Agile Design for Learning Systems Cheat Sheet

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Introduction

Software design and related practices and methods have had a significant influence over the Instructional Design field. For example, ADDIE, Dick and Carey, and Rapid Prototyping are heavily influenced by software development methodologies (Rawsthorne, 2005).

Software design methodology is now going through another paradigm shift — Agile Design. And rather than being a method-ology, it is more a philosophy or ethos that is best described by its manifesto (Agile Alliance, 2001):

"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."

Agile Approach

The Agile approach recognizes the need for collaboration, faster design solutions, feedback, and continuous improvement for producing business value in our ever faster and more networked society. For learning professionals to keep pace with the rest of the organization, Agile Design can be adapted to fit the needs of the learning and training community by providing an ethos for the design of learning:

"We are uncovering better ways of designing learning processes by doing it and helping others do it. Through this work, we have come to value:

Individuals and interactions over processes and tools

Solutions that promote and speed the development of learning processes over comprehensive documentation

Customer collaboration over contract and formal 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."

Values and Principles of Agile Design

Agile is a more of a philosophy, it has values and principles that guide its practices. The Sidky Agile Measurement Index (SAMI), developed by Sidky and Arthur (2008), is probably the most widely used method for guiding Agile principles. It is composed of five values: communication, collaboration, evolutionary, integrated, and encompassing. These three of Malcolm Gladwell's ideas in The Tipping Point heavily inspired the five values:

- **People: Communication and collaboration**
- **Message: Evolutionary, integrated, and adaptive**
- **Suitable environment: All encompassing**

The five values with their descriptions (descriptions have been adapted to fit learning design rather than software development):

- **Encompassing:** Establishing a vibrant and all-encompassing learning environment to sustain agility
- **Adaptive:** Responding to change through multiple levels of feedback
- **Integrated:** Developing high quality learning solutions in an efficient and integrated manner
- **Evolutionary:** Delivering learning processes and platforms early and continuously
- **Collaborative:** Enhanced communication and collaboration

Five Tight Principles

The Agile Manifesto outlines twelve principles; however, Sidky and Arthur (2008) discovered they could group them into five tight principles (the descriptions have been adapted to describe learning design rather than software development):

- Embrace change to deliver customer value
- Plan and deliver learning processes and platforms frequently
- Human centric
- Technical excellence
- Collaboration with business people

The Four Essences of Agile Design

1. Self-organizing teams collaborate to ensure the values and principles of Agile Learning Design are upheld to bring value to the organization or business.

2. An appreciation for adaptability and flexibility that brings small changes over the long term, rather than the uncertainty of prediction that waterfall or linear design methods impose.

3. Iterative design methods that are based on real world experience and research.

4. Customer involvement and collaboration from start to end to ensure their needs are met to the fullest.

Adaptive vs. Predictive in Agile Design

These value and principles make Agile more adaptive rather than predictive; and people-oriented rather than process-oriented (Fowler, 2003). However, it is misleading to view it on the opposite end of a spectrum from a plan-driven or disciplined method as it implies that agile methods are unplanned or undisciplined. A more accurate distinction is that methods exist on a continuum from adaptive to predictive and agile methods lie on the adaptive side of this continuum (Boehm, Turner, 2004).