

FEEDBACK IN MATHEMATICS LEARNING

Leonor Santos, Institute of Education, University of Lisbon

Jorge Pinto, School of Education of Setúbal

Feedback is a key element for an assessment practice guided in a deliberate way by an assessment for learning (Black & Wiliam, 1998). The research has identified characteristics of feedback to promote learning, such as a descriptive approach focus on improvement (Tunstall & Gipps, 1996), and about the processing of the task or self-regulation (Hattie & Timperley, 2007). Feedback should never come up before the student has had the opportunity to work on a particular task (Wiliam, 2007), why it is desirable to choose tasks developed in two stages, without grading the first one. Several studies, along three years, has been carry on in Portugal, on the scope of the Project AREA. A meta analysis of some of them, that followed an interpretive methodology, and analysed the practices of feedback of three mathematics teachers with students from 8 to 14 years old, pointed out that reflected experience, allows the evolution of the feedback writing, considering the space it gives to the students, as a reviewer of their own mistakes and therefore author of their own learning. Mathematical open tasks tend to originate a feedback to improve justifications and mathematical close tasks a feedback directed to the self correction of specific mathematical aspects. However, the high level challenge tasks revealed the need to the teacher to make longer comments. From the point of view of the students, short feedback is easier to understand and helps them to focus on certain specific aspects of the task. Certain feedback has been ineffective not due to its form as such but due to the students' perception of the task itself. Furthermore, feedback generally helps students with a good performance in mathematics, but it is not always effective for the ones for whom feedback could be most vital. This is a great question for which we still have not found an answer. The poster will use pictorial format.

References

- Black, P. & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7-74.
- Hattie, J. & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112.
- Tunstall, P. & Gipps, C. (1996). Teacher *feedback* to young children in formative assessment: a typology. *British Research Journal*, 22, 389-404.
- Wiliam, D. (2007). Keeping learning on track. In F. Lester Jr. (Ed.), *Second handbook of research on mathematics teaching and learning* (pp. 1053-1098). Charlotte: Information Age Publishing.