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## **ARE STUDENTS READING THEIR TEACHERS' COMMENTS? THE IMPACT OF DIGITAL FEEDBACK IN ADULT LEARNING SECONDARY EDUCATION**

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### **Abstract**

This paper shows the results of an ongoing research which explores the impact of digital feedback in adult learning at the Institut Obert de Catalunya (IOC), an online public school (Department of Education of Catalonia, Spain). The students are adults who did not obtain a degree in compulsory secondary education at the time. The objective of these studies is twofold: to teach students basic life skills they should know to survive and thrive in nowadays society and to manage lifelong learning. Within this context, feedback plays an important role as it has a huge influence on students' learning gain. However, are students taking advantage of the teachers' feedback to improve their tasks? The research is based on the assessments made by students of their teachers' feedback comments and the improvement those meant in the students' task completions. Our intention was to prove from the statements made by the students two facts: if the students received feedback effectively and if that resulted in an improvement in their task completions. Seven closed-ended multiple choice questions together with an open-ended one were used to carry out this survey. The first set of questions were used to gather insight about the students' opinions on the effectivity of the feedback regarding content value, extension and clarity of message. With the open question, we tested how much information the students had retained from their teachers' feedback messages, and what aspects of it they considered more relevant. These first findings provide new insight into the relation between digital feedback and its impact on academic results.

### **Introduction**

The widespread use of ICT in recent years has played a meaningful role in the way online adult learning education is conceived. It is an educational context that allows the student to access a virtual classroom at any time and from where he can interact with the teacher and with other students through various devices, even from the mobile phone.

This online educational context is characterized by flexibility and interactivity. It is flexible because it adapts to both the schedules and the geographical area of each student as well as the different learning rhythms, making individualized attention more possible and facilitating access to people who were excluded from the traditional educational system. It is an interactive modality since it focuses on interaction as a key element for learning. That is, the student must have an active role: he must interact with the teacher, classmates and make use of the activities and resources he has at his disposal. This implies a higher degree of autonomy and student commitment, because he is responsible for his own learning. On the other hand, it involves more careful and personalized guidance from the teacher, an accompaniment that must be planned in the design of the course (Durán & Manresa, 2016).

One of the key elements of this learning process is the way feedback is performed: the teacher can guide and help regulate the learning process, taking into account the formative assessment (Sanmartí, 2010) that develops the awareness of the student's learning (Allal, 2016). Many studies show that feedback can be one of the most powerful influences on student learning (Hattie & Timperley 2007; Jonsson, 2012; Jonsson & Panadero, 2018; Zimbardi et al., 2017) as well as reinforce a positive attitude towards studies (Heppelstone et al., 2011; Knauff, 2015; Hilliard et al., 2019). Recent research focuses on the way students take advantage of feedback in order to improve their tasks (Zimbardi et al., 2017). Feedback is effective only if the learner becomes "proactive recipient", that is, if the student tries to improve from it. (Jonsson & Panadero, 2018).

But how can teachers engage students with feedback? There is evidence feedback is not always productive despite it is well received by students. Some students do not read it and some others do not do anything about it (Jonsson & Panadero, 2018). Other research has shown that feedback is more effective in intermediate tasks rather than in final tasks, especially when the tasks are designed so that the student must read the teacher's feedback to improve the final products (Zimbardi et al., 2017).

## **Study context**

This study explores the impact of digital feedback in the adult learning secondary educational context of GES at the Institut Obert de Catalunya (IOC), an online state school operated by The Generalitat de Catalunya Department of Education. This institution, with more than 23,000 enrolled students in September 2019, integrates all kinds of online non-compulsory education: GES (Graduate of Secondary Education), VET Vocational training, Upper secondary education and modern languages. Its students are adults who did not obtain the certificate in Compulsory Secondary Education on time (16 years of age). These former school dropouts note their educational failure, and teachers must ensure these students rebuild trust in their academic capabilities of achievement. The objective of this

educational stage is twofold: to teach students basic life skills, which should be known to survive and progress in today's modern society, and to manage lifelong learning.

The pedagogical and methodological principles that rule the formative proposal of GES studies at the IOC stem from the teachers' wish to guide the students through their learning process. For this reason, the syllabus is based on didactic sequences whose main objective is to reword the students' post-drafting phase productions in order to achieve a successful monitoring learning process (Camps, 2003). Making a mistake is seen as the starting point of the learning process (Guash, 1997) and it is in this context that feedback plays an outstanding role. Moderating an attitude towards academic achievement as the ultimate result of the learning process is not the objective of the GES teachers, but promoting educational interaction between educators and students to achieve pre-established learning goals. In virtual educational contexts, this objective presents its own particularities as feedback is mainly written. Under these circumstances, the attention to instructions and the reading of the teachers' inputs become part of the teaching-learning process and not a conclude assessment qualification closed to further amendments.

## **Purpose and Research Questions**

This research focuses on the impact of digital feedback in the students' learning processes. Some questions need to be considered to understand the connections between assignment feedback and the effect this exerts on the students' learning gains.

- How do GES students act on feedback? Do they actually read it?
- Does it really have a significant impact on the students' learning process? What aspects of feedback do students find more relevant?

## **Method**

In order to meet the needs, a system, which was implemented at GES (IOC) ( $n = 1046$ ) during the fall term 2019 to 1046 students from 9 courses (from 46 to 181 students) and that is related to the feedback given by the teacher in an assignment from the second unit, has been designed. It is necessary to say that GES studies have a total of 34 courses and each course has a planned time dedication of 35 hours during a trimester, divided into four units. Each unit includes, at least, one activity with a personal feedback from the teacher.

The sample subjects were selected as follows:

- All areas and levels are represented (3 courses from communication, 3 from social and 3 from science).
- Compulsory and elective course.

To have a confirmation that the student read the teacher's feedback, a survey which was linked to the commentary was designed so that it could only be accessed through the feedback. We are assuming that it is difficult to know how many students read the teacher's feedback, and it is even more complicate to know if the reading has been attentive or superficial. However, we may assume that those students who have clicked on the survey link have read it.

The survey included seven multiple-choice questions and an open-ended one. The first ones were intended to take the students' opinions towards the usefulness of the feedback according to their content, their extension, or clarity of the information; the relationships between students who answer the survey and the obtained mark, and the impact of the feedback in the student post-draft production. The last question asked to students about the device from which they check the teacher's commentary. The aim of the open-ended question was to recover the student's memories about the content of the feedback to note which aspects they considered more relevant.

This data has been compared with Moodle logs and the students' qualifications. In total, more than 50 variables (date and time, Boolean, integer, float, percentage, text).

Finally, a text discursive analysis of the open-ended questions has been done and four resulting categories were established: (a) learning content related to the assignment; (b) acquisition of cross-curricular learning strategies; (c) emotional personal aspects, and (d) the assessment of the teaching work.

The research instrument was validated in a pilot test conducted during the spring of 2019 ( $n = 1200$ ).

## **Results and discussion**

In this paper we are only presenting those results that allow us to answer two of the initial research questions. Data relating to each are presented in summary form, and analysis of each key theme is then reported and discussed.

### ***RQ1 Are students reading the teacher's feedback?***

Of the active 1046 participants that received teacher feedback, 84% consulted the gradebook during the following month where they were able to see their mark, 70% checked the feedback for the task, 51% did something with teacher feedback (either clicking on the link to the questionnaire or repeating the task), 43% clicked on the link to the questionnaire and only 17% of the students actually filled it in. In other words, we cannot know for certain the number of students who read the feedback given, but we consider it is more than 51% and less than 70%. This implies that at least 30% of students,

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that is to say, almost one in three active students, did not check the teacher's comments and, therefore, will not be able to use this feedback to improve their performance on the task or said feedback will have little or no impact on their learning.

Our initial hypothesis was that this might be related to the mark that the students got in the task (very high marks or very low ones would probably render the comments for improvement as only minimally useful). However, the figures do not show any relationship between the two variables (mark received and checking the feedback) (Figure 1).

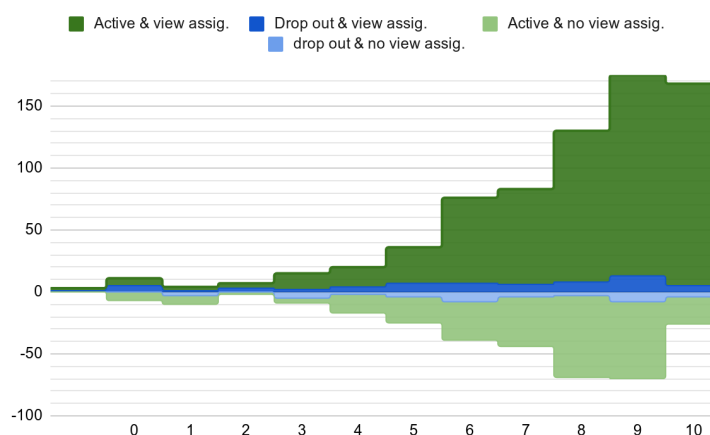


Figure 1. Number of students grouped by their activity, access to the assignment and marks

We can observe that between 30% and 40% fail to check the feedback for the task no matter what the mark awarded was (final grade for the task), except in the case of the students who obtain a 10, of whom only 13% do not check their feedback. In other words, those who are awarded the maximum mark read their feedback more often than students who obtain lower marks. It doesn't seem to be connected [neither] to students' dropping out.

Table 1: Relation between students' activity and access to the feedback

	View feedback	No view feedback	% no view
Active	666	277	29%
Drop out	62	41	40%
% drop out	9%	13%	

Among drop-out students, the percentage who do not read feedback (40%) is slightly higher than among those who continue as active students (29%). The dropout rate for those who check the task and for those who don't are similar (9% and 13%).

On the other hand, logs show some relevant information. Most students who check their feedback do so within a few hours after the task has been corrected by the teacher. That is because once a submission has been marked and moderated by teacher, students receive an email notification that feedback is available.

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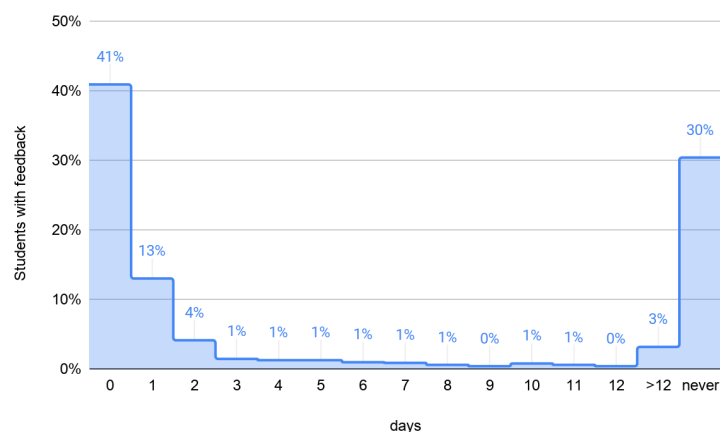


Figure 2. Proportion of students who looked at their feedback in days after receiving it

41% of students see the task the same day they are assessed (less than 12 hours), and 13% the next day.

In the questionnaire, when asked about how did they get into the feedback in a multiple choice query, 83 students answered that they got into it by email, 4 via notification, 69 saw it in the assignment and 79 in the gradebook. In this sense, the message they get when a task is assessed seems to have a motivating effect for students to read their feedback.

In all the courses analysed, the percentages are similar (between 64% and 75%) except in the case of SO2, one Social Sciences course. In SO2 we analysed 49 students and it was the only course in which the main activity was a quiz with open-ended questions whereas in all the other courses students handed in assignments.

### **RQ2 What type of feedback do students turn their attention to?**

When analysing the answers that the students gave to the open question of how had the teacher assessed the tasks they had submitted, we noted that their answers could be classified into four different categories of analysis: (a) things that they had learned which were related to the task; (b) acquisition of transversal learning strategies; (c) emotional personal aspects; (d) assessment of the teaching work.

Generally speaking, we can see a great impact in the emotional aspects and improvement of their self-esteem. For example:

*"I like to see how my teacher values other tasks that I have done during the course and how she encourages me to continue my studies of Catalan Literature." (Catalan Language).*

Besides, students value the cross curricular learning strategies. For example:

*"[She told me] that I have to revise the procedure and the final result of the tasks before submitting them" (Joan P., Maths).*

There are as well a lot of comments related to the teacher's assessment. For example:

*"I think he is a good teacher, and whenever I had an issue or made a contribution, he responded and solved it immediately". (Catalan Language)*

There are less comments in relation to specific contents than related to the aforementioned categories, even though, in some cases, they were more detailed. For example:

*"[She told me] that I could have explained the question of the causes of WWI with more detail. Also, that in another question, the reason is archduke Franz Ferdinand's assassination in Sarajevo and that the answer to the fifth question should be that women came across with problems such as not being allowed to vote: suffrage." (Anna, Social Science)*

## **Conclusion**

The research has allowed us to draw some conclusions on three different aspects: (a) feedback reading, (b) the students' perception of the impact of the feedback in their learning, and (c) the teaching in a virtual learning environment.

As for the first aspect, the results show that a high percentage of students (one in every three) do not check the submitted tasks again and, therefore, it is obvious that they do not read the teacher's comments. This is especially worrying in a learning context whose virtual learning support is based on the improvement of the students' self-regulation tools and gives a key role to the teacher's feedback as a tool for the formative assessment (Hattie & Timperley, 2007). The profile of the students who do not read the feedback is not related to the task of the quality or to the education level, as there is a similar percentage of students who do not read the feedback independently of their marks. However, there seems to be a relationship between the type of activity and the feedback reading, as the percentage of the students who read their feedback is much lower when feedback is not related to a Moodle task, but to an open-answer quiz. On the other hand, most students who check their feedback do so immediately after the teacher's submission, which shows the motivating effect of the warning sent to the students' emails.

Relating to the impact of the teacher's feedback on the students' task, the results show that the students greatly appreciate positive feedback and point out the motivating function of feedback. In this sense, the results of previous research (Heppelstone et al., 2011; Knauff,

2015), which shows that the teacher's positive comments reinforce the students' positive attitude towards their studies. This is especially important in second-opportunity contexts like that of the IOC. Students also appreciate the comments related to cross curricular learning strategies and to procedural support which might serve them to carry out both one specific task and the tasks of other courses or subjects. Such support is very important in distance education, where the student must have a certain degree of autonomy and, for this reason, must adopt some self-regulation strategies. However, the results also show that the teacher's comments do not have much influence on the specific learning strategies needed for the task.

In relation to the third aspect, the teaching in a virtual learning environment, the results show the need to rethink the students' actions as soon as they receive the teacher's feedback. If the feedback is part of the students' learning process, we must design activities in which the students necessarily have to resort to their feedback. This leads us to think about the need to design activities that require the students' more active use of feedback (Jonsson & Panadero, 2018).

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