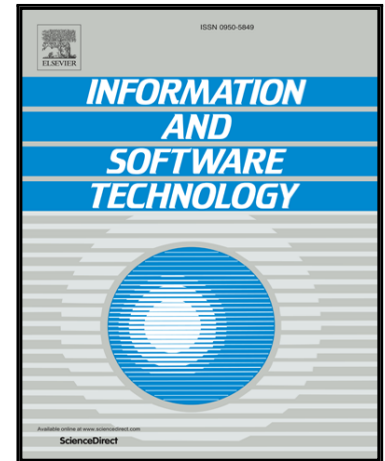


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Why Does Site Visit Matter in Global Software Development: A Knowledge-Based Perspective

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Abstract

Context: Face-to-Face (F2F) interaction is a strong means to foster social relationships and effective knowledge sharing within a team. However, communication in Global Software Development (GSD) teams is usually restricted to computer-mediated conversation that is perceived to be less effective and interpersonal. Temporary collocation of dispersed members of a software development team is a well-known practice in GSD. Despite broad realization of the benefits of visits, there is lack of empirical evidence that explores how temporary F2F interactions are organized in practice and how they can impact knowledge sharing between sites.

Objective: This study aimed at empirically investigating activities that take place during temporary collocation of dispersed members and analyzing the outcomes of the visit for supporting and improving knowledge sharing.

Method: We report a longitudinal case study of a GSD team distributed between Denmark and Pakistan. We have explored a particular visit organized for a group of offshore team members visiting onshore site for two weeks. Our findings are based on a systematic and rigorous analysis of the calendar entries of the visitors during the studied visit, several observations of a selected set of the team members' activities during the visit and 13 semi-structured interviews.

Results: Looking through the lens of knowledge-based theory of the firm, we have found that social and professional activities organized during the visit, facilitated knowledge sharing between team members from both sites. The findings are expected to contribute to building a common knowledge and understanding about the role and usefulness of the site visits for supporting and improving knowledge sharing in GSD teams by establishing and sustaining social and professional ties.

Keywords: Global Software Development (GSD), Knowledge Sharing, Knowledge Management, Face-to-Face interaction, Empirical, Case study

1 Introduction

Nowadays, globally distributed software development teams have become a norm, a paradigm that is known as Global Software Development (GSD). Geographically distributed nature of GSD lacks sufficient opportunities of frequent interactions among a team's members. Frequent and intense interactions are necessary for acquiring, sharing and applying technical and domain knowledge for software development that is inherently a knowledge intensive undertaking. That means GSD usually inhibits knowledge sharing among software development team members [1, 2]. Nor can GSD team members share implicit knowledge around coffee machines or during breaks. GSD usually reduces the frequency and speed of communication [3] and eliminates the shared context [4]. Additionally, GSD teams are also challenged by linguistic gap and cultural differences, which can lead to miscommunication. Hence, GSD projects are expected to have appropriate strategies to compensate the negative impact of distance and support knowledge sharing needs of dispersed teams.

Temporary collocation of dispersed software development team members is considered a common practice of establishing and growing social ties and collaborations [5, 6] that help support knowledge sharing about technical and social aspects of software development projects. Site visits are organized with diverse durations and involves employees at different levels of organizational hierarchy depending upon the needs and priorities. Given the cost of organizing site visits, it is important for managers to clearly understand the objectives to be achieved and the expected Return on Investment (ROI). It is equally important to have a well designed and organized set of social and professional activities to maximize the social and monetary ROI [5]. There is an apparent lack of empirically founded knowledge and understanding about how to plan social and professional activities for site visits in GSD and their potential impact on building and growing social ties that can be leveraged for supporting knowledge sharing in GSD [5]. We decided to carry out a case study to empirically explore the key activities organized during temporary collocation of GSD teams as a strategy to build and leverage mechanisms for knowledge sharing between sites.

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