

A step-by-step guide on how to design a classroom workshop for a project entitled "How I Imagine the Perfect Class" using agile methodology.

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Agile education is a very promising learning framework that has its basis on agile methodologies developed for the management of software development projects. Having proven their effectiveness in this domain the Agile Based Learning Environment which is an adaptation of Scrum and Kanban methodologies for education, promise to change the educational model of 21st century allowing students, beyond typical knowledge, to develop and enhance competences that are considered critical for the citizen of 21st century both in personal and professional level.

In this article we present an example design of the implementation of a classroom project entitled "How I imagine the perfect class", using agile methodologies. Project implementation can be divided into three phases.

1. The **first or pregame phase** includes all the preparatory steps that should take place before the project implementation begins. These are:

Introduction: Start by introducing the concept of Agile methodologies and explain how it will be applied to the specific project.

Team Formation: In this step, students divided into small teams of 4-5 members each, ensuring a diverse mix of skills and personalities within each team. Teacher inspects the entire operation and do not encourage team formation based on personal relationships.

Define the Project: The teacher in collaboration with his students sets the objectives of the project as well as the evaluation criteria that will be used for the assessment of each team's results.

Creation of the project Backlog: A project backlog is list of requirements that each team should satisfy during project execution. If needed, it can be adjusted as the team moves through the project. The items on the backlog can be broken down into smaller tasks, and additional items may be added as needed. The goal is to keep the backlog flexible and responsive to the needs of the team.

An example product backlog for this project can be the following:

Define what students meant by the term "Perfect Class." (To do this the team can conduct a survey of student preferences. The team will create a survey to gather data on what students consider to be the most important aspects of a perfect class. This action includes the steps of creating questionnaire, distribute it, collect the answers, and analyze survey results. The team will analyze the results of the survey and identify the key themes that emerged).

Gather ideas for creating the 'Perfect class'. (The team will determine e.g., through brainstorming ideas, how to create the perfect class based on the survey results.

Prioritize the ideas according to feedback received from students. (The team will prioritize the ideas generated in the brainstorming session and select the most important ones to focus on).

Develop a plan for implementing the perfect class. (The team will create a plan according to their vision for the perfect class using materials such as paper, cardboard, whiteboards, or e-tools.)

Present the plan to the rest of the class. (The team will present their plan to the rest of the class and receive feedback).

Refine the plan according to feedback (Based on the feedback received, the team will refine their plan and make any necessary changes).

Finalize the design of the plan (The team will finalize the design of the perfect class and present it to the teacher).

2. The **second or main game phase** includes the “Sprint” phase, where is the phase the project is executed. This phase includes:

Sprint Planning: Teams will attend a sprint planning meeting, where they will prioritize the items on their estimate the effort required to complete each task and agree on which tasks they will complete during the sprints, forming the Sprint backlog. Usually at least three sprints should be implemented.

An example of the three sprint structure is the following:

Sprint 1:

- Conduct a survey of student preferences.
- Gather ideas for creating a perfect class.

Sprint 2:

- Prioritize the ideas based on student feedback.
- Develop a plan for implementing the top ideas.

Sprint 3:

- Refine the plan according to feedback and adjust as needed.
- Finalize the plan of perfect class.

Sprint Execution: Teams will begin working on the tasks agreed upon during the sprint planning meeting. They will hold daily stand-up meetings to share progress and identify any obstacles.

Daily sprint: Team members should have a quick (max 5 min) meeting at the beginning of each day during the sprint to discuss the progress and set the daily plan.

Sprint Review: At the end of the sprint, teams will review the work completed and demonstrate the results to the rest of the class.

Sprint Retrospective: Teams will reflect on what went well during the sprint and what can be improved for the next sprint. Based on this reflection, they will adjust their processes and procedures.

Repeat: The process of sprint planning, execution, review, and retrospective will be repeated until the project objective is achieved.

3. The **third or post game phase** is the phase where each team evaluates its performance, reflects on good or bad practices applied during the previous phases, identify good practices and identify what competences they felt that developed or improved during the Sprints.

The above is an example outline of how a classroom project can be executed through the implementation of agile methods. More details about the implementation of agile methodologies and ceremonies as well as the other actions need to be taken place can be found within the modules offered in the pilot training of Agile2Learn project.

References

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