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Evaluation of digital badges for knowledge exchange platforms

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MOTIVATION

Digital badges are validated indicators of accomplishment, skill, quality, or interest.

» They had its origin in online communities.
» Nowadays well known in gaming communities and Web 2.0 platforms.
» Our aim: Evaluation of the usage of digital badges in learning environments.

Hidden knowledge

» Additional and not documented knowhow, competencies or skills.
» Hidden knowledge-building happens often on a subliminal level during work or when pursuing hobbies.

Informal learning

» Informal learning is without curriculum.
» Self-directed learning from experience.
» Learner defines the objectives (what to learn) and the means (how to learn).

Online knowledge sharing platforms

» Worldwide span social-communities are interacting together by using Web 2.0 technologies.
» Popular social media platforms (Xing, LinkedIn, etc.).
» Q&A platforms are recently in coming for knowledge-sharing (well-known example: Stackoverflow).

PROBLEM STATEMENT

We consider a knowledge sharing platform as a tool to identify informal knowledge. With that approach, combined with informal learning we stated the following key-issues as part of the research question:

Online participation

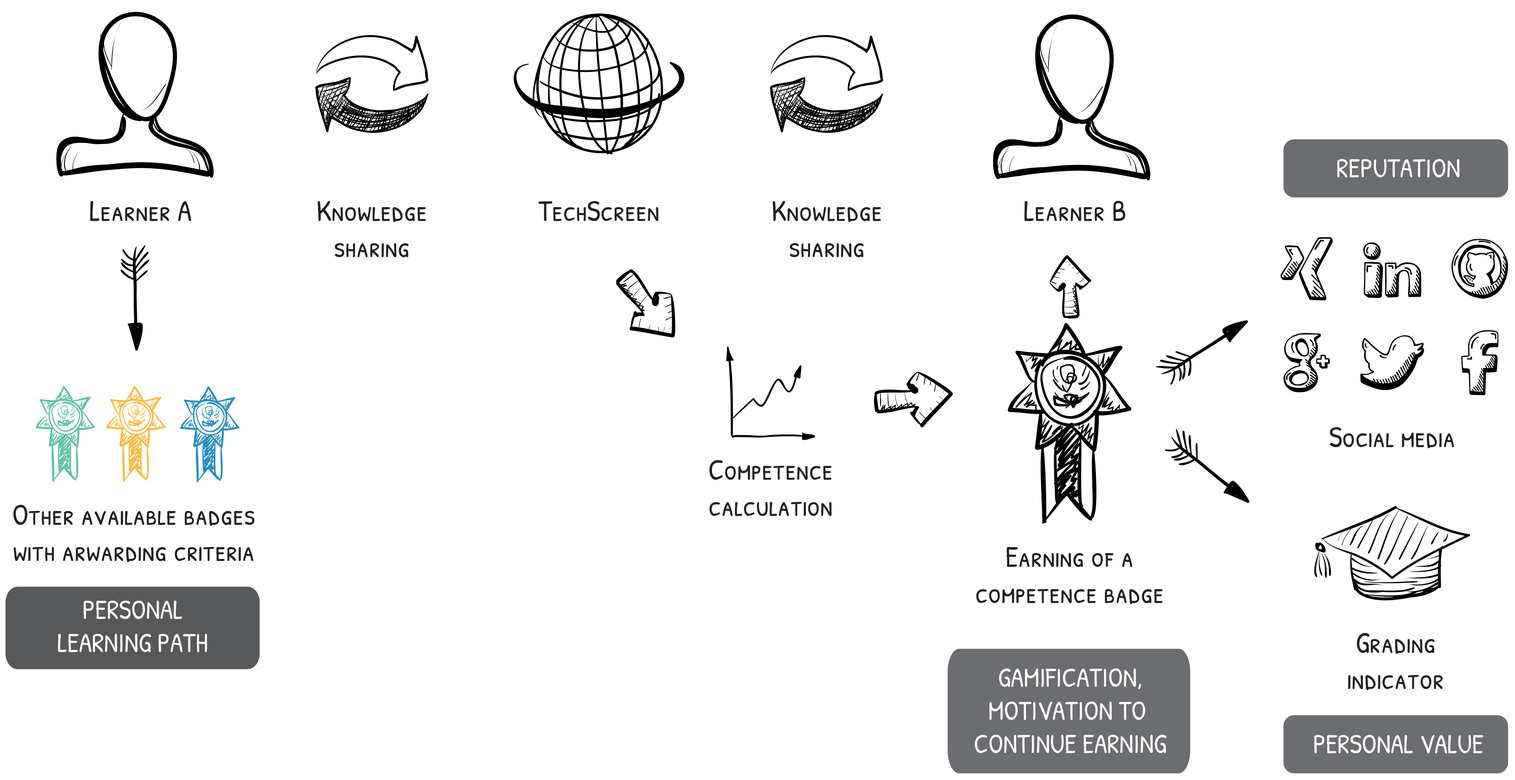
» Online communities need a strong user community and content to work.
» For knowledge sharing it is also required that users are willing to proactively share their knowledge on the online-platform.

Rewards & reputation

» Typically no financial compensation or other reward for knowledge sharing and competence-building.
» No valuable sign of reputation as reward, that can be used in (other) social communities.

DESIGN AND SOLUTION

We introduced a concept of an integration of digital badges to a knowledge sharing platform. As we built our concept upon existing concepts we first hat to evaluate compatible technologies.

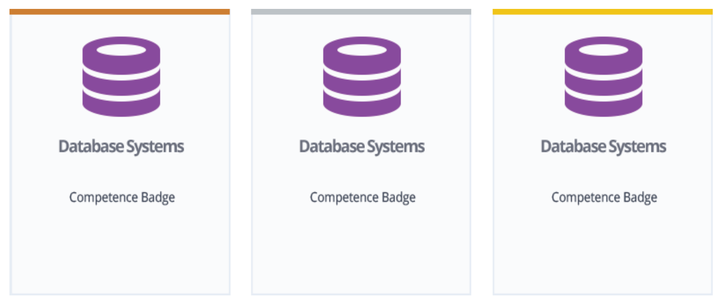


TechScreen online sharing platform

» TechScreen is an existing „Question & Answer platform“, used for the prototype and evaluation.
» Built-in algorithm of TechScreen to automatically calculate a user's competence profile.

Badges and categories

» Definition of feasible knowledge categories of the field of computer science.
» Conception and artwork of a badge for each category.
» Competence badges as knowledge-indicator.
» Three levels of experience: beginner, intermediate, expert.
» Social badges to admit social behavior such as online presence, helpfulness to answer other's questions, etc.



Prototype implementation

» Evaluated of various frameworks to integrate digital badges with Drupal, the underlaying technology framework.
» Concept of the earning process of digital badges in TechScreen.
» Capabilities of open standards to exchange this badges, issued by TechScreen, with other (social media) platforms.

Digital badges in university environment

» Digital badges could be used as extension to formal learning, at university for example.
» Additional grading indicator upon (voluntary) completion of additional tasks and discussion on TechScreen.

Self directed learning

» Learners shall be motivated to extend their knowledge and define their personal learning-path.
» Also no evidence for willingness of lifelong-learning.

RESULTS

We conducted a questionnaire among selected students, evaluated the technical compatibility and defied a long-term study. The results revealed that:

» Frameworks and tools often not production ready.
» New concept to users, often unknown.
» Users are generally open minded to digital badges.
» Specification of evaluation setup for long-term study.

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