

Midocean University

College of Management

Master of Project Management

**Embracing Agile Mindset impacts on Communications
of Tabuk University Construction Projects**

Prepared by:

Adil Rhamtallah Genawi 222001663

Thamer Khalid Alameer 222001675

Supervised by:

Dr.Walid Soliman

Dr.Alfaisl Hassen

Year:2023

كلية الإدارة

ماجستير إدارة المشاريع



أثر تبني عقلية الرشاقة على التواصل في مشاريع التشييد بجامعة تبوك السعودية

إعداد الطالب/

عادل رحمة الله خضر قناوى 222001663

ثامر خالد الأمير 222001675

إشراف/

د. وليد عبد الجواد سليمان صديق

د. الفيصّل عبد الحميد محمد حسن

العام الدراسي:

2023

1- INTROCTION

Agile Mindset is being agile and to embrace the four values and twelve principles of agile manifesto.(2001. publication of the Manifest for Agile Software Development).

As Agile frameworks, approaches were adopted publicly by those people work in Software Industry, and before that some of the lean frameworks had been used manufacturing industry, some agile approaches and methodologies have been introduced to other industries, such as construction industry , which the research takes.

Why the research takes the Agile mindset instead of Agile methodology, framework, approach (Scrum, XP, Kanban) ? The answer is, not applicable to use specific approach to manage construction project unless it is broken into small projects or deliverables that can be used by customer. And generally any project has own uniqueness due to environment, organization culture, team , stakeholders, and risks ,changes level degrees, so due (PMI-Agile Guide2017) recommends AGILE SUITABILITY FILTER TOOLS, to help organizations assess and discuss whether projects should be undertaken using predictive, hybrid, or agile approaches Construction projects follow predicative life cycle as planning everything up front, low frequency of delivery, low degree of change. As well as they follow agile life cycle in some project development phases, as Project concept and design phase, in which the customer feedback is mandated.

Construction Project team members sometimes unconsciously use agile tools, particularly when risks occur, and issues surface, or urgent changes request by key stakeholders need to be executed. They use agile tools, such as review meetings, collaborative meeting, which are forms of face to face communication, and the feedback is important.

Construction projects have complexity, ambiguity , and high stakeholders expectations, although, formal contracts are signed by the parties (Owner, Consultant, Contractor, and Other) before project starts, applying time, cost, and resources constraints, which make the project team of each party adhere the contract terms, and focus to their company goals, not to the project goals and the business benefits it delivers. And make communications between parties not effective, and all communications deliverables subjected to contract constraints

The research proposes the Agile mindset as a solution to the construction projects problems, and takes communications as start point to adopt agile mindset.

Communications key driver for project success, as convey business value, confirm stakeholders expectations, help to monitor risks and issues, support quality assurance and control, and encourage team collaboration, transparency.

Communications help to convey and train agile mindset , and agile approaches to the teams .

“Project environments subject to various elements of ambiguity and change have an inherent need to communicate evolving and emerging details more frequently and quickly. This motivates streamlining team member access to information, frequent team checkpoints, and colocating team members as much as possible.

In addition, posting project artifacts in a transparent fashion, and holding regular stakeholder reviews are intended to promote communication with management and stakeholders.”

2- Research Problem

- Construction projects communication is not effective
- Contract requirement for communication, Project status (Daily, Weekly, Monthly Report) mislead project goals.
- Bad communication results in quality defects, risks, and issues
- Written communication not giving complete information, no feedback

3- The importance and objectives of the research

- Give graduated transition from traditional to agile
- Start with coaching and convey agile mindset
- Adopt agile in communication management

4- Research hypotheses

- Is not possible to adopt specific agile approach to construction project.
- Project team need to know and adopt agile mindset, being agile
- Waterfall approach lack effective commination.
- Increase communication effectiveness by using some agile tools, artifacts, events, (daily meeting, face to face meeting, Kanban boards,

5- Literature review

6- Agile Manifesto mindset, values, and principles

Agile! Is a project management methodology that was developed in order to minimize the gap between the traditional way of managing projects “Waterfall” which executed in a linear sequence and the need of rapid changes in some industries such as software development, product development and other.

According to the Agile Manifesto authors (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.

From that Four Values, the Twelve principles were developed, which according to AGILE PRACTICE GUIDE (2017), the Twelve principles say:

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.

8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

9. Continuous attention to technical excellence and good design enhances agility.

10. Simplicity—the art of maximizing the amount of work not done—is essential.

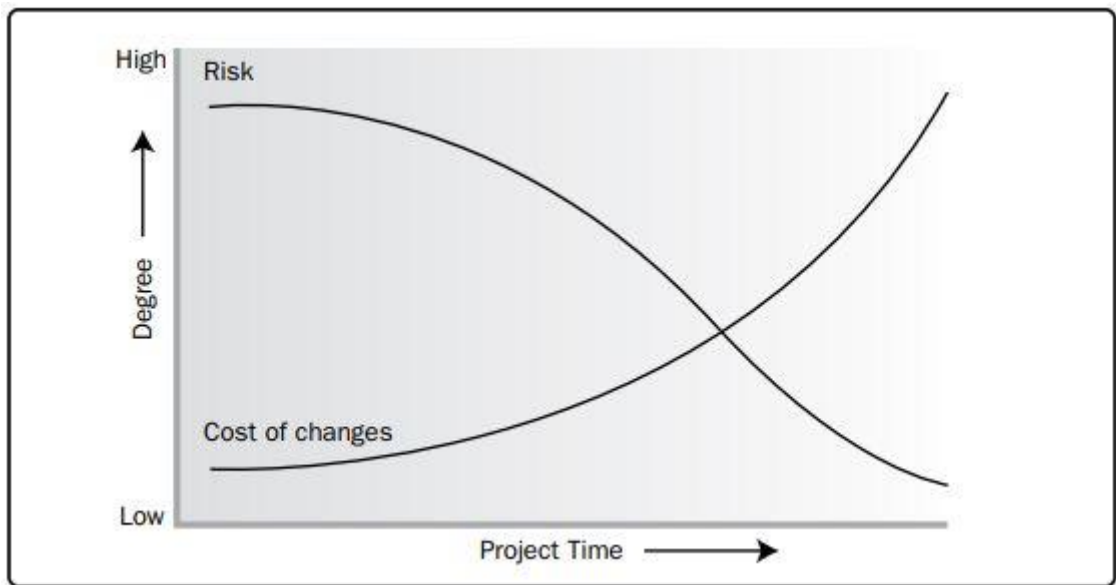
11. The best architectures, requirements, and designs emerge from self-organizing teams.

12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly

Benefits of Using Agile Manifesto mindset, values, and principles in construction

Due to the rapid changes in the requirements to satisfy the customer needs, adapting agile mindset could help in producing a product that satisfy all the parties involved in the project.

Using agile mindset in the communication can reduce the cost, produce higher quality and satisfy the customer since all parties are able to engage in productive ways of communication. For example, in the design phase of a construction project, all parties will be able to meet each other and do the required changes that the customer needs which according to PMBOK® GUIDE Sixth Edition, changes in a project could be costly as the project advances and can lead to delay in the schedule. The ability of stakeholders to influence the final characteristics of the project's product, without significantly impacting cost and schedule, is highest at the start of the project and decreases as the project progresses toward completion.



As Mrio Moreira mentioned in his book *Being Agile: Your Roadmap to Successful Adoption of Agile* (2013), Communication is the enabler for individuals to interact with their team members. The inspect-and-adapt model is an enabler for communication to occur throughout a project. The benefit is the continuous feedback. This helps us understand the process in which we work and how we may adapt it over time. This also ensures that a predefined process or tool set does not dictate how we interact.

According to (PMBOK® GUIDE) Seventh Edition, establishing a frequent rhythm or cadence of review and feedback sessions from a broad selection of stakeholders is helpful for navigating project risk and being proactive with risk responses. Daily standup meetings can be used in any project and are a source for identifying potential threats and opportunities. Frequent demonstrations of increments of the product or service, interim designs, or proof of concepts can surface threats and opportunities. Addressing risk at weekly status meetings ensures that risk management remains relevant. These meetings can be used to identify new risks as well as identify changes to existing risks. Retrospectives and lessons learned meetings can be used to identify threats to performance, project team cohesion, etc., and to seek improvements.

According to (PMBOK® GUIDE) Seventh Edition, Effective and efficient engagement and communication include determining how, when, how often, and under what circumstances stakeholders want to be—and should be—engaged. Communication is a key part of engagement; however, engagement delves deeper to include awareness of the ideas of others, assimilation of other perspectives, and collective shaping of a shared solution.

As the AGILE PRACTICE GUIDE (2017) suggested that Projects are subjected to various elements of ambiguity that need to be communicated in transparent fashion, which can motivate the team members positively by having all the information needed easy to access and can be reviewed. Also, holding regular stakeholder reviews are intended to promote communication with management and stakeholders

Obstacles

Construction projects tend to rely heavily on definable work and the excessive amount of documentation. According to AGILE PRACTICE GUIDE (2017), Definable work projects are characterized by clear procedures that have proved successful on similar projects in the past. The production of a car, electrical appliance, or home after the design is complete are examples of definable work. Also, face to face meetings could sometimes become difficult due to the number of people involved in the project. According to Agile for Project Managers (2015), We know that the agile team communicates face to face with each other and this is another reason why they are able to be so effective. In addition, Team commitments to change to agile mindset can be challenging. According to Turner (2014) Now ideas go through three stages which are: First, people think it is stupid. Then they think it is dangerous. And finally they think they believed that all along.

Gaps in the Existing Literature

AS we have reviewed some of the existing resources that discuss using agile in construction projects, we found out that most of the research focuses on the broad ways of using agile management. In APPLYING AGILE METHODOLOGIES TO MANAGING CONSTRUCTION PROJECTS, by Abeer N. Al-Ismael and others (2022) they discuss the usage of agile in construction projects which is a broad subject, focusing in agile frameworks not agile mindset.

Problems in the Existing Literature

In some research we found out that the researchers tend to focus on many aspects of using agile in construction projects which made the research too broad and hard to follow the outcomes. Also, using the exact researches that were published made a problem in the existing literature.

7- Research Methodology

- Descriptive Method.
- Previous study theories
- Tabu University Construction Project Teams Survey.

8- Research limits

- Current Construction projects in Tabuk University in Saudi Arabia-2023
- To adopt agile mindset at project development teams,(Sponsor, contractor, consultant teams), exclude organizations.
- Start to share agile mindset knowledge, and adopt it in communications
- Organization support to agile not addressed.

9- The General Perception of the research structure

10- Initial reference list

- 1- A guide to the Project Management Body of Knowledge , 7th Edition, 6th Edition
- 2- AGILE PRACTICE GUIDE, PMI
- 3- Being Agile, Your Roadmap to Successful Adoption of Agile, Mario Moreira
- 4- PRINCE2 Agile
- 5- Agile for Project Managers, Denise Canty
- 6- Agile for Everybody, by Matt LeMay
- 7- APPLYING AGILE METHODOLOGIES TO MANAGING CONSTRUCTION PROJECTS