# How socialization tactics affect supplier-buyer co-development performance in exploratory and exploitative projects: The mediating effects of cooperation and collaboration☆

Lan Xu [a], Nan Cui [a,*], William Qualls [b], Lei Zhang [a]

[a] *Department of Marketing, Wuhan University, Wuhan 430072, China*
[b] *Department of Business Administration, University of Illinois at Urbana-Champaign, Champaign, IL 61820, USA*

## ABSTRACT

Drawing on prominent theories of innovation and interorganzational relationship paradigms, this research identifies exploration-exploitation, one of the innovation characteristics of co-development projects, as a boundary condition for the effects of formal and informal socialization tactics on co-development performance. The results suggest that formal socialization tactics enhance co-development performance in exploitative innovation projects, while informal socialization tactics facilitate co-development performance in exploratory innovation projects. Moreover, the research firstly introduces cooperation and collaboration to interpret the mediating mechanisms underlying the relationships above. The findings indicate that cooperation mediates the effect of formal socialization tactics on co-development performance of exploitative projects, whereas the influence of informal socialization tactics on co-development performance of exploratory projects is mediated by collaboration. Based on the results, this research provides practical guidelines for managers who are considering how to employ appropriate socialization tactics to facilitate performance in a setting of co-development.

© 2017 Elsevier Inc. All rights reserved.

## 1. Introduction

Supplier-buyer co-development is becoming common across a spectrum of industries ranging from semiconductor to software (e.g., Mowery et al., 1996; Appleyard, 2003) and has been found to facilitate learning, improve speed to market, and reduce risks of technological uncertainties (Cui, Wen, Xu, & Qin, 2013).

In co-development projects, formal socialization tactics, such as structured rules and routines, and informal socialization tactics, such as personal relationship building and group social events, are usually employed to enable newcomers from the partner firm to acquire social knowledge and expected behaviors that are essential for participating as project members (Cousins, Handfield, Lawson, & Petersen, 2006; Jansen, Van Den Bosch, & Volberda, 2005).

Whereas prior research has noted that socialization helps to ensure coordination and improve innovation performance (e.g., Jansen et al., 2005), existing literature has produced mixed results for the roles of socialization tactics in organizational learning (e.g., Ashforth & Saks, 1996;

Cousins et al., 2006; Gupta, Smith, & Shalley, 2006). Specifically, although research has established the effects of both formal and informal socialization tactics on the outcomes of learning (e.g., Ashforth & Saks, 1996; Gupta & Govindarajan, 2000), some studies related to interorganizational co-development (e.g., Cousins et al., 2006; Lawson, Petersen, Cousins, & Handfield, 2009) did not find significant effects of formal socialization tactics on co-development performance. These studies argued that formal socialization may not function well unless interorganizational members have established goals, resources, or longer term objectives.

However, the empirical investigation of these studies forms the context in the general long-term buyer-supplier relationship instead of specific co-development projects, which may hinder our deeper understanding of the roles of different socialization tactics. First, it is more pertinent to address established goals and committed resources within the framework of a specific co-development project rather than in a general buyer-supplier relationship, so that we may observe the positive effect of formal socialization on co-development performance. Second, supplier partners in a long-term buyer-supplier relationship cannot be considered as newcomers on whom socialization tactics usually exert their influence. In contrast, co-development team members can, however, be treated as newcomers because co-development projects differ from each other with regard to specific goals to be achieved and resources required.

Furthermore, prior research has suggested that the influence of different types of socialization tactics may vary with different contexts (e.g., Ashforth & Saks, 1996; Lynskey, 1999). Along these same lines, formal and informal socialization tactics may have different effects on co-development performance conditioned on certain important characteristics of the co-development project. In addition, different mediators were proposed to explain the effect of informal socialization tactics in similar research contexts (i.e., Cousins et al., 2006; Lawson et al., 2009), which indicates the complexity of the mechanisms through which socialization tactics exert their effects on co-development performance. This has spurred us to analyze and disentangle the mechanisms underlying the effects of socialization tactics.

In light of these gaps, this study contributes to extant literature by examining the contingent role of one of the innovation characteristics of the co-development projects (i.e., exploration versus exploitation) with regard to the effects of formal and informal socialization tactics and doing so, firstly, by introducing two types of interactive relationships, namely, cooperation and collaboration, in order to interpret the mediating mechanisms underlying the relationships between socialization tactics and co-development outcome.

The exploration-exploitation distinction has been well-documented as one of the most important characteristics in innovation activities such as co-development (e.g., Jansen, Van Den Bosch Frans, & Volberda, 2006; March, 1991); whereas exploration-exploration distinguishes each co-development project in the domains of knowledge development and characteristics of the tasks. Considering different types of knowledge absorption and contexts of communication facilitated by formal socialization and informal socialization, this study argues that socialization tactics used in exploratory versus exploitative co-development projects need to be differentiated and employed accordingly.

The study also proposes that formal socialization tactics are more likely to reinforce cooperation, which focuses on labor division and knowledge specification, among co-development members, which, in turn, facilitates co-development performance in exploitative projects. In contrast, collaboration, which involves goal sharing and knowledge integration, is more likely to be nurtured by informal socialization tactics and thereby increases the co-development performance of exploratory projects.

In the next sections, the literature review and several hypotheses are first presented. Hypotheses are then tested on data collected from the project managers representing both sides of the supplier-buyer dyads and the top executives from 194 focal firms in high-tech industries. The results confirm our predictions. Finally, the findings are discussed, with implications and directions for future research.

## 2. Literature review and hypotheses

### 2.1. The roles of formal and informal socialization in organizational learning

Organizations can structure socialization contexts of newcomers through the use of formal and informal socialization tactics (Jones, 1983). Formal socialization refers to those processes by means of which individuals are provided with structured programs, procedures or training materials by their respective organizations, to aid them in adapting to new jobs and organizational roles (King & Sethi, 1998; Lawson et al., 2009). In contrast, informal socialization is a "laissez-faire" process in which individuals seek information about jobs and situations by developing personal ties (King & Sethi, 1998; Lawson et al., 2009). Personal influence and normative processes during informal socialization are not officially endorsed and are less controlled by the organization (Shaw & Grubbs, 1981).

Research has indicated that whether the socialization occurs in a formal or informal context may affect the outcomes of learning (Ashforth & Saks, 1996; Gupta & Govindarajan, 2000). Ashforth and Saks' (1996) empirical research showed that formal socialization tactics were positively related to job satisfaction and organizational identification at

both four months and ten months after the newcomers joined the organization. However, socialization in formal settings was also found to decrease attempted and actual role innovation at four months and restrict actual role innovation at ten months into the research project. The results support the arguments that formal socialization, on the one hand, helps to reduce some of the uncertainty inherent in work experiences, and, on the other hand, enhances employees' conformity to established procedures and goals as well as restrains changes in working mode or method (Jansen et al., 2006).

Comparing the functions of the formal and informal mentoring relationship, Ragins and Cotton (1999) found that trainees with informal mentors received more career development and psychological support and thus reported higher overall satisfaction with their mentors than trainees with formal mentors. However, Mujtaba and Sims (2006) found that an informal approach to ethical socialization was not as effective as a formal approach. Khan, Shenkar, and Lew (2015) found that informal socialization enhances comprehension of knowledge transfer from international joint venture assemblers to local suppliers, but does not facilitate the speed of knowledge transfer.

Gupta and Govindarajan (2000) observe that formal socialization facilitated knowledge flows between a subsidiary and its peer subsidiaries and between the subsidiary and its parent corporation. Although informal socialization was also proved to enhance knowledge flows between the subsidiary and the peer subsidiaries, the expected increase in knowledge outflow from the subsidiary to the parent corporation was not found in the case of informal socialization, which implies that although both formal and informal socialization contribute to knowledge flows between organizations, the underlying mechanisms of how socialization impacts the flow of information and knowledge may vary. In a case study of technology transfer, Lynskey (1999) noted that formal mechanisms such as training programs and documentation were useful for transferring explicit knowledge, whereas informal socialization such as practical hands-on experience and interaction were appropriate for acquiring the tacit knowledge which is experientially-based and highly personal.

However, in the context of supplier-buyer co-development, Cousins et al. (2006) failed to find the positive effect of formal socialization on co-development performance through relationship capital as they had predicted. Similarly, Lawson et al. (2009) also found that formal socialization did not induce knowledge sharing between firms that improved product design, product quality and process design, departing from their original predictions.

In summary, prior research on the influence of socialization within organizations indicates the roles of formal and informal socialization may depend on the context and the outcome of learning (e.g., Ashforth & Saks, 1996; Lynskey, 1999), while research in the interorganizational co-development context only confirms the role of informal socialization. These mixed results motivate us to reconcile the research gap in the co-development context. The failure to detect a positive effect of formal socialization in Cousins et al.'s (2006) and Lawson et al.'s (2009) research may lie in the recognition that: (1) the supplier-buyer relationship under investigation had at least lasted 2–3 years, so that the supplying partners could not be considered as newcomers to whom socialization tactics are usually applied; (2) these studies investigated the supplier-buyer relationship instead of specific co-development projects. Little research has been conducted to examine how co-development project innovation characteristics, within the framework of an exploration-exploitation model, influence the effects of formal and informal socialization tactics; and (3) ignoring the exploration-exploitation distinction, mechanisms identified by previous research, through which formal and informal socialization tactics exert their influence on co-development performance, may be inadequate.

To fill the gaps, this study identifies exploration-exploration as a boundary condition for two types of interactive relationship, namely cooperation and collaboration, as the mediating mechanisms to explain