Agile Writing: A Project Management Approach to Learning

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ABSTRACT

Scrum methodologies that support cross-functional writing teams to develop polished increments of writing instead of lengthy drafts of documents stand to improve productivity and learning within organizations. Scrum methodologies may be deployed in higher education as well as in nonacademic settings to achieve purposeful knowledge transfer across disciplines and across academic/industry borders. Key to scrum is an emphasis on productivity within fixed time frames, with productivity facilitated by learning that emerges in cross-functional teams. Higher education is similarly a domain in which productivity in fixed time frames takes the measure of student learning. Across the disciplines, scrum methodologies show promise for improving the quality of collaborative problem-solving in writing projects in college and at work.

Keywords: Agile Project Management, Agile Projects, Iterative Methods, Scrum Methodologies, Technical Writers, Writing Process, Writing Teams

USING SCRUM ACROSS THE CURRICULUM

The purpose of this discussion is to explore agile project management generally, and scrum methodologies specifically, for new directions in knowledge production in higher education. The scrum framework can productively inform cross-disciplinary knowledge for strategy and decision making (Hart-Davidson, 2001, p. 154)—an ability found to be increasingly vital to productivity in cross-disciplinary and in distributed work teams (Spinuzzi and Jakobs, 2013, p. 120). The scrum framework has been adopted in software development and other industries, including education, showing promise for realigning what Johnson-Eilola and Selber have called disjunctions that split those who research and teach project management from those who perform by its disciplinary guidelines (2009, p. 407). As a tested framework for collaborative group work in organizations, agile suggests new directions for collaborative learning in higher education beyond software engineering.

Agile project management methodologies adopted by software development teams over the last three decades have already advanced productivity and learning in organizations. In one quantitative study, for example, Serrador and Pinto sought to determine whether agile
methods used in 1002 projects across industries and countries showed demonstrable impact on project performance, and their statistical analysis showed trends of improvement in efficiency, satisfaction, and quality of projects in construction, financial services, government, education, technology, healthcare, and retail among other industries (2015, p. 1048). In higher education Pope-Ruark (2012) reported improved collaboration skills, problem solving, listening, negotiating, and engagement in agile group work for a professional writing course (p. 167). This paper asks whether students in history, agriculture, apparel design, chemistry, and sociology, among other disciplines might similarly experience improved satisfaction and performance in group projects that use scrum principles.

**SCRUM PRINCIPLES IN REVIEW**

Scrum methodologies take complex adaptive systems (CAS) as their theoretical foundation. Articulated in the work of John Holland (1995), Murray Gell-Mann (1994) and others, and adapted to the purposes of agile project management by practitioners in software development, the theory of complex adaptive systems describes ways in which agents (organisms, people, business firms) within systems survive, succumb, or adapt to diverse stimuli and aggregations (Sutherland and van den Heuvel, 2002, p. 60). Holland’s example of a CAS is New York City (1995, p. 41), where self-organizing agents aggregate to form advertising firms, cab companies, delis and the produce distribution companies that stock them. Complex adaptive systems are characterized by an ability to maintain coherence in spite of the presence of chaos. New York City maintains coherence in spite of lost advertising accounts, striking cabbies, and recalls of tainted produce. Scrum teams similarly self-organize to develop products designed to function within the systems of which they are a part. Students and teachers within courses within departments within majors and disciplines within colleges within universities within systems of accreditation also comprise complex adaptive systems.

The basic unit of any CAS is an agent whose efforts alone or in aggregate impact and are impacted by the larger system (Holland 1995, p. 6). A typical scrum development project consists of agents in roles such as product owner, cross-functional development team members, and scrum master who focus together on creating small parts, or increments, of a product (Schwaber & Sutherland, 2013, p. 4). Teams create, test, rework, and complete fully operational project increments before moving on together to the next increment of features to develop in the next work cycle. The focus on increments and short but frequent discussions about productivity help teams clarify goals and priorities and make changes as needed throughout the product-development cycle.

Scrum roles and work cycles are designed to improve productivity through cross-functionality. For example, a product owner’s key function in scrum is to present a vision for the final product based on his or her knowledge of business objectives and client interests. With the important responsibility of decision making throughout the development cycle, the product owner must be one person—not a team, and not a committee—empowered to set direction for the development team. In the classroom situation the person most qualified to be a product owner is the instructor, whose vision for finished products is aligned with disciplinary and academic models on which instruction is based. While tasked to provide a vision for finished written products, the product owner does not dictate how writing problems are to be solved. The product owner instead guides productivity by setting the priority in which increments are to be developed, with the most important requirements of the increment to be met first. With priorities set by the product owner, development teams whose members represent different disciplinary perspectives such as coding, design, and testing, for example, determine a pace at which members can realistically work given
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