



Using Agile in the Classroom

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Manifesto for Agile Software Development



We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

From the Agile Manifesto - <http://agilemanifesto.org/>

12 Principles

- Customer satisfaction by rapid delivery of useful software
- Welcome changing requirements, even late in development
- Working software is delivered frequently (weeks rather than months)
- Close, daily cooperation between business people and developers
- Projects are built around motivated individuals, who should be trusted
- Face-to-face conversation is the best form of communication (co-location)

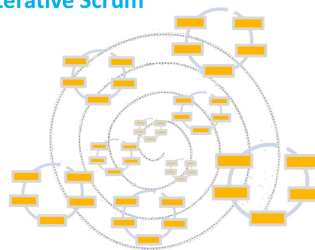
12 Principles

- Working software is the principal measure of progress
- Sustainable development, able to maintain a constant pace
- Continuous attention to technical excellence and good design
- Simplicity—the art of maximizing the amount of work not done—is essential
- Self-organizing teams
- Regular adaptation to changing circumstances

Terminology

- Sprint – an interaction. The sprint starts with a sprint planning meeting. At the end of the sprint there is a sprint review meeting, followed by a sprint retrospective meeting. Product is designed, coded and tested during the sprint.
- Scrum meetings: daily, short, productive. Stand up.
- Backlog: List of features; there is a product backlog and a sprint backlog
- User Stories: how to describe features
- Estimates
- Ranked and Weighted List; Roadmap
- Prototype
- Shippable Product Increments

Iterative Scrum



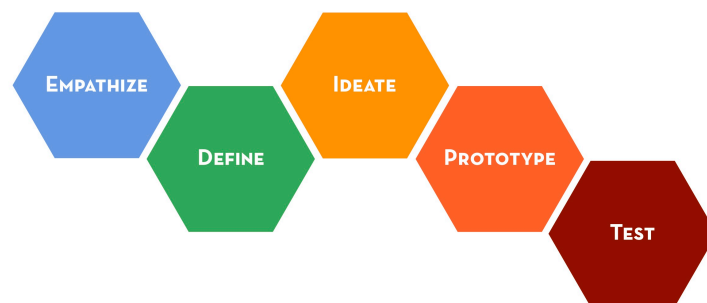
Scrum Meetings

- Stand Up
- What did you do yesterday?
- What will you do today?
- Is anything standing in your way?

Sprint Review

- Present results of sprint
- Usually in form of a demo
- Informal
- No slides
- Retrospective – what works, what doesn't?

Design Thinking within the Agile Framework



In the Classroom

- Semester/quarter well suited for 3-4 sprints
- Teach collaboration
- Regular feedback and assessment
- Peer feedback
- Client feedback throughout, if applicable
- Embracing change/flexibility

Types of Projects

- Single class project with multiple elements –
TXStateofChange.com
SXTXState.com
- Group projects
- Individual Projects
- Technology and non-tech projects
- Assist an outside project – Storify beta; TXST students considering test of EveryBit