Chapter 7
Human Performance Technology and the Effects on Web-Based Instruction Performance Efficiency

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ABSTRACT

Human performance technology (HPT) is a field of applied sciences involving the identification of the causes of actual performance problems of organizations, development and implementation of solutions to such problems and evaluation of the outcomes for every step of the performance improvement processes. In addition to its operability with organizations and corporations for varying purposes, HPT can also be employed as an educational tool designed to solve performance problems and improve performance. This study aims to assess how the HPT operates within the scope of web-based education. The study identifies the primary factors which have adverse effects on web-based instruction including non-interactivity, infrastructural and systematic incompetence, ineffective course materials, unproductive feedback systems and discusses some potential solutions which can be designed using the HPT processes and explores the effects these solutions may have on performance efficiency.

INTRODUCTION

Human performance technology has gained prominence as an applied scientific study aimed at improving performance issues thanks to its capability to develop goal-oriented, comprehensive and system-based solutions. Operating in a model, which comprises the phases of perception and analysis of problems, development and implementation of solutions, and evaluation, HPT aims to push the performance of

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all stakeholders in a system to the maximum level. Not only can HPT be aligned with the operations of organizations and corporations for different purposes but it can also be used in educational fields to fulfill similar tasks of solving performance problems and improving performance. Hence the primary aim of this study is to present an evaluation of HPT processes with regards to web-based learning. For the purposes of the study, students who are registered at distance learning programs of Afyon Kocatepe University Vocational School were asked for their views about and expectations from distance learning practices. This was followed by the next phase of identification of system performance problems and subsequently the next one, which involved development of solutions to terminate the identified problems. The study was conducted among 300 students who are registered at distance learning programs of Afyon Kocatepe University Vocational School. Study sample was based on the 182 students' response to the survey. Students' views of the distance learning practices were analyzed and interpreted in terms of frequency (f) and percentage (%).

The first phase of the human performance technology study involved getting to know the educational medium and analyzing the actual performance in web-based learning settings. Responses of the students taking the survey were cited to this end. As a result, a number of performance problems were identified. These performance problems involved the following findings: that distance learning course materials are not effective, feedback from tutors to students was insufficient, students are unable to build interaction with the tutors and there is a lack of a platform where students can enjoy interaction with their peers. Once the problems were diagnosed, HPT professionals were sought for advice to identify the root causes of these problems and design interventions to mitigate or terminate them. A feasibility study was conducted, in which each intervention was assessed in terms of their cost, applicability to the educational setting, and the time required for the implementation and their potential value. Proposed interventions were then prioritized and the best fitting interventions were selected. This phase was followed by the final phase of evaluation where the contributions of feasible interventions to web-based instruction were evaluated.

The contents of the subsequent sections of the study are as follows: Next section provides an exploration of the concept of human performance technology as well as explanations of the performance improvement model used in the study, and where it can be used. Section three focuses on the application of the relevant human performance technology processes to performance productivity of Afyon Kocatepe University Distance Learning System. The section introduces the model, scope and sample of the study, describing the application of the measuring tool used to collect data and presenting a comprehensive evaluation of the study outcomes. It also contains information on how the analysis of these data by performance improvement process can aid the production of solutions to improve performance. Finally, an evaluation of the feasibility of these solutions is offered. The study concludes with the "Results and Proposals" section.

DEFINITION OF HUMAN PERFORMANCE TECHNOLOGY AND PERFORMANCE IMROVEMENT PROCESS

Human performance technology is an applied science that identifies the actual problems of organizational performance, analyzing the root causes of these problems, develops solutions, implements these solutions in the organizational system and evaluates all performance improvement processes (Çakır, 2013). Human performance technology uses a wide range of interventions that are drawn from many other disciplines including, behavioral psychology, instructional systems design, organizational development,