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Question 1

* 1. The Project management processes that would be needed to support the first two phases of IT project methodology
  2. Project initiation: is the phase where the project starts. It provides an overview of the project, along with the strategies required to attain desired results. It is the phase where the feasibility and business value of the project are determined.

The project charter is considered to be the most important document of any project as it comprises:

* Undertake a feasibility
* Identify the project scope
* Identify the project deliverables
* Identification of project stakeholder
* Develop a business case
  1. Project planning: The project planning frames set of plans which helps to guide your team through the implementation phase and closing phase. The program created at this point will surely help you manage cost, quality, risk, changes, and time.

The project planning phase includes the following components:

* Creating a project plan
* Create workflow documents
* Budget estimation
* Gather resources
* Anticipate risks
  1. Agile project management focuses on delivering maximum value against business priorities in the time and budget allowed, especially when the drive to deliver is greater than the risk. The agile philosophy concentrates on empowered people and their interactions and early and constant delivery of value into an enterprise.

**What are the benefits of agile working?**

* Agile approaches empower those involved; build accountability; encourage diversity of ideas; allowing the early release of benefits; and promotion of continuous improvement.
* Agile helps build client and user engagement because changes are incremental and evolutionary rather than revolutionary: it can therefore be effective in supporting cultural change that is critical to the success of most transformation projects.
* Agile allows decision ‘gremlins’ to be tested and rejected early: the tight feedback loops provide benefits in agile that are not as evident in waterfall.

In 2000, a group of seventeen “thought leaders,” including Jon Kern, Kent Beck, Ward Cunningham, Arie van Bennekum, and Alistair Cockburn, met first at a resort in Oregon and later, in 2001, at The Lodge at Snowbird ski resort in Utah. It was at the second meeting where the Agile Manifesto and the Twelve Principles were formally written. The Manifesto reads:

“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.”

Each Agile methodology applies the four values in different ways, but all of them rely on them to guide the development and delivery of high-quality, working software.

1. Individuals and Interactions Over Processes and Tools

2. Working Software Over Comprehensive Documentation

3. Customer Collaboration Over Contract Negotiation

4. Responding to Change Over Following a Plan

These 12 principles inspired by and supportive of the Agile Manifesto are guiding practices that support teams in implementing and executing with agility the production of software development and much more

**Satisfy the Customer:** Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

**Welcome Change:** Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage. It's hard not to get a wave of despair when thinking about change requests but change is good if you can react to it fast enough. Change means you are getting closer to client needs and that's a good thing.

**Deliver Frequently:** Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale. The sooner you deliver incremental software, the faster the feedback and faster you can identify a wrong turn or a miscommunication with the client. Would you rather find out earlier when you can do something about it or at the end when a complete rework is required?

**Work Together:** Business people and developers must work together daily throughout the project. It makes sense for the customer to become part of the team. After all, both the developers and the customers have the same goal; to deliver valuable software.

**Build Projects:** Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done. Agile projects emphasize self-organizing teams who instinctively are able to manage both themselves and the work. The micromanagement of projects is no longer required or beneficial.

**Face-To-Face Time:** The most efficient and effective method of conveying information to and within a development team is face-to-face conversation. Co-location is the ideal. Osmotic communication - where you absorb some part of the conversation around whether you are part of the actual conversation or not - is a very real benefit of co-location. Unfortunately, development teams are often distributed. If the teams are not co-located, every effort must be made to communicate often and to increase the use of technical communication techniques.

**Measure of Progress:**

Working software is the primary measure of progress. When you focus on following the plan you typically get too involved in updating documentation taking focus off the objective of the project. When you make working software the primary measure of progress you promote it to the primary focus of the project.

**Sustainable Development:** Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely. Think Work/Life Balance. Remember the end of the project dash? Everyone worked almost around the clock to get the project finished. Never mind the impact on quality, how about the impact on the team? Agile strives to maintain a consistent level of activity which translates to consistent velocity. One important result is a better ability to forecast.

**Continuous Attention:** Continuous attention to technical excellence and good design enhances agility. While an elegant design is meaningful even more valuable is a solution that will span the test of time. Perhaps even more importantly a solution that has the ability to be updated to keep it current. What good is an elegant design if it cannot maintain its value through update and maintenance cycles.

**Keep It Simple:** Simplicity! The art of maximizing the amount of work not done essential. Of course, the most reliable features are the ones that are not yet built...they can't fail. But that aside, nearly 30% of the functionality we build is seldom or never used. Agile is ruthless about cutting functionality that does not lend value.

**Organized Teams:** The best architectures, requirements, and designs emerge from self-organizing teams. Self-organizing teams that are cross functional as well. Who better to recognize issues before they become real impediments; of course, the people closest to the solution.

**Reflect for Effectiveness**: At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly. We've all been on projects that end with an AAR, After Action Review. These reviews help the next project but not the one you just finished. Agile defines several ceremonies and important among those is the Retrospective. Generally held at the end of each Sprint/Iteration it is a way for teams to catch and improve behaviors before they have a huge, detrimental impact on the project.

Question 2

Question 3

Universities teach project management to information technology (IT) students. The project management principles that students previously have learned often are put into practice in a project course that is intended to give final-year students the experience of applying their knowledge to real or simulated projects

191Project Management in Student Information Technology Projects Introduction Universities all over the world teach project management to information technology (IT) students (Goold, 2003; Reif & Mitri, 2005; Stein, 2002). The project management principles and system development methodologies students have previously learned are often put into practice in an IT project course, intended to give final year IT students the experience of applying theoretical concepts and practical techniques to real or simulated student projects (Batra & Satzinger, 2006; Ellen & West, 2003). The research reported in this chapter investigates the use of, and usefulness of, project management in student IT projects. Student projects are usually defned and scoped to run on a one or two semester basis within an academic program and are not as complex as industry projects (Jih, 2003). Within the time limitation placed on these projects, students have to plan, design and implement their systems and create relevant documentation. While student projects are not comparable in size and complexity to industry projects, the rigor expected is the same as for industry projects. Past experience reveals that IT students And it difficult to manage their project for reasons such as lack of understanding of project management tools and techniques (Abernethy & Piegara, 2007; Lowe, 2000; Pournaghshband, 1990).The Project Management Institute’s (PMI) ‘project management body of knowledge (PM-BOK)’ provides a solid base of standards, procedures and practices for managing all types of projects and is used by many organizations to apply project management principles to projects (Freedman, 2002). The goal of project management guidelines is for project managers to achieve better outcomes in projects. IT students can also make use of project management guidelines to try and achieve the same goal. Project Management and the PMBOK Guide Project management is defined by the PMI as the application of knowledge, skills, tools, and techniques to project activities to meet project requirements (Project Management Institute, 2004). The PMBOK Guide is a handbook that provides broadly accepted knowledge and practices that are generally applicable to most projects. There has been widespread consensus as to the value and usefulness of these guidelines (Schwalbe, 2004). The PMBOK Guide consists of I’ve project management process groups, and is also divided into nine key sections called the project management knowledge areas. These knowledge areas are further divided into their component project management processes, which describe the activities that need to be fulfilled for each knowledge area. In addition, each of the nine knowledge areas has specific project management tools and techniques which help to carry out the activities in each process. The project methodologies and practices presented in the PMBOK Guide are used to control and manage projects and cover every aspect of project development. The Role of Project Management in IT Projects Generally, project management is considered important for three reasons. First, project management can clarify a project’s goals because it makes the project manager produce documentation which identifies the project’s unique characteristics which have to be addressed throughout the project. Secondly, project management will enable a project manager to identify the required resources, thus assuring the project’s stakeholders that resources are being effectively managed. Finally, project management can help to succeed

Project Management in Student Information Technology Projects in the achievement of both project and organizational goals. There has been some research into the value of project management in IT projects. An early study by Pinto and Slevin (1988) tested the importance of factors that are believed to be critical to project success. Each of the critical factors was tested independently against project success and the results showed that having a project schedule and plans was significantly related to project success. They concluded that project managers need to create project schedules and plans and use them on a regular basis. More recently, the Standish Group’s CHAOS project investigated the scope of software project failures and the major factors that cause software projects to fail. The results showed that project success rates have increased since 1994 and that this is partially attributable to better project management, including the availability of better tools to monitor and control progress, better skilled project managers, and better management processes (The Standish Group, 2001). This study also found that 46 percent of successful projects used a formal project management methodology, compared to 30 percent of challenged and failed projects. Hence, having a formal project management methodology appeared to increase the chances of success by about 16 percent (The Standish Group, 2001).This research is supported by the endings of Aladwani (2002), who studied the mediating effect of project planning between three project uncertainty variables and IT project success, and showed that IT project planning was the most important contributor to IT project success. Gowan and Mathieu (2003) tested a model of the relationship between technical complexity, project size, use of a project management methodology and project performance. The results showed that the use of a formal project management methodology is positively related to project performance, particularly when project size is large.This research illustrates the value of apply-ing project management practices to IT industry projects and hence it is vital for IT students to learn and apply the standard practices to manage projects successfully. Phillips, Fairholme and Luca (1998) noted that while student project teams address some project management issues, many focus more on the development of the product. IT students need to be aware of the value of project management and they need to be encouraged to use project management principles. Du, Johnson and Keil (2004) conducted a project to and out what project management topics are being covered in information systems curriculums, and concluded that project manage-mint practices have not been fully incorporated into university IT degree programs despite the increased emphasis on project management in the most recent Information Systems model curriculum (Gorgone et al., 2002). They argue that preparing future IT graduates to apply project management guidelines will increase the suc-cess rates of industry projects. This view is also reflected by Reif and Mitri (2005).RESEARCH QUESTIONS The study reported in this chapter was conducted to explore the use of, and usefulness of, project management in student IT projects. It consid-ered both project management in general, and more specifically, the application of PMBOK guidelines.Phillips, Fairholme and Luca (1998) argued that it is important for IT students to be aware of project management guidelines. Therefore, the first research question relates to awareness of project management principles:• Are IT students aware of project manage-ment principles that can be applied to student projects?

IT is more pervasive in our society than ever and more organizations are using IT as a competitive advantage. With this increased importance, a major need has risen in the IS community. Project Management skills are now just as important as coding skills. Millions of dollars may be lost on IT projects, largely due to poor project management skills.

**References**

* Arvind Rongala –August 26th 2019 “5 phases of project management life cycle you need to know”
* <https://www.apm.org.uk/resources/find-a-resource/agile-project-management/>
* <https://www.smartsheet.com/comprehensive-guide-values-principles-agile-manifesto>
* <https://www.cgi.com/us/en-us/life-sciences/blog/12-principles-of-agile-methodologies>
* M.D. Rojas ,Tanya Jane McGill ,Arnold Depickere- January 2006 “Project Management in Student Information Technology Projects” (<https://www.researchgate.net/publication/43980863_Project_Management_in_Student_Information_Technology_Projects>)