Toward successful project management in global software development

Mahmood Niazi a,b, Sajjad Mahmood a, Mohammad Alshayeb a,*, Abdul Majid Qureshi a, Kanaan Faisal a, Narciso Cerpa c

a Department of Information and Computer Science, King Fahd University of Petroleum and Minerals, Saudi Arabia
b Faculty of Computing, Riphah International University, Islamabad, Pakistan
c Faculty of Engineering, Universidad de Talca, Chile

Received 18 February 2016; received in revised form 9 June 2016; accepted 18 August 2016

Abstract

Project management in the context of global software development (GSD) is challenging due to a number of issues. This paper has a two-fold objective: (1) to identify the factors from the literature related to the successful project management in GSD and to validate the identified factors in the real-world practice; (2) to map the identified factors to 10 project management knowledge areas of PMBOK. Our results show a positive correlation between the ranks obtained from the literature and the survey. The results of t-test (i.e., \( t = 1.979, p = 0.061 > 0.05 \)) show that there is no significant difference between the findings of the literature and survey. Our mapping shows that most of the success factors are related to human resource knowledge area. It is anticipated that the identified success factors can be helpful to practitioners for developing strategic implementation of project management activities in GSD environment.

Keywords: Global software development; Project management; Systematic literature review; Empirical study; Knowledge areas

* Corresponding author.
E-mail addresses: mkniazi@kfupm.edu.sa (M. Niazi), smahmood@kfupm.edu.sa (S. Mahmood), alshayeb@kfupm.edu.sa (M. Alshayeb), g201105290@kfupm.edu.sa (A.M. Qureshi), kanaani@kfupm.edu.sa (K. Faisal), ncerpa@utalca.cl (N. Cerpa).