

A digital collaboration tool for fostering innovation in design teams

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Innovation is rarely the result of individual work. Rather, it stems from effective collaboration of multidisciplinary teams that collectively offer the skills and competences necessary for implementing forward thinking ideas. The innovation process can be greatly facilitated through user-centered design principles that aim at exploring, discovering, and documenting the needs of users who will be the beneficiaries of a particular solution. Innovation generation paradigms, and more specifically design thinking, contribute to the identification of actual, as opposed to perceived, user needs and their description in a manner that opens possibilities for the introduction of rich and diverse ideas from which a final solution will be prototyped and evaluated. To achieve this, design thinking introduces steps of problem discovery, where designers analyze the problem context through research, observation of users, or immersion in the users environment, problem redefinition in a manner that accurately describes needs stemming from discovery, description of a characteristic user, ideation for the generation of a rich pool of ideas, and prototyping for evaluation of a potential solution through user engagement.

The innovation process cannot be restricted by space and time. For this reason, it can be positively impacted by digital technology that supports team collaboration anywhere and round the clock. This work presents a digital collaborative platform that leverages teamwork for generating innovation by richly describing, sharing, organizing, and categorizing ideas as well as building on the contributions of team members to collectively introduce and evaluate a feasible design. The platform is designed for both educational and business use. It is based on design thinking principles. In educational contexts, the platform provides educators with access to a collaborative design thinking board, documents, videos, and quizzes for developing courses that address student interests. In business contexts, it provides design teams with access to a design thinking board complete with agile planning tools that support the development process. In both cases, the collaborative digital board is organized in levels and supports templates of activities with wide applicability in design thinking for facilitating reuse. Participants can share ideas through posts, videos, images, and drawings that can be linked by logical connectors to help teams organize the thinking process. A voting system introduces gamification by allowing users to show their preference to peer ideas.

The collaborative digital learning platform is being populated with commonly used design thinking exercises as well as high level problem-solving activities linked to 21st century challenges. Its use is facilitated through educator support content. The platform will be piloted in real-life educational and business contexts, with field input being integrated into the final outcome.