Chapter 13
Evolution of Covert Coaching as an Evidence-Based Practice in Professional Development and Preparation of Teachers

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ABSTRACT
There is a tradition of coaching in many fields that prepares and improves performance among professionals. Coaching practices evolved over time, with several technological applications developed to improve the coaching process. An application gaining attention as an evidence-based practice is the use of wireless communication systems in which coaching statements are delivered to individuals while they engage in work. In education this has been called Bug-in-Ear coaching or Covert Audio Coaching, and has demonstrated its efficacy as a coaching intervention with teachers, families, and individuals with developmental disabilities. In this chapter the evolution of coaching across disciplines is summarized and specific applications that hold promise as an evidence-based practice for the professional development and preparation of teachers are described. This chapter summarizes 22 studies which support covert coaching as an evidence-based practice. Covert coaching enables immediate feedback without interrupting the participants, and provides opportunities for immediate error correction.

INTRODUCTION
Technology has greatly affected employment and professional preparation programs. Computers, once relegated to science fiction, are now commonplace tools in academia and most employment settings. Current technologies continue to expand; technology has multiple impacts on the way professionals conduct their work and the way they are prepared for roles in the workplace. Technologies that once relied on
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Computers that were the size of a large room are now portable, and small enough to carry in a pocket. In just two decades, the focus of many technologies has shifted from the hardware to applications and use of portable smart tools. The application of technology to coaching and professional development has the potential to make a greater impact on employees in a variety of employment settings.

**BACKGROUND**

In many fields, coaching is a common practice used to prepare and improve performance among professionals. Like technology, coaching practices have evolved over time, and several technological applications have been adopted in an effort to improve the process. An application that is gaining attention as an evidence-based practice is the use of wireless communication systems in which coaching statements can be delivered to individuals while they engage in work activity. This coaching practice has been used effectively as an intervention with teachers, families, and individuals with developmental disabilities. In teacher education this practice is referred to as both *Bug-in-Ear* coaching and *Covert Audio Coaching*.

In this chapter the evolution of coaching across several disciplines is outlined. Specific applications that hold promise as an evidence-based practice for professional development and teacher education are described. A review of studies indicate that covert coaching enables immediate feedback without interrupting the participants. Further, this research supports that the combination of covert coaching and immediate feedback provides opportunities for immediate error correction.

**RESEARCH ON COACHING AND FEEDBACK**

Feedback on employee performance is important for both supervisors and employees. Employment coaching has been used in the private and public employment sectors to provide feedback to employees (e.g., Crowell, Anderson, Abel & Sergio, 1988). Many of the origins of employment coaching can be traced to *organizational behavior management*, a term that has been used to describe an application of behavioral principles including the simultaneous coaching that occurs in various places of employment (Crowell et al., 1988). Feedback and coaching have been used traditionally in employment settings between supervisors and their “subordinate” employees, with feedback delivered after the supervisor has observed the employee or conferred with other management. The purpose of coaching and feedback in the employment sector typically is to develop an employee’s skills, provide suggestions to improve or recognize exemplary work, or modify certain workplace practices.

Cunningham and Austin (2007) provide an example of an organizational behavior management practice involving workplace coaching. To reduce injury to hospital staff in an operating room, Cunningham and Austin sought to improve safety practices with direct observation and feedback. Focusing on injuries caused by sharp needles, the researchers set the goal to reduce needle exposure and injury, and to reinforce the “hands-free technique.” The study incorporated various coaching practices, and increased safety behavior during inpatient and outpatient procedures in the operating room during treatment, and in outpatient operating rooms during a maintenance condition.

The use of feedback and coaching in employment settings has not been limited to “subordinate” employees. A study by Green, Rollyson, Passante, and Reid (2002) provides an example. Supervisors in a living facility for adults with severe disabilities were coached to improve their supervisory performance.