Chapter X

The Measurement of Telecommuting Performance

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Telecommuting provides various benefits to a number of constituents. However, the rate of telecommuting implementation is low due to the difficulty of measuring telecommuting performance. A new approach is needed to measure telecommuting activities. This paper analyzes the characteristics of telecommuting in order to establish a clearer understanding of the many facets of telecommuting. Based on this analysis, a conceptual framework for measuring its performance is presented.

INTRODUCTION

The recent proliferation of personal computers and communication networks has enabled organizations to acquire and retain their distributed organizational structures. As a result of these telecommunications networks, geographically distributed people can communicate, coordinate, and collaborate their work efforts across time and space barriers. These advancements have contributed to the creation of “the virtual workplace” (Cascio, 2000), a
recent phenomenon that has changed the way people work. One of the related business practices of the virtual workplace is “telecommuting.”

Despite years of effort, the definition of telecommuting is still not clear. Though often used interchangeably, the terms telecommuting and teleworking are generally considered to be two distinct constructs. The broad term for working away from the main office using telecommunications is generally regarded as “telework” (Hill, Miller, Weiner, & Colihan, 1998). Teleworking includes any form of substitution of information technologies for work-related travel (Nilles, 1998). Under this definition, even the use of telephones or facsimile transmission is regarded as telework.

Telecommuting is generally considered to be a subset of teleworking. Coined by Jack Nilles in 1973, telecommuting was defined as “periodic work out of the principal office, one or more days per week either at home, a client’s site, or in a telework center” (Nilles, 1998). Telecommuting emphasizes as one if its major benefits the ability to reduce or eliminate daily travel to a work location. In the United States, practitioners and researchers have shown increasing interest in commuting problems like traffic congestion so that the term “telecommuting” has been dominant over the term “telework.”

Various paradigms of telework related to work arrangement exist. Büssing (1998) structured organizational forms of teleworking into four types: “mobile telework, alternating telework, collective telework, and home-based telework.” Among these forms, the dominant type of teleworking in most countries is the alternating of telework between home and organization (Büssing, 1998), which has come to be known as “telecommuting.” The focus of this analysis is grounded in this definition, and thus, self-employed telecommuters and the employees who work overtime at home are not examined.

Although remote work was foreseen as early as 1950, the practices of telework did not start until the availability of telecommunications technology in the early 1970s (US Department of Transportation, 1993). After the introduction of telecommuting by Nilles in 1973, companies started to consider telecommuting as a new business form, and several companies set up telecommuting trials during the early 1970s (Katz, 1987). Organizations continued to experiment with telecommuting, and the number of telecommuters reached about 10,000 by the middle of the 1980s (Gordon, 1986).

The practice of telecommuting has been dramatically increasing during the last decade. The number of telecommuters has grown to more than 10 million in the US (Shellenbarger, 1997; Nilles, 1997) and equivalent numbers in the rest of the world (Nilles, 1997). Most researchers expect that this growth rate will only continue to increase in the foreseeable future. Using a math-
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