

## Designing an Editorialization Environment for Repeatable Self-Correcting Exercises

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**Abstract :** In order to design a cooperative e-learning platform, we observed teams of Teacher [T], Computer Scientist [CS] and exerciser's programmer-designer [ED] cooperating for the conception of a self-correcting exercise, but without the use of such a device in order to catch the kind of interactions a useful platform might provide. To do so, we first run a task analysis on how T, CS and ED should be cooperating in order to achieve, at best, the task of creating and implementing self-directed, self-paced, repeatable self-correcting exercises (RSE) in the context of open educational resources. The formalization of the whole process was based on the "objectives, activities and evaluations" theory of educational task analysis. Second, using the resulting frame as a "how-to-do it" guide, we run a series of three contrasted Hackathon of RSE-production to collect data about the cooperative process that could be later used to design the collaborative e-learning platform. Third, we used two complementary methods to collect, to code and to analyze the adequate survey data: the directional flow of interaction among T-CS-ED experts holding a functional role, and the Means-End Problem Solving analysis. Fourth, we listed the set of derived recommendations useful for the design of the exerciser as a cooperative e-learning platform. Final recommendations underline the necessity of building (i) an ecosystem that allows to sustain teams of T-CS-ED experts, (ii) a data safety platform although offering accessibility and open discussion about the production of exercises with their resources and (iii) a good architecture allowing the inheritance of parts of the coding of any exercise already in the data base as well as fast implementation of new kinds of exercises along with their associated learning activities.

**Keywords :** editorialization, open educational resources, pedagogical alignment, produsage, repeatable self-correcting exercises, team roles

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