WHY ARE WE DOING THIS AGAIN? TOWARDS UNCOVERING THE OUTCOME PERSPECTIVE OF ENTERPRISE SOCIAL SOFTWARE USE

Sven Dittes  
*University of Hagen, Germany, sven.dittes@fernuni-hagen.de*

Stefan Smolnik  
*University of Hagen, Germany, stefan.smolnik@fernuni-hagen.de*

Follow this and additional works at: [http://aisel.aisnet.org/ecis2017_rip](http://aisel.aisnet.org/ecis2017_rip)
WHY ARE WE DOING THIS AGAIN? TOWARDS UNCOVERING THE OUTCOME PERSPECTIVE OF ENTERPRISE SOCIAL SOFTWARE USE

Research in Progress

Dittes, Sven, University of Hagen, Hagen, Germany, sven.dittes@fernuni-hagen.de
Smolnik, Stefan, University of Hagen, Hagen, Germany, stefan.smolnik@fernuni-hagen.de

Abstract

Growing numbers of companies are implementing enterprise social software (ESS) in its various forms. The adoption and use of those information systems (IS), such as wikis, weblogs, social networking sites, or platforms that combine and integrate various of those IS, is said to have various kinds of impact on organizations. Such impacts include increased productivity or improved innovation levels.

In our study, we aim to provide a more holistic overview of the various outcomes of ESS use. In doing this, we conduct a literature review to collect a list of ESS use outcomes, and apply coding techniques to categorize and order these outcomes. Our study contributes to both theory and practice: Our understanding of the outcome perspective of ESS use is advanced, thus answering various calls for research, and management of the value creation process becomes more transparent and more feasible due to the introduction of ESS.

Keywords: Enterprise Social Software, Enterprise Social Media, Outcomes, Literature Review.

1 Introduction

Currently companies are increasingly investing in enterprise social software (ESS) and its implementation (Chui et al., 2012; Ellison et al., 2014; Holzblatt et al., 2013; Keitt et al., 2010; Leonardi, 2014). The adoption of such information systems (IS) is said to have a positive impact on organizations by, for example, increasing productivity (Steinhüser et al., 2011) or improving innovativeness (Gray et al., 2011). However, many companies struggle to realize those benefits (Alarifi & Sedera, 2014), which raises the question of how exactly the introduction of ESS adds value to firms (Aral et al., 2013). The concept of ESS success (e.g. Herzog et al., 2013; Steinhüser et al., 2011) was introduced as a contribution to answering this question. However, it has become clear that the impact of ESS use on the business benefits is difficult to prove (Herzog et al., 2015) and therefore, most companies focus on the analysis of the level of ESS use rather than added value, in order to indicate success (Malsbender et al., 2013). Building on this, research on ESS success measurement has conceptualized ESS success as a list of different (categorized) benefits (e.g. Steinhüser et al., 2011). Such conceptualizations, however, show only what is affected by the implementation of ESS, but not how the ESS use influences business value nor how the different benefits are related. Therefore, in this paper we aim at opening this black box of the outcome perspective on ESS use.
Investigating the relationship between the various benefits of using ESS, we came across quantitative studies explaining the causal relationships between particular benefits such as the improvement of networking capabilities that lead to better employee job performance (e.g. Ali-Hassan et al., 2015). Additionally, we came across qualitative studies narratively explaining how and which benefits were achieved; this, however, was only observed in one particular case (e.g. Holtzblatt et al., 2013). Hence, a holistic overview of the outcomes of ESS use and the corresponding relationships is still missing. Therefore, we have formulated the following research question for our work-in-progress:

**What are the potential outcomes of ESS use and how are they related to one another?**

In order to answer this research question, we conducted a literature review collecting all mentioned outcomes of ESS use. Based on this collection, we applied coding techniques put forward by Corbin and Strauss (1990) to categorize and order the list of outcomes. In doing so, we contribute to theory by advancing our understanding of the outcome perspective of ESS use. In the process, we also answer various calls for research into this perspective (e.g. Aral et al., 2013; Viol & Hess, 2016). Further, based on our findings, we develop research questions that can serve as a guide for future research endeavors. Additionally, we contribute to practice by making the value creation process due to the introduction of ESS more transparent and thus more manageable.

### 2 Background

The term “enterprise social software” (also referred to as “enterprise social media”) refers to the application of web-based IS that provide functionalities to support and foster social interaction among employees in terms of communication, collaboration and sharing in an organizational setting (Razmerita et al., 2016). Various types of ESS tools such as wikis, weblogs and enterprise social networking sites have been developed and, over time, they have been bundled and integrated into extensive ESS platforms (Kügler et al., 2015). Thus, looking at the scope of our literature review, we draw on Leonardi et al. (2013, p. 2) who state that “it makes less sense to distinguish between tools such as social networking, microblogging, and social tagging, and more sense to treat these individual tools as part of an integrated enterprise social media platform”. We follow these authors in defining ESS more abstractly as “web-based platforms that allow workers to (1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing” (Leonardi et al., 2013, p. 2). In summary, the scope of our work covers the organizational application and use of any type of ESS as an internal tool for social interaction and thus, our literature review excludes publications dealing with the application of various public social media platforms such as Facebook and Twitter, e.g., for the purpose of e-commerce (e.g. Liang & Turban, 2011) or employer branding (e.g. Wolf et al., 2015).

During the last few years, ESS has been an important theme within IS research and thus has been part of several studies applying various research methods (Wehner et al., 2017). A current review of ESS literature shows that a large section of research on ESS focuses more on the antecedent and use perspective, such as implementation, use and adoption of ESS, and much less on the outcome perspective, such as researching the impact on organizations and success measurement possibilities (Viol & Hess, 2016).

Research on ESS success provides us with a good understanding of possible changes within an organization due to ESS. For example, Steinhäuser et al. (2011) list various impacts of ESS by categorizing them into different dimensions. Doing this, they distinguish i.a. between impacts on the individual (employee) level and on the organizational level. Additionally, in their case study Holtzblatt et al. (2013) introduce a gradual value creation in two stages by evaluating the benefits of ESS. Further, Raeth and Smolnik (2010) differentiate between individual, community and organizational benefits as
result of corporate weblog use. Drawing on this, in our literature review we apply the idea of different levels and stages in analyzing and categorizing the collected outcomes.

3 Research Process and Method

Our study is based on a comprehensive literature review undertaken to collect the mentioned outcomes of ESS use. In doing this, we followed the recommendations of Webster and Watson (2002): First, we conducted our search in the leading IS journals. We therefore selected the eight journals of the Senior Scholars’ Basket of Journals as these represent the IS discipline’s top journals and include the major contributions to this research field. Second, we included the three leading IS conferences’ proceedings (ICIS, ECIS and HICSS) in our search. Within these sources, we searched in the titles and abstracts for publications using any combination of the search terms enterprise, organizational or corporate and the terms social media, social software, social network(s/ing), wiki(s), (we)blog(s/ing) or microblog(s/ing). Additionally, we also included the term enterprise 2.0 in our search query. We chose those keywords based on Kügler et al. (2015) who described both the various types of ESS and the potential synonyms. The respective search resulted in a total list of 104 publications. In the further selection process, we eliminated 34 publications since they either mainly focused on the antecedent and use perspective (e.g. Kügler et al., 2012; Wattal et al., 2009) and thus, did not mention any outcomes of ESS use, or dealt with, e.g., the application of public social media such as Facebook or Twitter for marketing purposes (e.g. Kruse & Baumöl, 2016; Wolf et al., 2015) and thus, did not fit our definition of ESS. Eventually, after removing irrelevant studies, we ended with a final sample of 70 publications (the papers are highlighted in the reference list).

We then analyzed those 70 publications by first extracting the outcomes. To be as comprehensive as possible, we extracted all outcomes that were mentioned anywhere in those publications. Based on the resulting list of various outcomes, we applied coding techniques from qualitative research in order to make sense of the various outcomes (Corbin & Strauss, 1990). In a first step of our analysis, we collected and merged outcomes that were synonyms leading to a sample of 92 (more or less) distinctive outcomes. In a second step of the analysis, two researchers categorized the outcomes in a joint workshop and as a result, we merged the outcomes into 20 different categories. In a last step of our analysis, we introduced the idea of different levels and stages (see background section) into our analysis: We arranged the 20 remaining categories based on a time frame. Here, two researchers evaluated the expected emergence of the corresponding outcomes of the 20 categories based on both experience and literature. This process delivered a model which includes four stages at three different levels of analysis.

4 Uncovering the Outcome Perspective of ESS Use

In developing the outcome perspective of ESS use, our analysis has shown that ESS use could have an impact on three different levels within an organization. First, the introduction and use of ESS can change processes and how particular things are done within an organization. We propose that this kind of change is carried out in two successive stages, namely direct changes to prevailing organizational processes due to the range of functions the ESS provides, and then indirect changes that emerge from the foregoing process changes. Second, ESS use has an impact on the employees in terms of their perceptions, behavior and task completion. Third, ESS creates and changes values on an organizational level in tangible and intangible terms. Figure 1 shows the model we developed.
As described in our definition, ESS provides new functions to the organization and their employees. Based on uniquely identifiable profiles (Ellison & Boyd, 2013) ESS enables employees to exchange and broadcast messages, to indicate their connections with coworkers, to post, edit, and sort text and files and to search for any information in the IS (Leonardi et al., 2013).

Based on these new functions, we state that ESS use has an impact on the process of communication performance within an organization. This outcome is extensively described in the literature where ESS use is mentioned as a measure to change, support and improve communication (e.g. Aral et al., 2013; Koch et al., 2012; Koch et al., 2013; Riemer et al., 2011; Silic et al., 2015).

Further, these new functions change the process of collaboration (Aral et al., 2013; Dyrby et al., 2014) within an organization since they provide new ways of collaboration (Bala et al., 2015) and thus, foster and improve collaboration (e.g. Pahlke, 2012; Ransbotham & Kane, 2011; Silic et al., 2015). ESS achieves this by enhancing the collaboration intensity (Herzog et al., 2015) and facilitating mass collaboration (Koch et al., 2013).

The coordination processes within an organization are also influenced by the ESS functions. Hereby the organization of meetings and the management of teams becomes easier since ESS improves both time and task coordination (Richter & Riemer, 2013; Riemer et al., 2011).
ESS use is also said to influence the process of information and file exchange within the organization. Literature states that due to the new functions provided by an ESS the information exchange is fostered, more so than before (e.g. Beck et al., 2014; Behrendt et al., 2015; Seebach, 2012). Furthermore, our literature review shows the potential of improving the effectiveness of information exchange within an organization (Risius, 2014).

4.2 Process Level Outcomes Indirectly Influenced by ESS Use

Building on the changes of the four processes that are directly influenced by using the ESS functions, we introduced a category of indirectly influenced outcomes on the process level. These outcomes are also characterized as organizational processes impacted by the ESS use. However, they are not directly a product of the new ESS functionalities but occur as a result of the corresponding changes in communication, collaboration, coordination, and information and file exchange.

First, network building can be seen as one of the indirectly influenced outcomes, since ESS use improves networking capabilities (Boughzala, 2014) by enabling professional interaction and relationship building (Steinhüser et al., 2011). As a result, the network can be strengthened (Bala et al., 2015) and extended (e.g. Kim & Kane, 2015; Van Osch & Steinfield, 2013; Van Osch et al., 2015).

Second, we also find decision making to be an indirectly influenced outcome. Here, Elragal and El-Telbany (2012) introduce the term “decision 2.0” to articulate the transformation towards a more collaborative process when making decisions. The literature also states that ESS use might lead to an improvement in decision making (Kügler & Smolnik, 2013) by enhancing the effectiveness of this process (Steinhüser et al., 2011).

Third, we also find evidence of changes in the organizational knowledge management in terms of capturing, creating and disseminating knowledge. By creating a central information space (Herzog & Richter, 2016), ESS can change the way knowledge is captured and stored within the organization. Pfaff and Hasan (2007) add to this in mentioning tacit knowledge creation as a positive outcome of ESS. Additionally to creating knowledge, literature also states knowledge transfer and dissemination as an outcome (Boughzala, 2014; Geng et al., 2014).

Fourth, we found transparency creation as being an indirectly influenced outcome. Previous studies found that using ESS enhances the transparency of interactions of and within the organization by making the communication and knowledge more transparent (Beck et al., 2014; Leonardi, 2014; Silic et al., 2015).

4.3 Employee Level Outcomes Influenced by ESS Use

According to the literature changing business processes can also impact a person’s perceptions in the workplace (Grover et al., 1998). Therefore, we propose in our model that the process-level outcomes can have an impact on the employee’s perceptions, behavior and task completion. Thus, we introduce the category of employee level outcomes in our model (see Figure 1).

Sharing behavior can be seen as one of the employee level outcomes. Here, we found literature confirming that the implementation of ESS within an organization has the potential to foster knowledge sharing behavior (e.g. Harden, 2012; Herzog & Richter, 2016).

Additionally, we also identified learning and knowledge usage as an employee level outcome. This outcome category is based on Steinhüser et al. (2011) who state learning as an impact of ESS on the individual level. Further, Lu et al. (2011) and Pfaff and Hasan (2007) also state learning as an important outcome of ESS. Based on learning as an outcome, Majchrzak et al. (2013) refer to the application of the learned knowledge in practice and thus, state knowledge (re)use as another potential outcome on the employee level.
An additional employee level outcome category can be defined as social capital and connectedness. According to Silic et al. (2015) implementing ESS within an organization can lead to employees being better connected. This outcome was also picked up by Kügler et al. (2015) who conceptualize an employee’s social connectedness as a potential outcome of ESS use. They define social connectedness as an employee’s feeling of being in touch with colleagues and having a network within the organization. Social capital is related to the concept of social connectedness. Here, social capital can be understood as the perceived value of a person’s relationships and social network as part of achieving particular goals (Adler & Kwon, 2002). Referring this to the implementation and use of ESS, many studies investigated and have proven the impact of ESS on social capital (e.g. Ali-Hassan et al., 2015; Pahlke, 2012; Riemer et al., 2015; Risius, 2014).

Our literature analysis also gave evidence that ESS use impacts an employee’s job performance positively. Many studies conceptualized and confirmed improved performance at work as an ESS outcome in applying quantitative as well as qualitative research methods (e.g. Ali-Hassan et al., 2015; Bala et al., 2015; Kügler et al., 2015; Lu et al., 2015; Pfaff & Hasan, 2007; Steinhüser et al., 2011).

Innovativeness is also a highly studied outcome of ESS on the employee level. Here research confirmed that ESS use fosters employee innovativeness in a positive way (e.g. Gray et al., 2011; Kügler & Smolnik, 2013).

ESS use is further reported to have an impact on the employee’s awareness within the organization. Employee awareness in this sense is made up of three facets: Situation awareness, which refers to an employee's knowledge of what is going on within the organization (e.g. Seebach et al., 2011); people sense making, which refers to an employee’s knowledge of his or her coworkers (Dimicco et al., 2009; Leonardi, 2015); and role clarity, which refers to an employee’s understanding of his own responsibilities and standing within the organization (Gonzalez et al., 2015).

The last employee level outcome category that we found in our literature analysis can be described as an employee’s satisfaction level within the organization. Hereby we discovered different components that we bundled together in the satisfaction category. Gonzalez et al. (2015) stated both an employee’s sense of belonging and self-efficacy as outcomes of ESS use. Further, Koch et al. (2012) mention employee’s citizenship behavior as well as job satisfaction in the context of ESS. Additionally, in a case study Silic et al. (2015) observe a positive impact on an employee's work-life balance based on more staff flexibility (Richter et al., 2016).

4.4 Organizational Level Outcomes Influenced by ESS Use

Finally, we introduce outcomes at the organizational level in our model (see Figure 1). In the following paragraph, we describe the outcomes that, according to literature, add value to the organization. We propose the organizational level outcomes as being brought about by increasing numbers of employees who are able to experience and leverage the employee level outcomes.

Previous studies have shown that ESS has the potential to enhance the productivity of an organization (Elragal & El-Telbany, 2012). Further, Herzog et al. (2015) mention the impact ESS has on the business value due to improved productivity. Additionally, Steinhüser et al. (2011) conceptualize overall productivity as an organizational impact of ESS. Finally, Suh and Bock (2015) report on their investigation of the impact ESS has on the task performance of dispersed teams.

Another frequently mentioned outcome of ESS use on the organizational level is the improved innovative capacity of a company. Implementing ESS can advance innovation by building communities (Silic et al., 2015). Further, Malsbender et al. (2013) state similarly that ESS supports organizational innovation efforts.

Furthermore, we found evidence in the literature that ESS use leads to an increase in staff capacity. Boughzala (2014) reports higher employability and mobility due to the ESS use. Additionally, ESS
use enables an organization to build larger and more flexible teams (Silic et al., 2015). Furthermore, Boughzala (2014) and Gonzalez et al. (2015) show an improvement in orientation, onboarding and integration of (new) employees.

We additionally propose employer attractiveness and staff retention as outcomes on the organizational level. According to Koch et al. (2012), ESS use has the potential to increase employee engagement and as a result, to reduce the employee turnover.

Introducing ESS has also been shown to have the potential of dramatically changing the organizational culture (Koch et al., 2013) and altering the organization’s social fabric (Dyrby et al., 2014). Relying on this, we propose organizational culture as an essential outcome on the organizational level. For Koch et al. (2012) ESS use has the potential to improve morale within the organization. Additionally, Riemer et al. (2012) mention the emergence of shared norms in the context of ESS.

5 Discussion and Future Research Agenda

Considering the developed model, we find that the current studies on various outcomes of ESS use mostly focus on the positive aspects which, to us, suggests a lack of research on the negative outcomes of ESS use. Considering the literature, we find very few studies indicating that ESS potentially brings not only positive outcomes. So, for example, Leftheriotis and Giannakos (2014) indicate – also in their paper title – that ESS use might be a “waste of time”. Thus, we propose:

(1) Future research endeavors could focus on investigating also the negative outcomes of ESS use.

Our model proposes that there is a time dimension underlying the four stages. Thus, we imply that, for example, the outcomes on the organizational level cannot be leveraged without the employee level outcomes having been achieved first. In order to empirically prove this proposition, we suggest that the outcome perspective of ESS use needs to be researched longitudinally from the initial implementation until the organizational level outcomes become observable. This proposition is in accordance with various calls for research in the IS community for more longitudinal studies (e.g. Pinsonneault & Kraemer, 1993). Based on this assessment, we propose:

(2) Future research endeavors could investigate the relationships between the various outcomes of ESS use over time by conducting longitudinal studies.

Our model shows a successive relationship across the four stages, meaning that the direct process level outcomes influence the indirect process level outcomes, and the indirect process level outcomes have a knock-on effect on the employee level outcomes. However, our current model proposes such relationships between stages only in an abstract way. Referring to this, we posit that future studies can build on our idea by researching the relationships between the various stages in more detail, for example, by conducting multilevel studies. Returning to the literature, we already find the first conceptual ideas for researching such relationships: Raeth et al. (2012), for example, conceptually develop a multilevel model, stating that an employee’s individual performance that is impacted by the use of ESS also leads to a higher team performance. Thus, we state:

(3) Future research endeavors could investigate the relationships between the outcomes of ESS use in various stages by conducting multilevel studies in order to explain how the levels merge with each other.

The literature here shows that the classification into stages might be done even more intricately. For example, Kügler et al. (2015) prove that, due to ESS, an employee’s individual performance is also affected by the feeling of social connectedness to co-workers. Similarly, Kwahk and Park (2016) show that ESS knowledge sharing behavior between employees influences the employees’ individual performance. Therefore, we posit:

(4) Future research endeavors could investigate whether there are relationships between categories within a particular stage refining our initial model on a more refined level.
Tackling these future research endeavors could lead not only to a better theoretical understanding of the outcome perspective of ESS use but could also have important practical implications. By going “the other way around” and interpreting our model reversely, companies wanting, for example, to improve their innovative potential, can trace this organizational level outcome back to the categories in the former stages. Knowing the related processes and ESS functionalities could enable them to better leverage the intended goal.

6 Summary and Next Steps

The aim of this research-in-progress paper is to shed light on the outcome perspective of ESS use by providing a more holistic overview of the potential outcomes of ESS use and their relationships. In doing this, we conducted a literature review to collect the various mentioned outcomes of ESS. For the purpose of analyzing and making sense of the collected outcomes, we applied coding techniques based on qualitative research methods. Based on our analysis, we developed a first model which includes 20 different outcome categories of ESS use. Doing this, we proposed a successive development of various outcomes in four stages: Process level (direct), process level (indirect), employee level and organization level.

Summarizing, our research makes several contributions to both the theoretical and practical body of knowledge. First, we provide a deeper understanding of the outcome perspective of ESS use by proposing the successive influence of various outcomes over time in four stages. In doing this, organizations might be able to control and manage their ESS implementations. Additionally, our model can be used to assess the stage of ESS adoption within an organization.

Besides these first contributions, it is necessary next to confirm and extend our preliminary findings. Thus, we plan to develop our research further in the future: Since our literature review could be biased by our choice of keywords and the exclusive selection of domain-specific top IS journals and leading conferences, we plan to conduct a more comprehensive literature search including major academic databases in order to improve the significance of our results. Alternatively, an extensive backward forward search, as recommended by Webster and Watson (2002), could also be a valid path for us to make sure we identify all the different outcomes of ESS use and, thus, make our results more generalizable. Additionally, subjective interpretations and preferences could have influenced the paper selection, extraction of outcomes, and analysis. The possibility further exists that other researchers would have selected papers as relevant which we did not and would have coded the extracted outcomes differently. Based on those limitations, we plan to conduct an interview study with both experienced researchers within the field of ESS research and practitioners that were responsible for implementing an ESS in the past in order to validate our results.
References


