Feedback: A Key Component in the Design, Development and Validation Stages of Online English/FL Materials

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Abstract. For the past few years, the authors have been working on the design and development of an online First Certificate in English (FCE) preparatory course and exam simulator in an attempt to provide a supplementary tool and resources for students aiming to achieve a B2 level of English. These materials have been designed in such a way that learners can follow and complete the activities either by being assessed by a remote tutor, or in a completely autonomous way. This makes the consideration, analysis and design of effective, efficient and constructive feedback an essential component in the whole design process. In this process, the concept of formative assessment needs to be taken into account from the initial stages of the design and development up to the last phase, and aims at validating the appropriateness of the contents and the resources which are part of the materials. This paper addresses feedback from a theoretical perspective while exploring its different roles from a practical point of view throughout these stages. The main objective is to present the pedagogical framework that has guided the whole design and development process, as well as to analyse the main parameters considered by the authors of these materials when designing and editing the feedback to be received by students after completing either automatically corrected or open input exercises and tasks. This entire process has been conductively aimed to offer learners the contents and all of the required additional tools, in particular corrective, personalised and formative feedback, in order to enrich the two main learning and assessment modalities: self-access and autonomous. Moreover, a description of the platform's main utilities, which allow material writers to edit, monitor and assess branched feedback in accordance with the students' performance, will be provided.

Keywords: feedback, online English/FL materials, design, development, validation.

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1. Introduction

There is a need to explore students' errors and mistakes so that material developers can anticipate them to avoid and reduce them or to offer an adequate solution when they have been already made. Ferris (2012) states that "corrective feedback is more effective when it is selective or focused" and that the emphasis should be on "identifying patterns of error that students could work on rather than marking every single error in sight" (p. 9), an idea to bear in mind when developing tools and resources to be used in autonomous or distance learning contexts. This is the case of the *InGenio FCE Online Course & Tester*, courseware for learners of English as a Foreign Language (EFL) developed to provide students at the Universitat Politècnica de València (UPV) with a supplementary tool to achieve a B2 level of English. In many cases, material developers explore the multiple ways in which language learning occurs and the features related to the causes that could explain why some students fail while others are able to attain the target level in the language being learnt. This fact is especially interesting as students are neither always aware of their progress nor are they able to describe the process that led them to that particular level of expertise (Ellis, 1997).

2. Feedback

Levy and Stockwell (2006) have presented research approaches in the field of Computer-Assisted Language Learning (CALL) based on the "patterns of learner behaviour as learners engage with online tasks and tutoring programs" (p. 153). A study on how students respond and interpret automatic feedback and on how they are able to correct their first response or performance can lead to important improvements. Pujolà (2002), who dealt with the concept of "help facilities", studied how students respond to those additional tools alongside the learning strategies which take part in the process too. This author distinguishes between the categories of assistance and guidance. Travis and Joseph (2009) consider that all the resources and tools relating to e-learning have "the potential to enhance the learning process, by offering more flexible access to the curriculum and providing opportunities for support outside the classroom" (p. 314). Arnold and Ducate (2011) reflect on the idea of dynamic evaluation and on how the line between instruction/formation and evaluation could be erased.

Martínez Ruiz and Sauleda Parés (2001) present the concepts of formative evaluation versus summative evaluation. Formative evaluation would be aimed at understanding and improving the learning process by means of the effect of feedback when learners' behaviour and answers have been predicted beforehand. Lara Ros (2002) studies the need to individualise, personalise, adjust, and adapt the entire process to comply with students' particular requirements, an assumption related to the individualisation criteria aimed at responding to learning scenarios which are more and more focused on students' specific needs and less on group anonymity and standardisation.

3. Computer assisted feedback and the feedback utility in the *InGenio FCE Online Course & Tester*

An aspect which has been greatly agreed upon is the appropriateness of computer-aided evaluation, one of the most important reasons being the immediate reception of feedback by students (Lara Ros, 2002). Additionally, technology is often described as contributing very positively in every process, providing formative assessment as well as any other supplementary and supportive activity introduced to practice and improve specific contents. Lara Ros (2002) explores how the concept of evaluation, understood as help and orientation, is deeply related to the administration of constant feedback and reports, and refers to a study conducted by Stephens and Mascia (1996), for whom computer-assisted evaluation would enable students to know about their results at any point and detect problems, difficulties or drawbacks. These options would allow material developers and teachers alike to know which components are not working properly, as well as those general ideas or contents which are not being learned as predicted.

According to Arneil and Holmes (2003), innovation and sophistication criteria can be introduced progressively if students' production and performance are analysed in detail and compared with some possible correct answers. They consider that feedback could be immediate so that students could know whether their responses are correct immediately after completing the required tasks, enabling content and materials developers to introduce specific keys and hints as part of the activities and tasks implemented. Bangs (2003) concluded that feedback can be seen as one of the main components. Nevertheless, he alerts on the fact that an important part of the online materials, which are currently available, present some outstanding shortages, and sees the delivery of feedback as the factor which can lead to the conception of learning in an independent and individual way. Chapelle and Douglas (2006) also see feedback as an element to be taken into account when evaluating computer-assisted learning and assessment materials. Other authors such as Youngs, Ducate, and Arnold (2011) conceive interaction as a channel to provide students with very valuable feedback too. Hauck and Hurd (2005) present the important role played by tutorials, as many students need elements that could help them find similarities shared by CALL and face-to-face learning.

The *InGenio* online authoring tool and learning management platform includes a feedback editing system in all the templates used to develop and edit exercises (Figure 1) (Gimeno Sanz, 2006). Feedback is approached in an intrinsic and extrinsic way and in an immediate or asynchronous way (Bangs, 2003). The aim is to provide a consistent pedagogical and didactic framework, enabling material developers to offer materials closely linked to students' needs. Therefore, a student would not receive abrupt messages such as "wrong" or "wrong answer", but a constructive response that would contribute dynamically to their linguistic development (Figure 2).

Figure 1. *InGenio* template to edit specific feedback

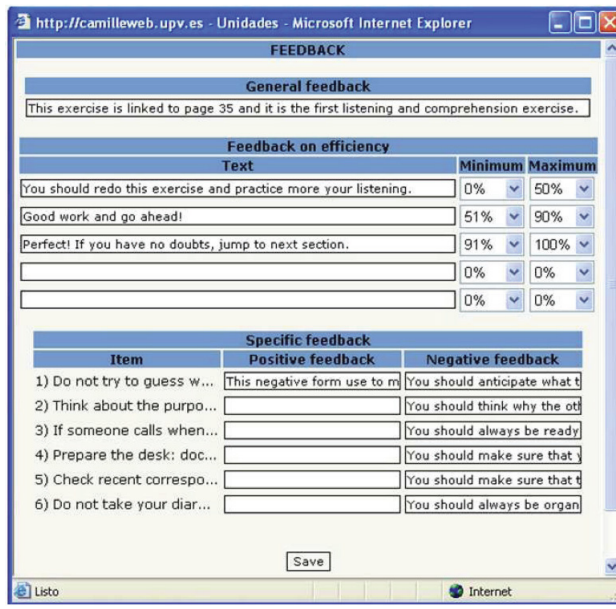
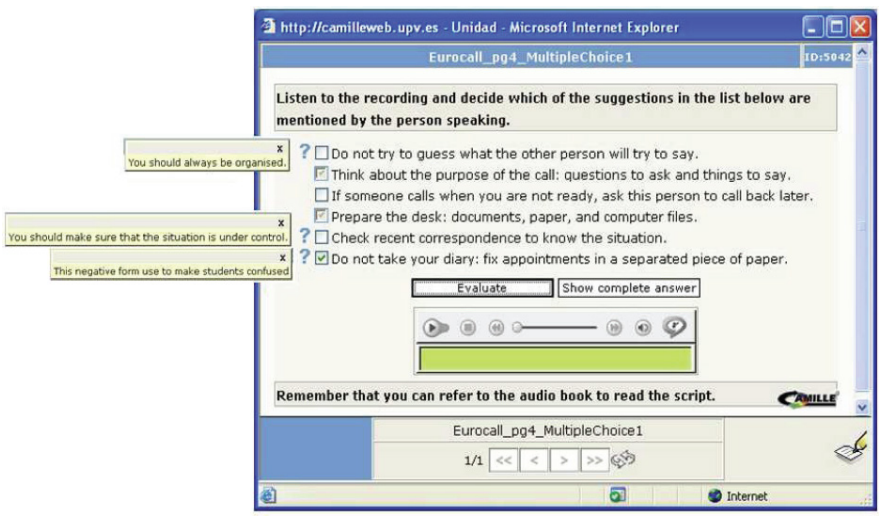


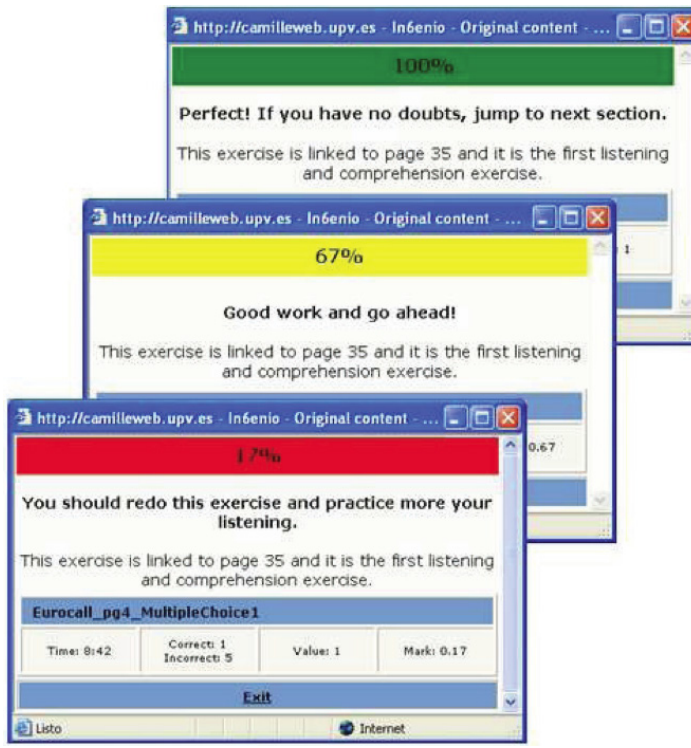
Figure 2. Feedback per item as seen by the user



This is possible thanks to its branched feedback utility, which helps to provide feedback in accordance with the particular responses given. The provision of automatic feedback is possible across the different *Course & Tester* sections, with the only exception of the

tasks which require the student to produce written texts or record oral performances. The correction and rating of these tasks would require a human tutor to interact with the platform and rate the exercise by using the *InGenio* tutor interface and the rating options. When automatic correction is not possible, a model answer or answer key is provided so that students can compare their production with a sample of what would be expected from them (Figure 3) (Gimeno Sanz, 2002).

Figure 3. Feedback in accordance with students' efficiency rate and sample automatic messages



In September 2011 a group of 52 UPV students who had enrolled on a subject called Computer-Assisted English started working on the online B2 level courseware. The main component of this subject was the *FCE Online Course & Tester,* used as distance materials to be completed online, a learning modality to test the effectiveness of both the immediate and automatic feedback provided, as well as the asynchronous and personalised feedback offered to students. After the first semester, 27 students had completed the *Course & Tester,* and had responded to the final questionnaire designed to receive the students' impressions, opinions and suggestions. This questionnaire, a key component in the validation stage, included several questions which can shed light

regarding the students' perceptions on the feedback utilities available in the *InGenio* system or offered by the materials and by the tutors who had been monitoring the process. According to their responses to the initial questionnaire, a very high percentage of the students were worried about making mistakes (Results: Strongly agree: 21%, agree: 58%, neither agree nor disagree: 21%, disagree: 0%, strongly disagree: 0%). However, they felt less anxious after using the online materials. In accordance with their responses to the final questionnaire, rating through a 1 (disagreement) to 7 (agreement) Likert scale, almost all of them considered that the materials encouraged autonomous and independent learning (Results: 1: 0%, 2: 0%, 3: 7%, 4: 7%, 5: 37%, 6: 41%, 7: 7%). Most of them reported that they enjoyed the fact of being able to self-assess their performance by accessing the progress reports (Results: 1: 0%, 2: 0%, 3: 4%, 4: 7%, 5: 37%, 6: 30%, 7: 22%), and perceived the feedback they received as being useful and relevant (Results: 1: 4%, 2: 0%, 3: 4%, 4: 15%, 5: 33%, 6: 26%, 7: 19%).

4. Conclusions

A representative number of studies have been conducted to observe and analyse students' errors and mistakes in order to introduce corrective feedback so as to help students overcome them. Despite the negative connotations of the words "mistake" and "error", their positive impact on language learning cannot be left aside. To study their origins or causes in depth could improve the learning process as well as offer feedback solutions to make it more effective and efficient. This idea has been taken into consideration during the design, development, implementation and validation stages of the *FCE Online Course & Tester*. The main goal has been to reinforce those resources as well as the learning and assessment modalities implemented. The idea of how important it is for students to receive materials suited to their own specific needs and demands has been addressed. Feedback has been approached from a theoretical perspective and a description of the utilities provided by *InGenio,* allowing material writers to edit, monitor and assess branched feedback in accordance with the students' performance, has been presented. The students who have already used these materials have rated the effects of the feedback received very positively.

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