**Taking into account the context in the quality of the feedbacks: a case study**

**Key words: feedback, formative assessment, students’ conceptions, self-regulated learning**

**Introduction :**

Our research focuses on the formative assessment practices from the study of interactions between the teacher and the students in the classroom. One of the main research areas in formative assessment is the quality of feedback, as it is thought to be an important way to enhance students’ learning. Hattie and Timperley (2007) conclude, in their review of research on feedback, that it “is among the most critical influences on student learning”. Results in this field of research has produced some general recommendations for teachers, but very few outcomes taking into account the context of production of teachers’ feedback.

We are interested in specific moments of the classroom which correspond to moments where the students encounter difficulties in progressing in the task. We assume that these moments can provide information about the lack of appropriated feedback from the teacher. Our study integrates some elements of the context.

**Theoretical framework**:

A variety of definitions of the term “formative assessment” exist in the literature. For example, Wiliam & Thompson (2007) suggests that assessment for learning can be conceptualized as consisting in five key strategies;

1. Clarifying, sharing, and understanding learning intentions and criteria for success
2. Engineering effective classroom discussions, questions, and tasks that elicit evidence of learning,
3. Providing feedback that moves learners forward,
4. Activating students as instructional resources for one another,
5. Activating students as the owners of their own learning

What characterizes most of the definitions of formative assessment is providing feedback to students and teacher about where the learners are in their learning, where they are going and what needs to be done to get them there (Carver & Scheier, 1999; Hattie & Timperley, 2007; Wiliam, 2010).These three processes are at stake also in students’ self-regulation of learning.

Indeed self-regulation theory involves learners’ questioning about (1) what is my goal? (2) Where I am right now? and (3) How to get there ? (Andrade, 2010; Carver & Scheier, 1999). Within the framework of formative assessment, the main purpose of feedback is to reduce discrepancies between the goal and the current state.

Self-regulation involves students in thinking about the quality of their own products and processes (Andrade, 2010). Many research shows that this process is positively connected to academic achievement. Indeed, self-regulated learners use a wide variety of strategy to promote learning (e.g. goal setting, selected adapting learning strategies, managing affect and motivation, monitoring progress, seeking feedback etc.). In contrast, less effective learners, have minimal self-regulation and depend much more on external factors (teachers, peers, or the task for guidance and feedback) (Pintrich, 2000; Zimmerman & Schunk, 2004).

According to Hattie & Timperley (2007) feedbacks that aim at improving students' strategies and improvements in the task are most powerful. Even though many researches have studied the quality of feedbacks, and their effects on students learning, very few took into account the context which could explain the production of feedbacks.

Our study aims at understanding what could entail the production, by the teacher, of a given feedbacks in a given context. More specifically we focus on the reasons why a teacher could give a poor feedbacks to students which encounter difficulties in progressing in the task.

**Methods**

Our data consists of a video recording of a physics lesson at grade 8 with an experienced teacher (more than fifteen years of teaching).The aim of the lesson was for the students to make an electric circuit and to do some tension measures of the different components of the circuit. From these measures they had to identify the characteristics of each component. One camera was pointing on a group of two students, and another one on the teacher enable us to grasp the context of the classroom. The teacher was also interviewed after the lesson. The aim of this interview was to clarify the learning objectives and the difficulties she came up with. The whole video data and the interview were transcribed.

Our analysis consists on several steps:

First the whole video data was coded using keywords corresponding to the categories mentioned in the theoretical framework (five key strategies). This enabled us to focus on a “privileged” moment concerning teacher/student interaction corresponding to an episode where the students show signs of demotivation, and where the teacher’s feedbacks are very poor. What’s more, the coding showed that students where engaging in the activity but did not seem to progress in the task.

The second step was to go back to the video data to understand more deeply what is at stake in this episode. From the verbalization of the students and their actions, we inferred what was the difficulty they were facing (the students made a confusion between the generator and the voltmeter, and thus the voltmeter was plugged in series). From the teacher's verbalization and actions we inferred what was the difficulty she diagnosed (the students don’t know how to plug in a voltmeter). It ended up that the teacher did not diagnose the correct difficulty the students were facing.

The third step was to make some hypothesis about the reason why the teacher would do a wrong diagnosis. We based this inference from an analysis of the interaction between the teacher and students and from the interview.

**Results**

The feedback which was given to the students was poor. Even though the teacher gives a feedback on the goal to be achieved (but not on the current state or the ways to achieve the goal), she gives a feedback according to a wrong diagnosis.

The interview with the teacher shows that she is focused on the difficulty to plug in correctly the voltmeter:

*“[the aim of the lesson] was to see once more the functioning of the voltmeter as there is many [students] who do not know how to use them”*

From the teacher’s interaction with other groups of students, we could also infer that the teacher is focused on this difficulty.

The fact that the teacher was anticipating this specific difficulty for the students prevented her to diagnose the actual difficulty. The following feedback was given before she went to see other groups of students:

*“how is your device plugged in?”*

The students had plugged in the voltmeter as a generator, and therefore could not understand the feedback of the teacher.

The students spent eight minutes trying to work out what was wrong in their circuit before the teacher returns and ends up giving the correct answer.

The teacher had knowledge on students’ difficulties in electricity from her previous experience. What could be seen from the video is that she doesn’t ask the students to explain what they have done, but rather infers difficulties from their production. It seems that the teacher does not adapt her feedback to the particularity of the students. Thus some further research on teachers’ diagnosis would be necessary.

This study suggests that a feedback should always take into account all three processes (where the learners are in their learning, where they are going and what needs to be done to get them there).

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