



# Tacit knowledge acquisition and sharing in a project work context

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Received 14 September 2001; received in revised form 12 February 2002; accepted 28 May 2002

## Abstract

In this article we address the question of what kind of social engagements provide the proper project work context for tacit knowledge acquisition and sharing to take place. In pursuit of this objective two epistemological assumptions are presented, and the analytical tool for understanding the behaviour of project team members, the Holistic Concept of Man, is illustrated and discussed. Project as a context of tacit knowledge utilisation is discussed, and different factors and situations that affect acquisition and sharing of tacit knowledge in project work, are analysed. The results of the study suggest that the situations, where the members of a project team can interact face-to-face with each other, reinforces tacit knowledge sharing. Also used language, mutual trust and proximity are factors which affect the grade of tacit knowledge utilisation in project work.

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*Keywords:* Tacit knowledge; Interaction; Language; Trust; Proximity; Holistic Concept of Man

## 1. Introduction

Tacit knowledge represents knowledge based on the experience of individuals. It expresses itself in human actions in the form of evaluations, attitudes, points of view, commitments, motivation, etc. Usually it is difficult to express tacit knowledge directly in words, and often the only ways of presenting it are through metaphors, drawings and different methods of expression not requiring a formal use of language. On the practical level many experts are often unable to express clearly all they know and are able to do, and how they make their decisions and come to conclusions.

Polanyi [26] encapsulates the essence of tacit knowledge in the phrase “We know more than we can tell”, and provides further clarification of the concept in such commonplace examples as the ability to recognise faces, ride a bicycle or swim without even the slightest idea of

how these things are done. Rosenberg's ([29], p. 143) description of traditional technological knowledge, accumulated in crude empirical ways with no reliance upon science, provides a good definition of tacit knowledge in technology companies: “The knowledge of techniques, methods and designs that work in certain ways and with certain consequences, even when one cannot explain exactly why”. Thus, tacit knowledge equals practical know-how.

However, in project work context the significance of tacit knowledge has probably not yet been sufficiently understood. The fact that a great deal of the know-how required, for example, in an engineering project is tied to knowledge that is not written in documents but realised through the expertise and understanding of the project personnel, is not taken into consideration as a whole. Also the fact that projects often last only for short time periods, which means that project people must continuously change their work situations, is not taken well into account.

This study on tacit knowledge utilisation in projects explores the situated character of human understanding and interaction in a project work. It focuses on the relationship between tacit knowledge utilisation and social

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situations in which it occurs. The study asks what kind of social engagements provide the proper project context for tacit knowledge acquisition and sharing to take place.

In pursuit of this objective we first highlight project as a context of knowledge utilisation. Second, two epistemological assumptions are illustrated to get an insight into knowledge and its formation. Third, our analytical tool, the Holistic Concept of Man, will be introduced and discussed. And fourth, we analyse factors and situations in projects in which tacit knowledge acquisition and sharing take place.

**2. Project as a context of knowledge utilisation**

A project is an organisation of people dedicated to a specific purpose or objective. Projects generally involve large, expensive, unique, and high risk undertakings which have to be completed by a certain date, for a certain amount of money, within some expected level of performance. At a minimum, all projects need to have well defined objectives and sufficient resources to carry out all the required tasks. Project characteristics, that all together are needed, are of a temporary nature, with specified end-results, of a non-recurrent character, with complexity and significance.

When an individual performs a task, s/he needs a competence. The competence of an individual member of a project team can be divided into three sections [17]: (Fig. 1)

- *Explicit knowledge*, which is the type of knowledge that an individual has acquired mainly in school and university. Explicit knowledge implies factual statements about such matters as material properties, technical information, and tool characteristics. Thus, explicit knowledge can be expressed in words and numbers, and is therefore easily communicated and shared.

- *Tacit knowledge*, which is highly personal and hard to communicate or to share with others. Tacit knowledge is deeply rooted in an individual’s experience, and it consists of schemata, belief, and perceptions stored so deep in the worldview of an individual that we take them for granted.
- *Personal characteristics* such as stress toleration, which either enhance or decrease an individual’s ability to perform a task, and which are also a part of individual’s competence.

Thus, tacit knowledge is a part of an individual’s competence. However, it must be noticed that “...knowledge is about specific insights regarding a particular topic, competence is about the skill to carry out work” ([38], p. 106).

Although every project is unique and different, it is, however, possible to roughly classify projects into different categories in accordance with the need to use explicit and tacit knowledge in them:

- Research-, development-, and design projects are projects in which the goals of the projects are not always clear at the outset of the work. Also the means and procedures needed in the course of the project implementation are often unclear. This means that at the outset of the project the possibilities to foresee the future results and success of the project are rather poor. Thus, we can conclude that abundant use of tacit knowledge is often necessary in these types of projects.
- Delivery- and investment projects are projects in which the goals of the projects are often clear at the outset of the work. Also the means and methods needed in the implementation of the project are usually well known. This means that the possibilities to foresee the results of the project at the beginning of the project are good. Thus, we can conclude that the possibilities to use mainly explicit knowledge in these types of projects are good.

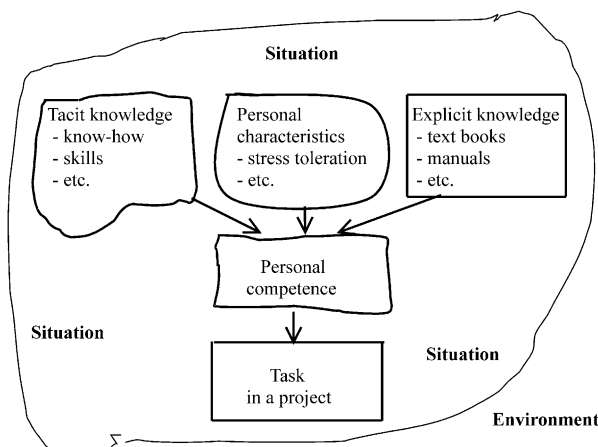


Fig. 1. Knowledge tree. (Adopted from the idea of Bohn [8]).

All of the knowledge needed by a project is visualised by Fig. 2. The trunk of the tree describes the project output. The branches from the trunk are the main activities that affect the outcome of the project. Branching off from each of these main activities are sub-activities, which together with the main activities collectively determine the outcome of the project. The shading of each activity represents the stage of knowledge. White colour (invisible) represents tacit knowledge, while black colour represents explicit

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