5.11 Evaluating scientific writing

After completing the article, with abstract and bibliography, the students now learn about assessing their work according to assessment criteria.

Outcomes

Students will be able to:

- formulate criteria for evaluating written work
- carry out self-assessment of their own work
- formulate suggestions for improvements to the work.

Time required

Allow 45-60 minutes.

Outline of the activity

Make sure the students have copies of any briefing sheets that were given at each stage of the preparation of the article as this will help them to formulate the evaluation criteria. The accompanying Slide presentation may be used to work through these steps. This also outlines the difference between a holistic approach to evaluation (based more on feel) and an analytic approach which uses specified criteria. The latter approach will be used here.

1 Ask the students 'What criteria could we use to assess your articles?'. Compile their ideas, adding any necessary suggestions of your own.

2 Ask students 'Are all of these criteria of equal importance?' Discuss the concept of weighting different categories of criteria.

3 Get the students to work in pairs. Issue briefing sheet 1, which is a pre-made evaluation form with specified criteria (these may be altered – see 'Tips and strategies'. Run through the form with the students and get them to work in pairs to assess each others' work.

4 Ask 'Was the mark you got roughly what you expected?'. If any marks are considerably higher or lower than the students expected, it is worth discussing reasons with the class.

5 After completing the assessment, the students use sheet 2 to provide written feedback for their partner. This should be constructive and give clear suggestions about how the article could be improved.

Tips and strategies

By this stage of their education, the students should have a reasonable level of experience of self and peer assessment. They should be able to produce a good list of evaluation criteria, applying good reasoning to their choices. The ability to do this will vary, depending on students prior experience. If students produce a comprehensive list of criteria and understand how to use weightings, you can dispense with the briefing sheet and let them assess the articles according to an agreed set of evaluation criteria.

The students should work in pairs to complete the assessment task as a combined self / peer assessment exercise. This will promote helpful discussion and provide a level of moderation leading to a more realistic set of marks.

Take the articles in and mark them yourself after the self-assessment exercise so you can give further feedback to the students on their perception of the work. For example, some students will not have sufficient knowledge of the correct use of language to be able to give an accurate assessment of performance in this area.

If the students are familiar with the principles behind giving feedback, you may choose not to use briefing sheet 2. It may also be a useful exercise for the students to respond to feedback by writing notes on their own feedback, showing when they are going to do to improve their performance in future.

5.11 Evaluating scientific writing

Slides

5.11 Evaluating scientific writing

Learning Skills for Post-16 Sciences

SEP
Science Enhancement Programme

Nuffield
Curriculum Centre

....

....

....

....

....

....

What is evaluation?

- You are familiar with the idea of your work being marked by your teacher.
- Tests and exams are marked according to whether not the answers are correct.
- Written reports and essays are more difficult to mark as there is not a single right or wrong way to complete the task.

....

....

....

....

....

....

'Holistic' vs 'Analytic'

- Holistic marking gives a grade based on a general impression of the quality of a piece of work.
- Analytic marking involves breaking the evaluation down into list of criteria, which are grouped into categories (e.g. structure, content, language etc). These are then assessed separately and a total mark is given.

....

....

....

....

....

5.11 Evaluating scientific writing

Slides

Taking the 'analytic' approach

- What criteria could be used to assess your articles? What categories would these criteria be placed in? *Write a list*

- Are all of the categories/criteria of equal importance? How can you address this?

....
....
....
....
....
....

Carrying out the evaluation

- You will work in pairs on this exercise so you can evaluate both pieces of work together.
- Use the criteria you have been given to assign marks in each category.
- Marks should be awarded if there is clear evidence of the criteria being met. If the criteria are met partially, the marks should reflect this. Marks should not be given if the criteria are not met at all.

....
....
....
....
....

Giving feedback

- Why do we need to give feedback? (Why don't we just tell the person their mark?)
- This is an opportunity to give the other person constructive suggestions of what they can do to improve their work in future.
- You can refer to the marksheet with the criteria to help you to come up with useful feedback.

....
....
....
....
....

5.11 Evaluating scientific writing

Slides

Tips on giving feedback

Feedback should:

- be positive and motivational
- help the student improve their work, to meet the success criteria more effectively
- identify what is good practice and how it can be achieved
- encourage the student to be reflective as the work on future tasks, so they produce better work

© Gatsby Technical Education Projects 2008. This slide may be used solely in the purchaser's school or college.

....

....

....

....

....

....