Leveraging agile and waterfall project management approaches in educational design

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This poster showcases both agile and waterfall project management principles in educational design, specifically within the Canvas@AUT project. With the ambitious goal of developing 1753 courses in Canvas within a limited timeframe, the project presented significant challenges that demanded a flexible approach.

The poster explores the integration of these two distinct project management methodologies and their role in establishing an effective and adaptable educational design practice and timeline. By synergistically combining the strengths of both waterfall and agile project management, this seemingly insurmountable Canvas@AUT project was successfully completed.

A waterfall project management approach was employed to provide structure and ensure a systematic progression through the various stages of course development. Each ten-week course development cycle was structured in distinct stages. By adhering to defined milestones and deliverables, the team could effectively monitor progress, manage dependencies, and maintain accountability. The sequential nature of the waterfall approach with its distinct stages facilitated a comprehensive and well-coordinated design process (Gardner et al., 2017; Gawlik-Kobylinska, 2018). These stages provided structure and guidance for learning designers (LDs) in course development, particularly during the initial phase of the project when the LDs were new to their roles.

By incorporating agile project management principles, the team embraced iterative approaches, enabling ongoing feedback and adjustment. This facilitated continuous improvement and ensured that evolving requirements and stakeholder feedback were effectively integrated. Agile practices, such as daily stand-up meetings, retrospectives, kanban boards, project Planner board, and weekly working meetings, enhanced adaptive decision-making and collaboration among team members were adopted (Judd & Blair, 2019; López-Alcarria et al., 2019). Technologies, including Microsoft Teams, further supported efficient communication, task tracking, and engagement within the project team. This approach proved invaluable when the entire team was forced to work remotely due to an extended lockdown, allowing for a seamless move to online working. The team was able to meet all the deliverables and complete the project on time in spite of the challenging circumstances.

The poster presents the valuable implications for educators, educational designers, and leaders who are embarking on similar initiatives. The integration of agile and waterfall approaches enabled a hybrid approach that brought together the flexibility and responsiveness alongside the structured and milestone-driven framework (Ní Shé et al., 2021; van Rooij, 2022). This combination proved instrumental in overcoming the challenges inherent in a project of this scale, ensuring timely course development and a successful migration to Canvas. This hybrid approach also enabled the project team to achieve a harmonious balance between adaptability and structured progress, ultimately leading to the project's success: the development of 1753 courses within the designated timeframe and under the allocated budget.

The principles and strategies that we have employed hold broad relevance for the wider educational community. Educational institutions around the world face similar challenges in transitioning to new learning management systems and enhancing their course offerings. The emphasis on iterative development, stakeholder engagement, and systematic planning can be applied to various educational design contexts that seek to improve course quality and efficiency.

Keywords: Education, design, agile, waterfall, project management, university, course

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