

# **DIFFERENTIATED FORMATIVE FEEDBACK AS A PEDAGOGICAL MECHANISM FOR DEVELOPING SELF-REGULATED LEARNING IN ESP CLASSES**

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## **Abstract:**

The increasing emphasis on learner autonomy in higher education has intensified the need for pedagogical mechanisms that help students use feedback not merely as correction but as a resource for self-regulated learning. In English for Specific Purposes (ESP) classes, this issue is especially important because students are expected to develop linguistic accuracy, professional vocabulary, genre awareness and communicative confidence within a limited number of classroom hours. This article proposes and theoretically validates a differentiated formative feedback model for ESP instruction. The study follows a design-based pedagogical methodology and integrates principles of formative assessment, feedback literacy, self-regulated learning and ESP pedagogy. The proposed model organizes feedback into three interconnected pathways: diagnostic feedback for identifying learning gaps, dialogic feedback for clarifying meaning and criteria, and feedforward feedback for planning subsequent improvement. The results demonstrate that differentiated formative feedback can create a more transparent learning environment, support students in monitoring their progress and strengthen the connection between teacher guidance, peer interaction and independent revision. The article argues that feedback becomes pedagogically productive when it is timely, criterion-referenced, dialogic and connected to further action. The proposed model may be applied in ESP, technical English and professional communication courses in higher education.

**Keywords:** Formative feedback, self-regulated learning, ESP, feedback literacy, differentiated instruction, higher education, learner autonomy.

## **1. Introduction**

Feedback has become one of the central concepts in contemporary pedagogy because it links teaching, assessment and learning improvement. In higher education, however, feedback often remains limited to the correction of mistakes after a task has already been completed. Students receive comments, grades or short recommendations, but they do not always understand how to interpret them, how to use them for future learning and how to transfer them to new tasks. This problem becomes especially visible in English for Specific Purposes (ESP) courses, where

students are expected to use English for professional communication, technical documentation, presentation, negotiation and problem-solving.

In ESP contexts, feedback cannot be reduced to linguistic correction. A student writing a technical summary, preparing a project proposal or presenting an engineering solution needs guidance on vocabulary, grammar, genre structure, communicative appropriateness and professional accuracy at the same time. For this reason, feedback in ESP should be formative, differentiated and action-oriented. It should not only inform students about what is wrong but also help them understand why the problem occurs and what kind of learning action should follow.

Previous research on feedback emphasizes that feedback can influence learning powerfully, but its effect depends on quality, timing, learner engagement and the extent to which students can act upon it. Hattie and Timperley conceptualize effective feedback through the questions “Where am I going?”, “How am I going?” and “Where to next?”, while Nicol and Macfarlane-Dick connect good feedback practice with the development of self-regulated learning. More recent studies on feedback literacy also show that students need to learn how to appreciate, interpret and use feedback as part of their learning repertoire.

The purpose of the article is to develop a pedagogically grounded model of differentiated formative feedback that supports self-regulated learning in ESP classes. The research questions are as follows: (1) What components should a differentiated feedback model include in ESP instruction? (2) How can feedback be organized so that it supports self-regulation rather than passive dependence on teacher correction? (3) What pedagogical outcomes can be expected when diagnostic, dialogic and feedforward feedback are integrated into classroom practice?

## **2. Materials and Methods**

The article is based on a design-based pedagogical methodology. Design-based research is appropriate for educational studies that aim not only to describe a problem but also to develop a practically applicable instructional model. In this study, the object of analysis is feedback practice in ESP classes, while the subject of analysis is the pedagogical mechanism through which differentiated feedback may support self-regulated learning.

The methodological procedure consisted of three stages. The first stage involved problem identification. Typical feedback difficulties in ESP classrooms were analyzed: delayed teacher correction, excessive focus on grammar, lack of learner response to feedback, weak connection between feedback and subsequent tasks, and insufficient differentiation according to student readiness. These difficulties were treated not as isolated classroom problems but as indicators of a broader pedagogical gap between assessment and learning improvement.

The second stage involved theoretical synthesis. The study drew on several interconnected bodies of literature: formative assessment, feedback literacy, self-regulated learning, differentiated instruction and ESP pedagogy. The synthesis made it possible to identify four design principles for the model: feedback should be criterion-referenced, timely, dialogic and transferable to future tasks. These principles were then adapted to the needs of ESP instruction,

where learning outcomes combine language, genre, professional vocabulary and communicative performance.

The third stage involved model construction. The proposed model was designed around three feedback pathways. Diagnostic feedback identifies the current gap between a student's performance and expected criteria. Dialogic feedback creates interaction between teacher, peer and learner so that criteria and meanings are clarified. Feedforward feedback transforms comments into concrete actions for the next task. The model is intended for written assignments, oral presentations, project reports and professional communication tasks in ESP courses.

To illustrate the practical logic of the model, a typical ESP task was used as a pedagogical scenario: students prepare a short technical problem-solution report and present it orally. The scenario requires discipline-specific vocabulary, coherent structure, accurate explanation of technical processes and persuasive communication. The model was then mapped onto the phases of task preparation, drafting, revision, presentation and reflection.

### **3. Results**

The main result of the study is a **differentiated formative feedback model** that connects teacher guidance with learner autonomy. In this model, feedback is not viewed as a final comment on a completed task, but as a continuous learning cycle in which students identify their weaknesses, clarify assessment criteria, revise their work and plan further improvement. The model includes three interconnected pathways: **diagnostic feedback, dialogic feedback and feedforward feedback**. Diagnostic feedback helps students understand specific learning gaps, such as problems with technical vocabulary, grammar accuracy, report structure or genre conventions. Instead of giving general comments like "improve vocabulary" or "work on structure", the teacher provides task-related guidance and explains why a particular problem affects communication.

Dialogic feedback turns feedback into an interactive process. Students discuss teacher comments, ask questions, compare alternatives and participate in peer review. This is especially useful in ESP learning because professional communication requires not only grammatical correctness, but also appropriateness, clarity and audience awareness.

Feedforward feedback connects the current task with future learning. Students prepare a short revision plan and decide how they will use the feedback in their next assignment. For example, after receiving comments on a problem-solution report, a student may plan to define the technical problem more clearly, use cause-effect connectors and include discipline-specific terms accurately.

Thus, the model distributes responsibility between teacher and learner. The teacher designs clear criteria, diagnoses difficulties and creates feedback opportunities, while the learner interprets comments, asks clarifying questions, revises the task and documents progress. As a result, feedback becomes a shared pedagogical process rather than a teacher's final judgment.

#### **4. Discussion**

The proposed model supports the idea that feedback is most useful when it helps learners close the gap between their current and expected performance. In ESP classes, this process should be differentiated because students have different levels and needs. Beginners may require clear diagnostic explanations, intermediate learners may benefit from guided peer discussion, and advanced students may need feedforward strategies for independent improvement.

The model is also connected with feedback literacy. Students sometimes fail to use feedback not because it is missing, but because they do not know how to interpret it. Dialogic feedback helps them understand teacher comments, compare them with assessment criteria and turn them into practical actions.

Another important point is the link between ESP and self-regulated learning. Since ESP courses often have limited classroom hours, teachers cannot prepare students for every professional communication situation. Therefore, students should learn to monitor their own language use, evaluate their drafts and transfer feedback to future tasks. The feedforward component supports this movement from teacher control to learner autonomy.

The model can also improve classroom interaction. When feedback becomes a cycle, peer review and teacher consultation become meaningful learning activities. Students begin to understand that revision is a normal part of professional communication, just as reports, proposals and presentations are usually discussed and improved before final submission.

However, some limitations should be noted. The model requires well-designed ESP tasks, clear criteria and teachers who can give criterion-based comments. Students may also need time to adapt to dialogic and feedforward feedback if they are used only to grades or direct correction. For this reason, the model should be introduced gradually with rubrics, examples and reflection activities.

#### **5. Conclusion**

This article proposed a differentiated formative feedback model for developing self-regulated learning in ESP classes. The model is based on the integration of diagnostic feedback, dialogic feedback and feedforward feedback. Its central pedagogical idea is that feedback should not be limited to correcting errors after task completion; it should guide students toward understanding criteria, revising their performance and planning future learning actions.

The proposed model contributes to ESP pedagogy by aligning feedback with the professional nature of language learning. It addresses not only linguistic accuracy but also genre awareness, technical vocabulary, communicative appropriateness and learner autonomy. The model may be implemented in technical English, professional communication, academic writing and project-based ESP courses. Future empirical studies may test the model through classroom experiments, student feedback literacy scales, portfolio analysis and longitudinal tracking of revision quality.

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