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Integrating the Information Systems Success Model With Project Success Management Process:
Position Paper

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ABSTRACT

DeLone and McLean information systems success model has become a reference for explaining the success of information systems (IS). Attempts to apply and test the model have resulted in both confirmation and challenges. One of those challenges is how to translate the learnings from this model into actionable knowledge. This position paper proposes the integration of the information systems success model with the success management process as a way of getting synergies from both models and improving the study and practice of IS projects. Moreover, the authors present several examples of IS success measures to be used in practice.

KEYWORDS

Information Systems, Information Systems Success Model, Information Technology, Project Management, Success Management Process

1. INTRODUCTION

Organizations need to ensure that their investments in Information Technology (IT) and Information Systems (IS) are successful, regardless of whether the economy is booming or disarming. IS plays a critical role in organizations since IT/IS projects are enablers of organizational transformation and business growth (Iriarte & Bayona, 2020). Furthermore, a successful IS leads a company to achieve better business results. However, IS projects failure affects business profit either directly or indirectly (Delone & McLean, 2003; Petter, DeLone, & McLean, 2008).

The evaluation of the effectiveness and success of IS is an important aspect of the IS field in both research and practice (Keen, 1980). Information system success concerns the effective creation, distribution, and uses of information via technology. However, defining IS success can be challenging because success is a multidimensional concept that can be assessed at different levels (e.g., technical, individual, group, organizational) and using several criteria (e.g., economic, financial, behavioral, perceptual) (DeLone & McLean, 1992).

Evaluating IS success has been a focus of IS research for the past four decades, which can be traced to the seminal work of Alter and Ginzberg (1978) and Barkin and Dickson (1977), who evaluated success in terms of system usage. However, system usage is just one measure of success, and in specific deployment contexts such as a mandated usage context, system usage might not be the

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appropriate measure to evaluate success. Since then, the measurement of IS success or effectiveness has been widely investigated throughout the IS research community. Theorists are grappling with the question of which constructs best measure IS success for many years (Rai, Lang, & Welker, 2002).

DeLone and McLean (1992) comprehensively reviewed the different IS success measures and proposed a six-factor IS success model as taxonomy and framework for measuring the complex-dependent variables in IS research. This model proved to be of great usefulness to explain the success theoretically, but in the literature, there is no much research translating it into actionable knowledge, i.e., describing how to use in practice the learnings from the theoretical model.

On the other hand, Varajão (2016), with a practical focus, proposed Success Management as a new project management knowledge area. This knowledge area was further organized through a new process (Varajão, 2018b). This process comprises nine activities: Plan project success management; Plan phase success management; Identify success factors and define performance and result indicators; Perform success evaluation; Validate and report success; Perform preventive and corrective actions; Review success management; Validate and report phase success; and, Validate and report project success. Varajão (2016, 2018b) identifies the main principles and processes of Success Management, but do not focus IS projects in particular; consequently, for instance, do not describe in detail the criteria that may be used to assess IS success.

In our view, there is an opportunity to improve IS success management theory and practice by integrating the IS Success Model with the Success Management Process. In this position paper, we present an overview of this and examples of IS success measures.

The paper is organized as follows. The following section summarizes the DeLone and McLean (1992, 2003, 2016) IS Success Model. Varajão's (2018b) Success Management Process is described next. Then, an integrated model is presented and briefly discussed. Finally, we conclude with implications from this proposal for practice and research, and some highlights for further research.

2. DELONE AND MCLEAN INFORMATION SYSTEMS SUCCESS MODEL

In 1992, Delone and Mclean published the first version of the IS Success model (DeLone & McLean, 1992), based on their review of 200 research papers published between 1981 and 1987. DeLone and McLean comprehensively reviewed IS success measures and concluded with a model of interrelationships between six IS success variable categories: System quality; Information quality; IS use; User satisfaction; Individual impact; and Organizational impact. This model makes two important contributions to the understanding of IS success. First, it provides a scheme for categorizing the multitude of IS success measures that have been used in the research literature. Second, it suggests a model of temporal and causal interdependencies between the categories (McGill, Hobbs, & Klobas, 2003; Seddon, 1997).

After the publication of the first model, researchers started to propose modifications and developments. In 2003 an update focused the changes in IS practice, especially the advent and explosive growth of e-commerce (Delone & McLean, 2003). In 2016 happened punctual modifications (Figure 1), as, for instance, the change of the construct "Net benefits" to "Net impacts". The "benefits" have a relationship with positive results. "Impacts" are possible to occur as positive or negative results. In the use of IS, the results might be positive or negative (DeLone & McLean, 2016).

According to Delone and McLean (2003, 2016), the constructs of the model depicted in Figure 1 are:

- *System Quality* is related to the characteristics that an information system should have. For instance, ease of use and learning, flexibility, reliability, as well as system features of intuitiveness and response times;

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