



Review

Understanding feedback: A learning theory perspective



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ABSTRACT

This article aims to review literature on feedback to teachers. Because research has hardly focused on feedback among teachers, the review's scope also includes feedback in classrooms. The review proposes that the effectiveness of feedback and feedback processes depend on the learning theory adhered to. Findings show that regardless of the learning theory effective feedback is goal- or task-directed, specific, and neutral. In addition, four rules of thumb were formulated that reflect what a majority of learning theories suggested as effective for learning. Finally, some feedback characteristics were considered effective from only one learning theory. The article shows that feedback processes are complicated and many variables influence and mediate the processes. Most reviewed studies did not investigate the whole feedback processes, and therefore, we suggest that future research is needed to further understand feedback.

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1. Introduction

Feedback has long been recognized as an effective tool for student learning (Hattie & Timperley, 2007; Mory, 2003; Shute, 2008). However, as Scheeler, Ruhl, and McAfee (2004) pointed out few studies have focused on effective feedback to teachers. In this article, we focus on feedback literature in order to provide insights into the effectiveness of feedback. More specifically, we aim to review research on feedback to teachers.

In this article, we propose that the characteristics of effective feedback and feedback processes are related to a specific learning theory from which learners, either students or teachers, are facilitated. For instance, in behaviourism, feedback can be positive or negative, depending on whether teachers want to reinforce and encourage student behaviour or not. Or in meta cognitivism, feedback can be directed at the “learning to learn” processes, such that learners can develop themselves as self-regulated learners. As a consequence of these differences, characteristics of effective feedback and feedback processes are expected to differ among learning theories.

In order to test this proposition and to provide insights into feedback among teachers, a systematic literature review (Petticrew & Roberts, 2006) was conducted. Research questions were formulated as follows:

1. To what extent does a learning theory influence characteristics of considered effective feedback?
2. To what extent does a learning theory influence feedback processes in pupil and student learning?
3. To what extent does a learning theory influence feedback processes in (student) teacher and adult learning?

This article first explains how the systematic literature review was conducted: the search process (Section 2.1) and data-analysis (Section 2.2) are addressed and the learning theories are described (Section 2.3). Next, the findings regarding the research questions are presented (Sections 3.1 and 3.2). Subsequently, the article discusses the findings and describes limitations, implications for practice, and implications for future research (Section 4).

2. Method

To our knowledge, only one review was previously published that focused on performance feedback given to teachers. Scheeler et al. (2004) aimed to determine which attributes of performance feedback given to teachers are effective. They found only 10 articles that matched their criteria, published between 1970 and 2000. They concluded that “(a) feedback is better than no feedback, (b) immediate feedback is better than delayed feedback, and (c) feedback that is immediate, specific, positive, and corrective holds the most promise for bringing about lasting change in teaching behaviour” (p. 68). This review updates their findings.

This section first addresses the search and selection process (Section 2.1) and then elaborates on the data-analysis (Section 2.2). Finally, five learning theories and their implications for feedback processes are described (Section 2.3).

2.1. Search and selection process

ERIC, PsychInfo, and Dissertation Abstracts were explored using search terms based on Scheeler et al.’s (2004) review. These (e.g., corrective feedback and peer coaching) and other search terms (e.g., professional development) were used.

Based on Scheeler et al.’s (2004) findings, in this review, we expected to find only a few publications that specifically examined feedback between teachers. Therefore, from the start, the scope of the review was expanded to research on feedback to students. The search covered literature from January 2000 up to and including June 2012. Some older seminal publications were also included. These were found by means of snowballing (Cordingley, Bell, Thomason, & Firth, 2005; Petticrew & Roberts, 2006), that is, literature cited in the already included articles was examined and included if it met our criteria.

In ERIC, an initial 630 articles were found and in PsychInfo, 757 articles, including 13 dissertations, were retrieved. The selection process encompassed two steps. In the first step, the title and abstract, as depicted by the databases, were judged on the following criteria for inclusion: (a) the article had to be peer reviewed, (b) the article had to report on an empirical or review study, (c) the sample should be in primary, secondary, tertiary, or teacher education or teacher professional development programs, and (d) feedback should be a subject of the study.

In the second step, the selected articles’ research goals and questions, methods, results, and conclusions were summarized. Using the summaries and the four criteria, it was decided whether the article would be included in the review.

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