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eParticipative Process Learning for Sustainable and Lived Processes

A Case Study on Process Introduction (Executive Summary)

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Bringing Processes to Life with eParticipative Process Learning

Why eParticipative Process Learning? Sustainable change!

The ability to change is of crucial importance for an organization's success. Shorter innovation cycles, rising costs, and individualizing customer's demands offer new challenges to successful organizations [Schu00].

Software organizations, in particular, are faced with these challenges of change. Short innovation cycles through rapid technical progress and paradigm change cause existing knowledge to quickly become obsolete, and require continuous, goal-oriented adaption of the organization.

Contrary to the necessity of change is the success of projects that implement the necessary change. According to the study of ILOI in 1997 [MoC97] 4 of 10 change projects achieve less than 60 % of their goals. These projects usually fail not because of hard, factual-technical barriers, but because of soft, mental-cultural ones [KoMo02].

Leverages for the comprehensive change of an organization are their business processes and the knowledge associated with these processes. An approach to use these leverages for achieving the necessary change is Process Learning [ArSc78], i.e., the organization-wide introduction and improvement of a process. In the case of eParticipative Process Learning, organization members provide opinions on and experiences with processes via web-based technologies. Conflicting opinions are then mediated towards a consensus and experience is captured for upcoming process executions.

What is indiGo? Methodology & platform for eParticipative Process Learning

The indiGo[1] project supports eParticipative Process Learning technologically with an Intranet-based process information system (PINS) with discourse and Lessons Learned features. A methodology for business-process oriented knowledge management, tuned to the features of the indiGo-PINS, ensures its organizational embedding.

The discourse feature of the indiGo-PINS allows a comprehensive participation of members of an organization. With this discourse feature, conventional approaches to change implementation are supplemented and supported (training courses, task team, workshop). The consent obtained thereby promises sustain-

[1] indiGo: **In**tegrative Software Engineering through **di**scourse supported **g**r**o**upware
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able change through high acceptance, high commitment during its implementation, and a special quality through the variety of discussed ideas, perspectives and arguments. Based on these comprehensive participation results, Lessons Learned are extracted from the discussions. These Lessons Learned are then available for upcoming process executions and thus support application of the (changed) processes.

Contents of case study? Controlled introduction of two processes!

In order to show these positive effects, a case study was performed at IESE. Two processes relevant for IESE's business were introduced using eDiscourses: *Industrial Project Acquisition* and *Conference Participation Planning*. The evaluation of these processes concerning acceptance and perceived quality was measured with two questionnaires: The first questionnaire was distributed during the discussion; the second one after the changes based on the discussion results were implemented. These questionnaires also captured the attitude of the participants toward eParticipative Process Learning and were combined with the evaluation of discussion contributions.

And the result? It works!

The case-study showed three substantial results regarding indiGo's methodology and platform:

- The acceptance and the perceived quality of the process descriptions were increased.
- Relevant process improvements could be derived and implemented based on the discussion.
- The discussion participants were satisfied with the discussion and its results.

These results are based on 16% to 27% of IESE members participating in the activities of the case study. Thus, the results are based on a representative population. Furthermore, the distribution of the case study participants concerning experience level and position in the organization was balanced. In the following, the results of the case study mentioned above are described in detail.

The *acceptance and perceived quality* of both process descriptions improved - with one exception, where the evaluation remained stable. Furthermore, the distribution of answers given for the second questionnaires narrowed, i.e. the evaluation of the process descriptions was more consistent after the discussion. Figure 1 exemplarily shows these effects for the perceived quality of Industrial Project Acquisition.

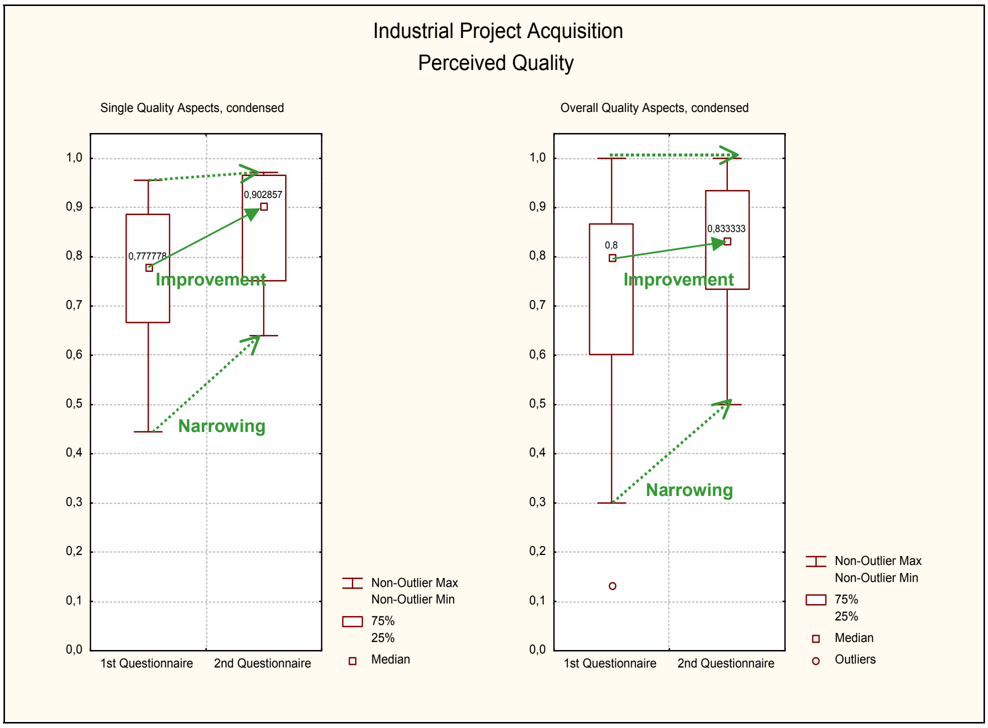

Figure 1: Example Evaluation of a Process Description: Industrial Project Acquisition, perceived quality

Project Managers evaluated the processes worse than regular employees. However, the evaluation by Project Managers improved more than the one by the regular employees. In both processes, particular improvement could be observed for the quality aspects understanding, responsibility, and completeness.

26 *relevant process improvements* were extracted from 80 contributions made by the participants. 16 of these improvement suggestions were implemented during the revision of the process description. Beyond that, document templates supporting process execution could be identified or improved. In addition, improvements to the knowledge management infrastructure could be justified based on the discussion results. Table 1 gives an overview of the number of discussion contributions and resulting improvement suggestions.

Discussion concerning	Contributions	No. of improvement suggestions	No. of implemented improvement suggestions
Industrial Project Acquisition	48	15	7 (+ 2 templates for process execution)
Conference Participation Planning	32	11	9

Table 1: Number of Discussion Contributions and resulting Improvement Suggestions

Participants were satisfied with the discussion and its eModeration for both processes. In particular, participants who suggested improvements were satisfied with the implementation of these suggestions. Figure 2 gives an example for Conference Participation Planning concerning these answers.

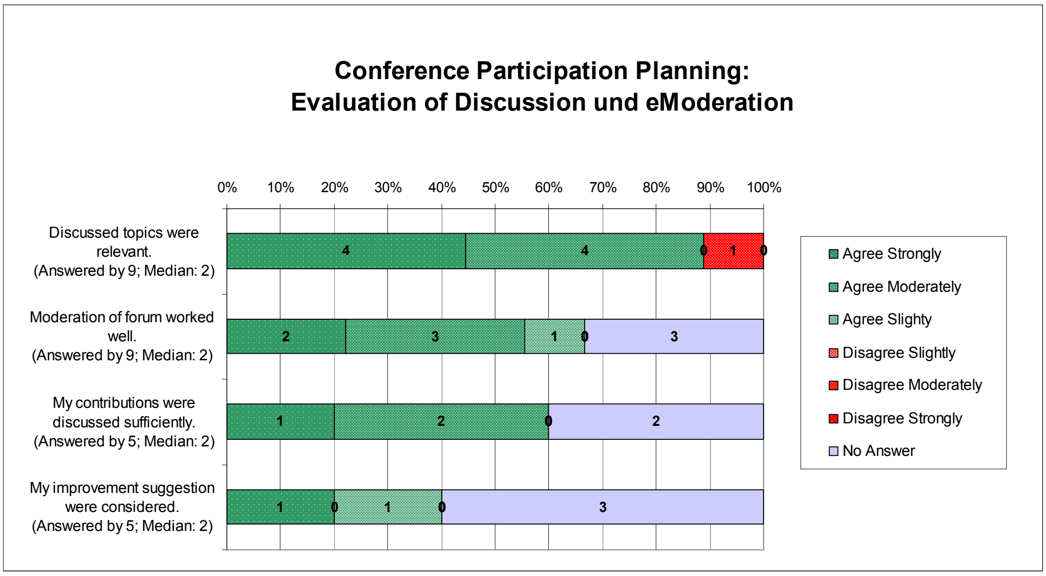

Figure 2: Satisfaction concerning Discussion and eModeration, Conference Participation Planning

Of the 26 participants completing the second questionnaire, 18 were willing to participate in future discussions. Important factors for participation mentioned by the case study participants were the relevance of the discussed topic, the time needed for participating in the discussion, and the implementation of the improvement suggestions.

The next steps? IndiGo is used and improved!

The results of the case study showed the practicability and usefulness of indiGo. Due to these results, indiGo will continue to be used at IESE. Furthermore, indiGo will be used, evaluated and improved in other projects.

What is in the full version of the case study report? More information!

Further information about this case study can be found in the long version of this case study report. In particular, the following topics are presented or detailed:

- IndiGo’s technical infrastructure and methodology
- A detailed description of the case study, including
  - the questionnaires used and
  - data-processing and interpretation
- All results of the case study, in particular,
  - further evaluations concerning acceptance and perceived quality

  - user behavior concerning eParticipation and eModeration
- Practical experiences concerning eModeration and operating an eParticipative PINS.

The long version (in German) is available for free download at http://www.iese.fhg.de/Projects/indigo/.

Further information about indiGo? Contact us!

If you have any further questions about indiGo, we will be pleased to answer them. Please contact:

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Further information about indiGo can be found on the indiGo webpage: http://indigo.fhg.de.

Literature

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Dokumenten Information

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