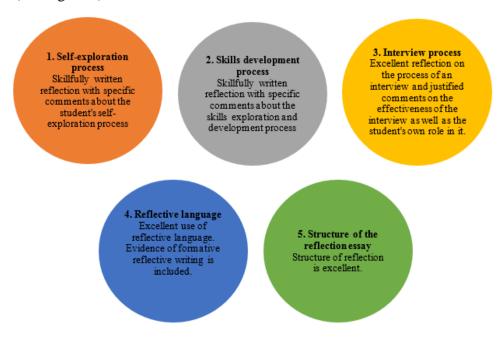


Figure 1. Five criteria from the university assessment criteria in the module DPI for the reflection essay

At the beginning of the study, students needed guidance with clear explanations and examples to understand the selected criterion better. This situation gave the idea of simplifying the language of the assessment criteria given on the LMS in a new instructional rubric used in the treatment group. The simplified and updated version of the rubric was selfengineered based on the existing assessment criteria. This rubric included only five required criteria with four level descriptors ranging from "advanced" to "failed" results (see Table 1). Students could use it for selfand peer- evaluation processes to improve their reflection essays.

	Advanced	Proficient	Basic	Failed
	4 points	3 points	2 points	1 point
Self- exploration process	reflection with specific comments about the student's self-exploration	student's self-exploration process. A very good explanation with some comments of how the interests, values, or talents were explored and	reflection with few or general comments about the student's self- exploration process. Students just list a number of interests, values, or talents	reflection with limited comments about the student's self-exploration

Skills development process	A skillfully written reflection with specific comments about the skills exploration and development process. A skillfully written explanation of the impact of the gained set of skills in the future career.	A well-written reflection with some comments about the skills exploration and development process. Students explain how the skills were developed but lack explanation of their essential role in a future career.	A satisfactorily written reflection with few and general comments about the skills exploration and development process. Students just list a number of skills without explaining any of them and connecting these skills to future career.	A poorly written reflection with limited comments about the skills exploration and development process.
Interview process	An excellent reflection on the process of an interview and justified comments on the effectiveness of the interview as well as the student's own role in it.	A well-written reflection on the process of an interview with some comments on the effectiveness of the interview as well as the student's own role in it.	A satisfactorily written reflection on the process of an interview is included with few or general comments on the effectiveness of the interview or the student's own role in it.	A poorly written reflection on the process of an interview. Limited comments on the effectiveness of the interview as well as the student's own role in it.
Reflective language	Excellent use of the reflective language. Many phrases and verbs used skillfully to describe past experiences.	A good use of the reflective language use. Some phrases and verbs used to reflect on past experiences.	A satisfactory use of the reflective language use. Few or general phrases and verbs used to describe the past experiences.	A poor use of the reflective language. A limited number of verbs and phrases are used to describe the past experiences. Some of them have spelling mistakes or used wrongly in the context.
Structure of the reflection	The structure of the reflection has an excellent introduction, body, and conclusion. The ideas are logically sequenced and presented in all parts of the reflection.	The structure of the reflection has a suitable introduction, body, and conclusion. There are some problems in presenting ideas or logically sequencing of them in some parts of the reflection. However, it is easy to follow the ideas.	The structure of the reflection has a satisfactory introduction, body, and conclusion. There are all parts but the ideas are not always easy to follow.	A poor structure of the reflection. Some parts are missing or some of the ideas are developed illogically.

Table 1. Updated Instructional Rubric used in treatment groups

The next step of the intervention-involved students' active participation in the formative assessment sessions. Students were required to submit two drafts of the reflection essay before the final version. The first draft was used in the peer assessment session. Thirteen students out of twenty-three students brought their first drafts (see Appendix 1) and provided feedback to each other using the new instructional rubric (see Table 1) with the *Five Coloured Pencils* technique. After the peer assessment sessions, they were asked to revise their reflection essays, self-assess their new drafts at home and submit the second draft for the teacher's feedback.

Finally, an online questionnaire was organised for thirteen first-year students in the treatment group to explore their experiences with the technique. The online survey asked students to rate the chosen technique for its effectiveness as a self-assessment tool for the formative assessment sessions at the university. In addition, students were encouraged to share their views and leave comments on the weaknesses and strengths of the selected technique.

Results Essays results

The study results highlight the benefits of revising the draft after peer assessment sessions and preparing the improved version for the

teacher's feedback. The analysis of the results revealed that students who submitted the second draft after the assessment session had a slight improvement in their grades (see Table 2). The average mark for the first draft among thirteen students was 9.3 out of 20 points (maximum). Meanwhile the average point of the second draft was 11.2 out of 20 points. The difference between the first and second drafts was 1.9 points. For the second feedback provision session, students with their improved essays prepared relevant and specific questions and built a plan of action to work on different areas of improvement after the progress meeting with teachers.

Another interesting observation after the first formative session was that students expressed their understanding of the written task and gained confidence and self-regulation (1; 9). For the second assessment sessions only six students out of twenty-three in the treatment group could bring the improved version of their reflection essays. The number of students for the second feedback provision session decreased as some of the students could not manage their time probably due to the number of assessment tasks at the university that teaching week. Therefore, in the future, teachers should check whether the feedback provision sessions are not happening at the same time with other assessment tasks at the university to create more opportunities for the students to participate in the formative assessment sessions.

Student	Draft 1	Draft 2
1	7	-
2	12	-
3	11	14
4	6	16
5	10	-
6	9	-
7	10	13
8	12	-
9	10	13
10	7	-
11	12	13
12	9	10
13	7	-
Mean	9.3	11.2
Max	20	20

Table 2. The comparative analysis of draft results

The written paper results were compared to check whether the coloured pencil technique and instructional rubrics could have an impact after the first peer-assessment sessions. Thirteen drafts were compared with the final works (see Table 3). As the findings illustrate, the average mark of the final work was 12.8 out of 20 points (maximum). The difference between the first draft and the final work was 3.5, which was relatively high. This result proves a

similar outcome with Andrade and Valtcheva (4) and Orsmond et.al. (11) that the chosen technique was effective for the feedback provision sessions for the writing tasks.

Student	Draft 1	Final work
1	7	10
2	12	12
3	11	15
4	6	19
5	10	13
6	9	10
7	10	14
8	12	13
9	10	19
10	7	8
11	12	13
12	9	10
13	7	10
Mean	9.3	12.8
Max	20	20

Table 3. The comparative analysis of draft and final paper results

The paper results of the control and treatment groups were analysed to compare the effectiveness of the coloured pencils technique with instructional rubrics and conventional method. The findings of the current study show that the average earned points of thirteen students from a focus group were obtained by randomly selecting thirteen students from the control group where the traditional method was used. The difference was 3.1 points between the average point of focus and control groups which demonstrates the effectiveness of the coloured pencils technique among first-year students.

Student	Treatment	Control group
	group	
1	10	12
2	12	7
3	15	10
4	19	9
5	13	10
6	10	9
7	14	10
8	13	10
9	19	10
10	8	10
11	13	12
12	10	9
13	10	9
Mean	12.8	9.7
Max	20	20

Table 4. The comparative analysis of the treatment and control group

As Moskal (10) and Andrade (2) showed, rubrics could be used not only in the evaluation process but also in the learning process. Similar findings were revealed in the current study as the rubrics were not used for the grading process only, but they were also implemented during the learning process to mark their progress and achieve academic success at the end. Moreover, students observed that applying the instructional rubric and using it for suggestions and comments about each required criterion is simple. The process was fruitful as they learned how to give feedback and employ the rubric for the assessment process.

Survey results

The students were asked to complete the online survey to express their experiences and perceptions of the *Five Coloured Pencils* technique. One of the questions helped to rate the effectiveness of the technique on a scale from 1 (not effective at all) to 10 (very effective). 61.5 % of participants rated the Five Coloured Pencils as the most effective technique, 23.1 % rated it at 8, which is close to 10 (very effective), and 7.7 % at 4, which is close to 1 (not effective at all). (see Figure 2).

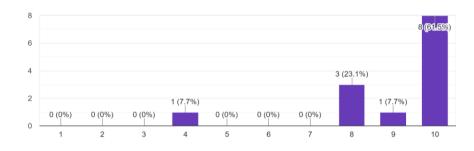
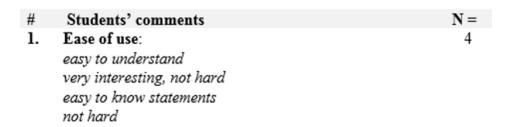


Figure 2. The effectiveness rate of the Five Coloured Pencils Technique

Another critical question was related to the strength of the coloured technique for the formative assessment sessions. The study results show that four students out of thirteen think that the coloured technique and instructional rubric were easy to implement, and another four students indicated that they were also valuable for the self-regulation process. The other two students underlined the general helpfulness of the chosen approach, and two more students informed that the formative assessment process was transparent for them (see Table 5).



2.	Self-Assessment and Improvement: huge advantage on self-assessment understood what kind of problems do I have we could see our mistakes, analyze them, and improve helps to know what our weakness and strength in writing	4
3.	General Helpfulness: it is really helpful for students self-marking	2
4.	Objectivity: trying to be objective transparent	2
5.	Peer Discussion there is a chance to discuss with others if participant is not understanding	1
	Total	13

Table 5. The strength of the coloured pencils technique in the assessment process

The results of this online survey did not indicate any obvious weaknesses. When participants were asked about the strength of the chosen technique for the formative assessment sessions, they all expressed that it was timesaving, easy to use, and transparent (see Table 5). For example, one student wrote, "We could see our mistakes, analyse them and improve." Another student noted, "You will exactly identify what is needed to make your writing as it needed. It also helps to know what your weaknesses and strengths are in writing skills." It could help them analyse the work and observe the areas needing improvement. Finally, they all agreed that it was valuable and exciting. Additionally, students were happy to apply a new technique and use instructional rubrics for the formative assessment sessions. One of the students suggested using this technique for other modules and future undergraduate students.

Conclusion and Recommendations

This study aimed to check the effectiveness of the *Five Coloured Pencils* technique and the instructional rubric in formative assessment sessions. The results of the descriptive statistics indicated that thirteen students who participated in the study improved their scores in their first draft and final work. Hence, the student's scores in the *Five Coloured Pencils* group were higher than those in the traditional group. In addition, there is evidence that this technique engages students and teachers in using the assessment criteria for the learning process. That is, the instructional rubrics can be created for students, making the learning process more transparent and interesting.

Teachers can use this technique to organise effective formative sessions in the learning and assessment process. First, teachers can use the chosen technique to explain the task and the required criteria for the final submission. In addition, with the help of this technique, the formative assessment sessions would be more useful if students see what is required and what should be ignored. This is what it means to teach effectively and engage students from the beginning of the learning process.

Although the study results were positive, several limitations should be acknowledged. The first constraint of the current study is the limited number of participants. A larger number of participants could be recruited to check the efficacy of the Five Coloured Pencils technique with the instructional rubrics on students' essays in a similar learning context. Another limitation is that this technique was not implemented for writing the other portfolio components. To have more accurate data, the Five Coloured Pencils technique could be used with other assessment components to check its effectiveness in the writing classes. Overall, the Five Coloured Pencils technique can be used to teach how to write the assessment task and employed at self-and peer-assessment sessions. However, the effect of the chosen method for this study should be adapted and implemented according to the academic subject's requirements.

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