ABSTRACT

Computer self-efficacy is known to operate at multiple levels, from application-specific subdomains like spreadsheets to a judgment of ability for the entire computing domain (general computer self-efficacy, GCSE). Conventional wisdom and many recent studies contend that the level of self-efficacy (specific to general) should match the level of its related constructs to maximize predictive power (Bandura, 1997; Chen, Gully, & Eden, 2001; Pajares, 1996). This thinking claims, for example, that GCSE should be used with a general attitude like computer anxiety (and vice versa). This study examines whether such a limitation is theoretically and empirically sound given that SE judgments generalize across domains.

Keywords: Cognitive psychology; computer attitudes; computer self-efficacy; computing competence; general self-efficacy; specific self-efficacy

INTRODUCTION

The exploration of the relationship between the individual and computers by researchers and practitioners has evolved into a significant stream of knowledge and research concerning the individual and his or her perceptions, beliefs, and capabilities concerning technology. The reference discipline for much of this work rests in social and
cognitive psychology, where the basic premise is that an individual behaves in a predictable way that is a function of environmental and/or cognitive factors. One influential model was Bandura’s (1986) social cognitive theory, which explained human behavior in terms of a continuous reciprocal interaction between cognitive, behavioral, and environmental determinants. This “triadic reciprocality” suggests that behavior is simultaneously a function of, and a determinant of, environmental and cognitive factors (p. 23). Among the most prominent of the cognitive factors is self-efficacy (SE), which is an individual’s perception of the ability to successfully carry out a task or activity. Self-efficacy is not just an ability perception; it provides a generative mechanism that orchestrates the motivation and effort required to complete the task. It helps determine which activities are attempted, the effort in pursuing these activities, and persistence when encountering obstacles (Bandura, 1986, 1997; Gist & Mitchell, 1992). Self-efficacy also applies to computing behavior. Computer self-efficacy (CSE), defined as an individual’s judgment of computing capability, is a significant influence of attitudes toward technology (Harrison & Rainer, 1992) and performance (Agarwal, Sambamurthy, & Stair, 2000).

Self-efficacy has been shown to operate at multiple levels; for example, an individual can make judgments of ability for specific applications (such as database or spreadsheet self-efficacy) or a judgment of ability for the entire computing domain, labeled general computer self-efficacy or GCSE1 (Marakas, Yi, & Johnson, 1998). These levels, frequently labeled as specific or general CSE, have been operationalized and used in numerous studies with varying degrees of success.

Although extant studies confirm a linkage between self-efficacy and various computing behaviors, there is relatively little research that empirically examines the distinctions between general and specific self-efficacy and, in particular, their predictive validity. Which level of self-efficacy, for example, should be used in a given study? Research maintains that the level of self-efficacy (specific to general) should match the level of the study outcomes (Ajzen, 1991; Pajares, 1996). Chen, Gully, and Eden (2001) refer to this as “specificity matching” and maintain that matching levels is crucial for predictive power (p. 64).

Although this approach makes intuitive sense, there have been several studies in the IS field where cross-leveling (using different levels for self-efficacy and outcomes) have been significant. For example, GCSE (using the instrument of Compeau & Higgins, 1995b) had a significant relationship with spreadsheet ease of use (Agarwal et al., 2000), affect, and anxiety (Compeau, Higgins, & Huff, 1999), and word processing and spreadsheet declarative knowledge (Compeau & Higgins).

We contend that the reason for these findings is due to the nature of...
Related Content

Examining User Perception of Third-Party Organization Credibility and Trust in an E-Retailer
[www.igi-global.com/chapter/examining-user-perception-third-party/18160?camid=4v1a](www.igi-global.com/chapter/examining-user-perception-third-party/18160?camid=4v1a)

A Cultural Model of Online Banking Adoption: Long-Term Orientation Perspective
[www.igi-global.com/article/a-cultural-model-of-online-banking-adoption/165433?camid=4v1a](www.igi-global.com/article/a-cultural-model-of-online-banking-adoption/165433?camid=4v1a)
When Technology Does Not Support Learning: Conflicts Between Epistemological Beliefs and Technology Support in Virtual Learning Environments
www.igi-global.com/chapter/when-technology-does-not-support/18653?camid=4v1a

Validating the End-User Computing Satisfaction Survey Instrument in Mexico
www.igi-global.com/chapter/validating-end-user-computing-satisfaction/18268?camid=4v1a