

*Full Length Research Paper*

# Culture dimensions in software development industry: The effects of mentoring

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Software development is a human centric and sociotechnical activity and like all human activities is influenced by cultural factors. However, software engineering is being further affected because of the globalization in software development. As a result, cultural diversity is influencing software development and its outcomes. The software engineering industry, a very intensive industry regarding human capital, is facing a new era in which software development personnel must adapt to multicultural work environments. Today, many organizations present a multicultural workforce which needs to be managed. This paper analyzes the influence of culture on mentoring relationships within the software engineering industry. Two interesting findings can be concluded from our study: (1) cultural differences affect both formal and informal mentoring, and (2) technical competences are not improved when implementing mentoring relationships.

**Key words:** Software development teams, human factors, cultural issues, mentoring.

## INTRODUCTION

Globalization is an unstoppable trend in almost all industries. In this new millennium, due to the advent of this phenomenon, the world is becoming increasingly interconnected (Jackson, 2008). Globalization is a business fact, expanded worldwide beyond domestic boundaries, that is, creating an interconnected world economy in which companies do their business and compete with each other anywhere in the world, regardless of national boundaries (Cullen, 1999). In fact, the world today is experiencing an unprecedented intensification of economic, cultural, political, and social interconnectedness (Jackson, 2008).

Globalization presents an important challenge for cultural differences and diversity (Kim, 2008). Although the common wisdom among economists is that the benefits from globalization are clear and significant,

increasing international trade and bringing improvements in efficiency and access to goods and services (Olivier et al., 2008).

Information and communication technology (ICT) is playing a major role in the globalization phenomenon. ICT offers several important contributions: it enables managerial control over vast global supply chains, ICT itself is a product and service that can readily be offered to global markets, it is a trade platform, which joins suppliers and customers and eliminates barriers for information sharing and networking (Leidner, 2010). Apart from that, ICT has been fundamental for improving productivity and the development of knowledge-intensive products and services (Soto-Acosta et al., 2010). The instrument that is enabling such transformation is the Internet (Chuang and Hsu, 2010).

Globalization is not only affecting traditional industries but also the ICT industry. This industry is becoming more global both in ownership and in market scope (Aramo-Immonen et al., 2011). Within the ICT industry,

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