

Traditional lecture versus video/discussion-based instruction and their effects on learning behavior guidance techniques

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ABSTRACT

Purpose: The purpose of this study is to compare the traditional lecture-based instruction to a contemporary format, which simulated the flipped classroom, on student learning of behavior guidance techniques (BGTs). Both types of instruction included video examples of BGTs. The secondary aims were (1) to examine the students' preference of learning style on test performance and (2) to determine the student perceptions about the methods of instruction with videos.

Subjects and Methods: Videos of practitioners performing BGTs were recorded. Dental students in their third year of training were recruited to participate ($n = 70$). Students were randomly divided into two groups as they entered the facility: (1) contemporary instruction (CI) and (2) traditional instruction (TI). The CI group watched a 20-min "mini-lecture" that simulated an online module and then divided into discussion groups led by calibrated pediatric residents and faculty. The TI group received 50 min of traditional lecture with videos incorporated in the presentation. At the completion of the course, students completed a questionnaire, which assessed the student's learning of the objectives of the course and his/her perceptions of the learning experience.

Results: The CI group performed significantly better on the posttest questionnaire ($P = 0.001$). After instruction, students felt most comfortable employing Tell-Show-Do and Positive Reinforcement. Students' perception of the usefulness of video examples of BGTs was high with mean 4-point Likert scores of 3.53 CI and 3.52 TI.

Conclusions: The CI format improved the students' learning of the topic as assessed by test scores. Behavior guidance education for predoctoral students could be enhanced by the use of videos and discussion-based learning.

Key words: Educational technology, pediatric dentistry, professional education, teaching effectiveness

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Introduction

Behavior guidance techniques (BGTs) are an essential set of skills for treating children and those with special needs. The techniques enable practitioners to help patients learn correct responses to stimuli, communicate fears and anxieties, and cope with a difficult appointment. BGTs are meant to help

patients have a positive view of dental appointments, which in turn fosters long-term relationships with dental practitioners and develops long-term investment in dental health. The communicative techniques include positive previsit imagery, direct observation, Tell-Show-Do, Ask-Tell-Ask, voice

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