"Avantgarde or uncool?". Lessons learned from developing a prototype serious game on long-term building perspectives
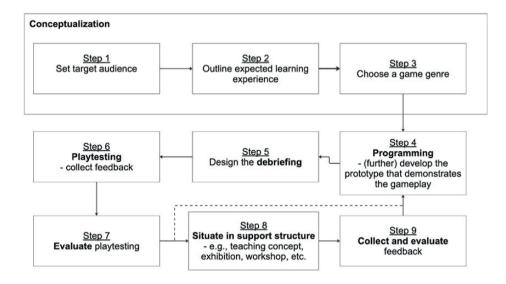
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In Switzerland, despite policy efforts to transition to a high-quality built environment, current practices can be characterized as unsustainable. Regarding the potential of engaging tools that enable informed dialogue about revaluing existing buildings, compelling digital approaches targeting the next generation of built environment professionals are thus far lacking. This paper showcases empirical research on the iterative development of a serious game prototype to meet outreach targets. The prototype's learning objective is to enable players to experiment with long-term perspectives of existing buildings. In essence, this paper emphasizes the role of a transdisciplinary approach to game development and the relevance of situating gaming experiences. Feedback from playtesting sessions with a specified younger target audience is utilized to improve the interface of a previously developed prototype. Three interface requirements for game-based digital building simulation models were identified and implemented. Future research could use the adapted prototype to explore a creation-based gaming approach that focuses on learning while creating games. Thus, the prototype offers a two-way didactic potential (gaming and game creation). Finally, the integration of a set of building values in a playful way is reflected in using the example of the alleged conflict between building preservation and "sustainable" refurbishment (depicted as deep renovation). The prototype deployment within an exhibition set up at the Museum für Gestaltung in Zurich (Switzerland) in 2023 allows us to validate a workflow to design serious games for didactic purposes. This workflow can be used in further game development projects or studies.