

# Implementation of Agile for the improvement of functionality of Universities

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## ABSTRACT

Since there are numerous options available for the students to take admission in different courses at various universities, now the competition is actually for universities rather students. Employing Agile practices in university contexts is a wonderful solution for improving the quality of University. Agile practices may be applied to the university functionality, pedagogy, for improving the standard, and maybe taught to the students also, so that they can become a successful graduate and improve their chances of getting their dream career. I will propose how these practices may be applied in university context more effectively, how the current structure of agile may be applied for the existing structure of university and what may be desired changes to make it more effective? For that, I will choose a specific university in India and will try to implement agile practices, and observe the changes in performance for a specific period.

Keywords: Agile practices, University context, pedagogy.

## INTRODUCTION

As of February 2017, there are 789 colleges, 37,204 universities and 11,443 independent Institutes in India, according to the most recent insights from the UGC site. These statics depicts the fact of mushroom growth of universities and colleges in India. In another statics it's been sighted that in top 300 universities of world there is not a single university from India. In order to become irreplaceable universities/colleges must introduce some practices which can set them apart from the crowd.

Surprisingly a software development method, known as Agile, has become progressively popular in contemporary years, is expected to be very helpful in this context. By virtue of this method production of software has become lighter, quicker, and more people-centered. The essential features of Agile, which are making it this much popular is adaptability and flexibility. The center idea of Agile depends on the ideas of (Abrahamson et al., 2003). Since the arrival of the Agile Manifesto in 2001, the prevalence and utilization of Agile have kept on developing. A portion of its particular systems, for example, Scrum and eXtreme Programming has increase broad appreciation. Starting at now, utilization of Agile identified with the usage in industry has been distributed and examined in different research articles.

But there has not been much discussion in the use of Agile in University context. The purpose of this proposal is to cover that horizon by discussing how it can be implemented in university context. And to further highlight it's prospective and to suggest some modification in its original format so that it can easily fit with university context.

## FLOW RESEARCH PROBLEMS IN AGILE IN EDUCATION AND LEARNING

The idea of utilizing Agile as a methodology for instructing and learning isn't novel (e.g., Chun, 2004; Andersson and Bendix, 2005, 2006; Razmov and Anderson, 2006; Lang, 2017; Vuokko and Berg, 2007). In spite of the fact that, as far as I could possibly know, no endeavor to build up a devoted design on Agile, in usefulness of University, instructional method and educating and learning into a solitary diary issue as of now exists.

A research work named as “Adapting Agile Practices in University Contexts” published in Journal of Systems and Software, May 2018. This paper was very well architecture and beautifully explain how the Agile was taught in the university, and how students were involved to practice agile by assigning various live projects. Although that was merely focused on the problem in implementing agile in university and their remedy, but that has shown me the possible benefits that one can get by implementing and teaching agile in universities.

Another article which further provides proper guidance for adopting agile in teaching was cited in the Journal of Information Systems Education, named as Agile in Teaching and Learning: Conceptual Framework and Research Agenda. This article has significantly contributed to the same cause. It has a diverting assortment of articles furnishing data frameworks instructors with explore based, down to earth methods for both showing Agile ("the what") and utilizing Agile as an educational methodology ("the how").

### RESEARCH METHODOLOGY AND PROPOSED PLAN.

#### Agile in functionality

For implementing agile practices in functionality I will choose Lovely Professional University (LPU), Punjab, which is housing more than 30,000 students from across the globe and having more than four thousands of teaching faculty. Managing this much crowd and maintaining adequate discipline cannot be achieved without having a corporate-like setup. We can use various agile practices like.

#### 1. Scrum

It is the most outstanding strategy for familiarizing Agility due to its straightforwardness and versatility. Scrum stresses trial analysis; bunch self-organization, and trying to develop suitably attempted thing increments inside short accentuation. The preferred position fuses extended detectable quality of undertaking destinations and how to achieve them. This sensible attribute of spry endeavors unquestionably contributes toward the extensively continuously basic goal of passing on programming on plan.

#### 2. Quality

Testing is joined all through the lifecycle, empowering standard appraisal of the working thing as it makes. This enables the thing proprietor to make huge changes gives the thing pack early sight of any quality issues.

#### 3. Visibility

Spry progression norms support 'customer/client' dynamic commitment all through the thing's improvement system. This gives astonishing detectable quality to key accomplices, both the endeavor's progression and the thing itself, which accordingly ensures that wants are feasibly directed.

#### 4. Early distinctive verification and objectives of issues

Minimal steady releases made observable to the thing owner and thing bunch through its headway help to perceive any issues early and make it more straightforward to respond to change. The undeniable detectable quality in facilitated improvement ensures that any basic decisions can be taken at the soonest possible risk, while there's still time to have a material impact to the outcome.

## 5. Accommodating change as a result of unsteady necessities (Flexibility/Agility)

In deft improvement, change is perceived. Or on the other hand possibly the span is fixed and basics rise and advance as the thing is completed. Plainly, for this to work, it's fundamental to have an effectively included associate who acknowledges this idea and picks the critical exchange off choices, exchanging existing degree for latest one.

### AGILE IN PEDAGOGY.

An undeniably basic practice is to bring Agile into existing courses close by conventional methodologies. Because of the developing fame of Agile task, the executives methods like Scrum, the usage of Agile is a characteristic fit for venture the board and final year projects, which are regular in figuring educational plans (e.g., Morien, 2004; Laplante, 2006; Ramakrishnan, 2009). Schwalbe (2012) gives a brief, yet exhaustive, way to deal with fusing Scrum to deal with a task-dependent on the procedure gatherings of the Project Management Institute's Project Management Body of Knowledge guide. Expanding on crafted by Landry and McDaniel (2016), Schwalbe (2012), set hypothesis in motion by growing course substance, assignments, and appraisals for executing Agile into a conventional task the executives course. Additionally, Baird and Riggins (2012) actualize a crossbreed, venture the board technique comprising of conventional task the executives (cascade) and Agile undertaking the board standards (Scrum) in a Computer Information Systems (CIS) capstone course with an end goal to catch understudies' fulfillment and view of such a half and half undertaking administration approach.

### AGILE TEACHING APPROACH

A course was planned and propelled by Dr. Roshina Hoda in 2013 and includes more than 250 understudies convey 36 activities utilizing nimble techniques in the development of the most advanced five years. It was given a name "SoftEng761 Agile and Lean programming Development" and gives hypothetical spry establishments to understudies and opens them to hands-on programming advancement. The important parts include iterative and steady programming advancement, self-arranging collaboration, venture the executives through undertaking work, lastly, summons basic research and reflection through examination crosswise over hypothesis, venture involvement with the course, and mechanical practice. Figure 1 shows the course flow, evaluation breakdown and timetable. The course pursues a three layered learning approach as explained beneath:

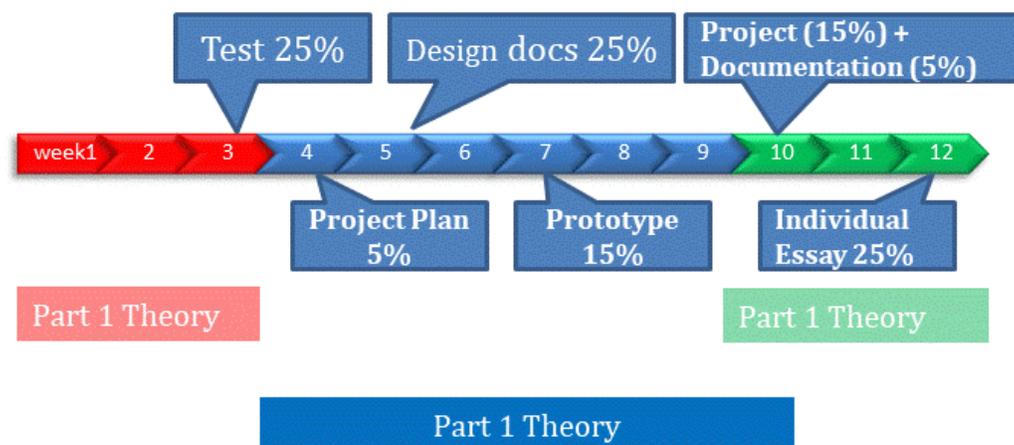


Figure 1 Course flow, assessment breakdown and timeline

## CONCLUSION

With all these efforts and implementation we may design a consolidated framework to be implemented by the universities which may lead to improvement of the performance of the university and of the performance of the students. For the validation of this research work, a very specific data which will make the prospective of agile practices obvious for the universities, so that they may not become hesitant in implementing the agile practices can be derived from these practices. Simultaneously we may suggest the changes required in the actual agile practice so that it can be easily and effectively implemented in the universities

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