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Information and Communication Technologies – Creating Oneness in Globally Distributed IT Project Teams

Olga Stawnicza *

European University Viadrina, Grosse Scharrnstr. 59, 15230 Frankfurt (Oder), Germany

Abstract

Information and communication technologies (ICT) are indispensable to globally distributed projects. ICT enables communication among geographically dispersed project teams and positively impacts project team efficiency. Furthermore, information and communications media help to create and maintain trust within geographically distributed units. These factors are particularly significant for creating a bond between project team members and establishing a sense of team unity. Since communications tools and methods develop at a fast pace, the author attempts to investigate the current trend toward ICT in modern global IT projects and their impact on creating this feeling of oneness in geographically distributed projects. The contribution of this research to the field is twofold. First, it fills the gap in prior literature on the impact of ICT on the performance of globally distributed project teams and their unity. Secondly, it increases project practitioners' awareness of the importance of striving for oneness in spite of the geographical distance that exists between project team members.

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* Corresponding author. Tel.: +49-335-5534-2304; fax: +49-335-5534-2321.
E-mail address: stawnicza@europa-uni.de

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1. Introduction

Globally distributed information technology (IT) projects have become common practice within today's organizations mainly due to outsourcing, globalization, and the ever increasing internationalization of companies. Moreover, the rapid development of information and communication technologies (ICT) has impacted the increasing use of dispersed project teams.

Communication and trust are essential to every type of business setting but they undeniably play a dominant role in virtual organizations, and for this reason also in globally distributed IT projects [1]. Regular face-to-face communication among team members of collocated projects supports the building of trust and the sense of "teamness" [2]. Since face-to-face communication is not always applicable to globally distributed IT projects, information and communication technologies play a major role in communicating and creating trust within global project teams. Though companies extensively use ICT to enable and support communication in distributed project teams, communication is still often recognized as one of the biggest challenges encountered in globally distributed projects [3]. Another challenge, strictly related to communication, is creating a bond among geographically dispersed project team members. Project team members located at different sites are less likely to perceive themselves as part of the same team than members of a collocated project team [4]. As globally distributed projects strongly rely on communication media [5], it is important to ensure that project team members are able to use the available means effectively.

Since communication in globally distributed IT projects is still recognized as particularly challenging, it requires further in-depth analysis. The goal of this research is twofold. First, the author attempts to identify new trends toward ICT use in globally distributed IT projects. Second, the author aims to fill the gap in prior literature by analyzing how ICT can be used for developing this sense of teamness within globally dispersed project teams. In light of the increasing importance of globally distributed project teams, this study contributes to the research on global project team unity.

The paper begins by initially presenting a theoretical background related to the study. Subsequently, the research method implemented in this study is justified, followed by the preliminary results of the research. The author concludes by evaluating the limitations of the current study as well as offering an outlook on the future research.

2. Theoretical Background

According to Binder (2007), global projects involve people distributed across various countries and organizations [6]. Likewise, DeSanctis and Monge (1999) defined a virtual organization as "a collection of geographically distributed, functionally and/or culturally diverse entities that are linked by electronic forms of communication and rely on lateral, dynamic relationships for coordination" [1]. Available evidence indicates that while an IT project can be global – although it is conducted within a single organization – it cannot function without sufficient ICT involvement (e.g. a software development project at Motorola, which involved engineers from Motorola's software development centers in six different countries [7]).

The communication problems that global projects often face tend to be a result of missing informal communication, which is a constant struggle for internationally distributed teams [8]. Past evidence indicates that communication in global software development (GSD) is less frequent [4] and less effective [9] than in classical, collocated project teams. Thus, the ICT must strive to strengthen the effectiveness and efficiency of communication practices between geographically distributed team members. Furthermore, communication media should enable rapid information exchange and promote regular communication. Previous research results indicate that ICT reduce the negative effects of intercultural communication and support the positive aspects of decision making in global virtual teams [10].

Another reason for communication problems in globally dispersed projects is a strong dependence of project team members on technology [5]. An unforeseen technical problem, such as a sudden power outage at one location, can lead to temporary communication breakdown. This, in turn, can result in increased anxiety felt by team members at the other site. Furthermore, a high information load due to excessive use of e-mails can lead to delays as well as increasing the risk of overseeing important information [11, 12]. In addition, slow or delayed feedback due to communication media has negative impact on global project team performance. When using asynchronous communication tools, such as e-mail, discussion boards, shared documents, web logs, etc. for solving urgent issues, the lack of immediate response can delay the decision making process. Delayed response is perceived as an obstacle

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