

Wiki as a part of Knowledge Management within an International Corporation

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ABSTRACT

This research project is dealing with the integration of wiki technology into knowledge management of an international company. Attention is mainly concentrated on individual factors of the user influenced by the situational context, both expecting to predict user acceptance. The empirical part builds a pilot wiki used for a corporate lexicon.

Categories and Subject Descriptors

J.4 [Computer Applications]: Social and behavioral sciences – Psychology

General Terms

Management, Measurement, Human Factors, Theory

Keywords

Technology Acceptance, Motivation, Identification, Trust, Ease of Use, Knowledge Management

1. INTRODUCTION

Wikipedia is widely known among engineers and business administrators of an international supplier of the automotive industry. Wikipedia is even used by most of them. So why isn't it possible to use something similar for internal, corporate topics? The company's corporate Knowledge Management was faced with this question and started a research project with a doctoral thesis as part of it. It was the first step of the project to define basic conditions, target, and objectives of a corporate wiki. Following these requirements a pilot wiki has been set up and started in November 2007, available for approx. 50,000 employees. As the second step it is planned to evaluate user acceptance and its predictors for gathering information about factors for success of a wiki in corporate use.

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The third step is defining an implementation recommendation to roll-out an improved version of a corporate wiki available for more than 140,000 employees world wide.

2. GOALS

One of the major questions which have to be clarified is whether wiki – in tool and concept – is appropriate for corporate-wide knowledge sharing. For reaching necessary results, three sub-goals were defined.

2.1 Evaluation of User Acceptance

First, actual usage behavior of employees based on research regarding technology acceptance [13] has to be proven.

Acceptance is getting more and more a central indicator for the success of recent communication and information technology. Usually it is meant that acceptance defines the adaptation of the relevant technology by a defined target group. Acceptance was seen as the usage of multimedia systems because of the positive attitude of the individual, the representation of behavioral willingness, and because of positive personal and situational factors. This means the term could be divided in attitude, intention to behave, and actual behavior [12]. Acceptance of and participation in communities, as given in wikis, is facing many influencing factors, either in a positive or negative way. Several prerequisites of virtual communities, such as anonymity, cross-cultural members, enormous amount of members etc., could be further predictors of functioning group collaboration [14]. This leads my direction to the following step in research.

2.2 Determinants of Wiki Acceptance

Second, determinants with major impact on user acceptance will have to be verified. Since acceptance can be defined as an active usage behavior, this research theory is based on the model of an activity system [2] [5] transformed into a more general cluster naming individual, wiki-specific and organizational conditions as demonstrated in figure 1.

2.2.1 Characteristics of the Individual

The individual, or subject called in activity theory, is a person who is engaged in the activity, i.e. who is using wiki. In doing this, the individual has a specific motivation, either internal or external. While internal motivation could be having fun using it or having interest in the topics, external motivation is related to all rewards and benefits from others, like reputation, money, or career opportunities.

While research regarding Wikipedia demonstrated a high intrinsic user motivation e.g. [10] other researchers are questioning inert motivation in contributing to wikis in organizational settings [7]. It is assumed that motivational directions will be observable as demonstrated in research of open source software developers [6] with both types of motivation given.

Another proposed determinant for user acceptance is trust in the wiki community. Trust regarding correctness of content and trust regarding confidential reuse of own contributions to the wiki. According to Reinmann-Rothmeier [9] trust is one of the most important motivational key factors for interaction, team spirit, and willingness for cooperation, all necessary pillars for knowledge communication. Without trust, people may be less willing to openly share information about problems, thus reducing the group's knowledge sharing and development [1] [11]. This is the reason why this study is evaluating the trust building progress within the corporate wide use of a wiki.

Schroer [10] verified identification of the user with other wiki users as one predictor for activity within Wikipedia. It is in question to what extent identification can be developed within a corporate wiki, and/or how identification with the corporation might affect usage behavior.

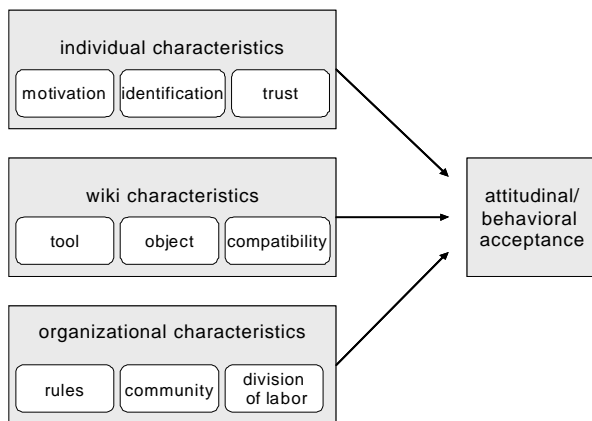


Figure 1. Predictors of wiki usage

2.2.2 Characteristics of the Wiki

The corporate wiki is consisting of a tool and a concept, both relevant for compatibility to the user's job. The current tool is based on a commercial enterprise solution due to the fact that it is not allowed using free/open source software products within the company. User acceptance might be affected by this IT-solution which shows a different look and feel than MediaWiki, known among most employees. Additionally acceptance may be influenced for instance by the bandwidth to access the wiki sites in an enterprise portal (see also [14]).

The concept is strongly related to the one of Wikipedia, thus restricted to internal terms and their specific definitions and descriptions valid within the company. Every employee has read and right access, to take part in harmonizing corporate terminology e.g. 'Warranty Concept' or 'Idea Management'. There are half of a dozen administrators who care voluntarily for content regarding their knowledge area. Basic administration, like defining rules and layout is part of a central department for

project management and knowledge management. Employees expected several benefits of this concept, like 'common understanding of terms', 'single point of access to information', 'easy editing', 'topicality of content' etc. It is expected, that user acceptance will be higher if the wiki concept fulfills desired outcomes (see 'motivation' as part of individual conditions). Compatibility of a system to one's own job is relevant for user acceptance [8] and depending on tool and concept. This is the reason why compatibility of the corporate wiki and how it is affecting behavioral acceptance has to be measured.

2.2.3 Characteristics of the Organization

Regarding to Di Iorio and Zacchioli [3] openness and voluntariness are key factors for the editing process of wiki sites and prerequisites for recent and substantial improvements, however partly incorrect and uncontrolled. Rules are necessary for structuring and organizing content, especially in a corporate context. A closed and specified wiki might be controversy to the common understanding of wiki. This is why a test phase was started to evaluate the success of these settings.

The organizational context of a wiki is always the wiki community, i.e. all wiki users. They are all characterized by the status of an employee of the company but no further distinction can be made, e.g. specific groups of interest, due to the fact that every employee with access to the intranet is able to use the wiki. An evaluation of the pilot wiki will result into further information about the wiki users' background, e.g. division or department. Some of the main characteristics of Wikipedia users like gender and age (as stated in [10]) are comparable with the average of employees contributing to corporate communities of practice [4].

As stated in activity theory, 'division of labor' is mediating the relation between community and object [5]. Functions within the corporate pilot wiki have been kept rare and most users have equal rights. There are only few administrators and employees who have been involved in the process of requirements definition. In this research study it is planned to evaluate how their special role in the wiki is influencing users behavioral and attitudinal acceptance.

2.3 Conditions for Implementation

Third, based on the results of the research on user acceptance and its determinants, key factors for success of corporate wikis in a lexicon use case will be defined. Additionally, it is planned to look for suggestions how to set-up or improve an existing corporate wiki with promoting conditions. Regarding the individual these conditions could be ways to build trust, or support of actual influencing benefits (e.g. payment or learning?). Improvements regarding the wiki are related to a user-friendly look and feel, regarding the organization these could be suggestions for user rights.

3. SUMMARY

This is a dissertation project which wants to give suggestions for successful use of wiki technology and the world-wide adoption of it within an international corporation. The distinctiveness of this research depends on the strong focus on individual characteristics which emerge in a specific organizational context and determine employees' acceptance to share knowledge with using wiki.

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