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A Maturity Model for Intraorganizational Online Collaboration

Samuel Reeb, TU Dresden, Germany*
https://orcid.org/0000-0003-0440-7273

ABSTRACT

The capability to collaborate successfully within and between organizational units using online media supports organizations in addressing the increasing complexity of work tasks of knowledge workers. However, organizations are struggling to develop and sustain their intraorganizational online collaboration (IOC) capabilities organization-wide. Hence, holistic approaches to effectively manage this capability are needed. This paper addresses this problem by introducing a maturity model for intraorganizational online collaboration. The model builds on related maturity models and research of the domain. In a four-round ranking-type Delphi study, essential capability areas for IOC were identified and refined, and a general maturation path was developed. Compared to related maturity models, the presented maturity model addresses the specific domain focus of online collaboration within an organization from an organization-wide perspective. The model provides a framework for design elements for intraorganizational online collaboration and a highly reliable general maturation path.

KEYWORDS

Collaboration Capability, Collaboration Performance, Collaborative Problem-Solving, Delphi Study, E-Collaboration, Maturation Path, Online Collaboration, Online Teamwork, Ranking-Type Delphi

INTRODUCTION

The increasing complexity of work tasks of knowledge workers represents a central 21st-century challenge and requires collaborative knowledge work (Burrus et al., 2013; Graesser et al., 2018; Marsh et al., 2022; Nelson & Squires, 2017). Furthermore, organizations are confronted with large data quantities that need to be processed to distribute available information to relevant recipients. By utilizing digital technologies and actively engaging in the digital transformation process, organizations can address this challenge (Mergel et al., 2019; Vial, 2019). The effective use of technologies is crucial for organizations, and their ability to engage in intraorganizational online collaboration (IOC) must be addressed. Organizations across all sizes provide their employees with collaboration platforms to tackle these challenges (Moore, 2016).

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However, organizations struggle to establish IOC (Jansz, 2016; Kiron et al., 2016) as it exceeds providing the technical solution and must be addressed holistically, incorporating different perspectives (Mergel et al., 2019; Nitschke et al., 2019; Orellana, 2017; Puklavec et al., 2018; Reeb, Dilefeld, et al., 2021). Therefore, control tools for IOC should be implemented to provide a more objective and universal view of the organization's status and identify problem areas (Chenhall, 2003; Langfield-Smith, 1997). One approach is maturity models (MM), which have already been applied in related domains (Alonso et al., 2010; Boughzala & Vreede, 2012; Friedrich et al., 2016; Jansz, 2016; Magdaleno et al., 2008).

However, existing models differ in several aspects like domain focus (Boughzala & Vreede, 2012; Jansz, 2016), target audience, and perspective (Friedrich et al., 2016). Furthermore, new findings and developments have emerged over the past decade (Reeb, Clauss, et al., 2021). Accordingly, the question arises how an MM for IOC can be designed.

This study explores the future of online collaborative work within organizations focused on knowledge work by developing an intraorganizational online collaboration maturity model (IOC-MM). Therefore, relevant aspects, summarized in capability areas that an organization must consider when designing IOC, are explored. Given the complexity of the domain, it is crucial to provide organizations with a maturity path, enabling them to derive their current state and the resulting opportunity for improvement.

Following the guidelines for MM development by Becker et al. (2009), related MMs are identified and used for initial model development. The literature-based capability areas are evaluated and refined by a modified ranking-type Delphi approach, and a maturation path is developed. The Delphi method was chosen because its iterative approach fits the goal of identifying and narrowing down essential capability areas and developing a corresponding maturity path. The result is an IOC-MM corresponding to the basic MM design principles (DP) according to Pöppelbuß and Röglinger (2011). This results in two central research questions for this paper:

- What capability areas are relevant (important and impactful) for effectively implementing IOC in an organization?
- How is a general maturation path for effectively implementing IOC in an organization designed?

THEORETICAL BACKGROUND

Intraorganizational Online Collaboration

Various terms for IOC exist (e.g., virtual collaboration, e-collaboration, smart collaboration), which are not consistently used in the literature and are therefore partly used synonymously or differently (Chi et al., 2016; Godin et al., 2017; Reeb, Clauss, et al., 2021; Rosenzweig, 2009; Ubell, 2011). All represent collaborative processes utilizing electronic media in business or education. This paper's underlying understanding is presented below, and a definition is provided to delimit IOC and the research domain.

Schrage (1990) defines collaboration as a "process of shared creation: two or more individuals with complementary skills interacting to create a shared understanding that none had previously processed or could have come to on their own. Collaboration creates a shared meaning about a process, a product, or event". To better understand what IOC is, it is beneficial to look at the dimensions of time and space (Johansen, 1991) and delineate what collaboration is not. Collaboration is repeatedly distinguished from cooperation relating to the interaction time (Dillenbourg, 1999; Haythornthwaite, 2006; Lee & Paine, 2015; Neumayr et al., 2018).

Cooperation refers to assigning tasks to participants, independently working on them, and creating a final product by aligning the individual parts (Holsapple & Joshi, 2000). On the other hand, collaboration is referred to as synchronous coordinated actions or interactions (Azab, 2013;