Organizational Learning Orientation in the Assimilation of New Technology in Organizations

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Abstract

While assimilating new technologies, targeted organizational members ideally become increasingly more knowledgeable, skillful, and committed to the use of the new technology. Many organizations, however, experience difficulties in assimilating new technologies, as well as of other innovations in their work practices, products, and services. These difficulties do not reflect a deficiency in the technology itself, but rather a failure in the assimilation process, and resistance to change.

Traditional approaches to the study of technical competence focus on individual differences. These theories identify individual differences in technical skills and interests, and predict that employees with high rather than low technical abilities will successfully adapt to technological changes. Today, however, all organizations must confront with the so-called technology age head-on, even if their employees are not particularly skilled in new technologies. Therefore, it is important to identify an alternative approach for successful assimilation beside individual differences. Such an alternative explanation can be found in organizational culture theories. These theories suggest that shared values, norms and organizational practices shape the culture that assist organizations to adapt themselves to changes in general and to the assimilation of new technologies in particular. We propose that two values are of specific relevance for

the assimilation of new technology – learning orientation, and openness to adaptation of new technologies.

The purpose of this research was to examine the relationships between different dimensions of organizational cultures in different organizational units, and the successful assimilation of new technology by members of these units. For this purpose we conducted two studies. . The purpose of the first study was to differentiate between the cultural dimensions of organizational units that are characterized by intensive use of technology, versus those units characterized by lower levels of technology use. The organizational culture characteristics of four ground corps in the Israel Defense Forces (IDF) were examined by means of a questionnaire distributed to 315 officers in combat battalions who participated in the research. The questionnaire assessed the level of technology-oriented practices, and two types of organizational values: openness to adaptation of new technologies, and core organizational values, including group orientation and unit learning orientation. The findings demonstrated that as expected technology oriented practices were more highly implemented in the highly technology intensive units than in other units. Furthermore, the two types of units were similar with respect to the core organizational values, but they differed on the two values of learning orientation, and openness to new technologies. Unlike our expectations, the high technology intensive units were lower on this dimension than the other units. The question that was then raised for the second study was whether the technological environment that dominated one unit, versus the learning orientation that dominated the other unit would predict the successful assimilation of new technology.

The second study was a field experiment with 107 officers from two ground corps of high versus low intensive use of technology who participated in a training course for assimilating a new navigation system. The findings demonstrated that the assimilation of new technology was more successful by officers from the unit with learning orientation as compared to those coming from the high technology intensive unit. The findings suggest that a technological environment is not necessarily open for adoption of technological changes, and that the learning orientation plays a crucial role in the assimilation of new technology. The implications of this study will be further discussed.