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Technology Project Management
Critique of Research Papers

Group B

Team Number 2

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Overall introduction:

Technology project management is the study of technology and managing software and non-software industries. Day by day technology is increasing and making customers' life better. The overall purpose of this paper is to examine three articles and perform a critique. This paper has a critique review on '**An Agile, Intelligent and Scalable Framework for Global Software Development**', '**New Fundamentals for CSCW Research: From Distance to Politics**', and '**The Impact of Agile Methods on Software Project Management**'. The aim of this paper is to determine the article's purpose and to critique all three articles from a project management point of view. Since Agile approaches are playing a significant part in global software development (GSD) and are helpful in resolving GSD difficulties, this article was chosen. The reason for selecting the second article is to show the collaboration across the distance. The idea for selecting the third article is related to the first article and aids in determining the influence of agile approaches in the industry.

Critique 1: "An Agile, Intelligent, and Scalable Framework for Global Software Development"

Introduction:

The article An Agile, Intelligent and Scalable Framework for Global Software Development was created by Raja Asad Zaheer, Aisha Tanveer, Hafza Mehreen Fatima in 2016.

Every software sector is interested in global software development (GSD), as businesses are aware of the issues that can arise from communication and coordination in the absence of connections around the world. As the technology grows, individual work is reduced because of new software techniques, so this framework is designed to overcome the GSD issues and it provides some special values to analyze the existing project problems. A globally shared knowledge will make it simple for new businesses to adopt the best practices already being used by established ones. As per this entire study, researcher found these agile methodologies are very useful for growth and the budget (Zaheer et al., 2016).

Summary:

After technology improvement, companies need to update their methods to achieve their goals. GSD is the process by which decentralized groups can create software over a variety of regions. The purpose of this article is to find out the challenges for Global software development and explain how agile methodologies are helpful to solve these issues.

The author proposed two agile frameworks for the organization which will be suitable. Those are the Agile transition engine, Agile validation engine, and issue resolution (Zaheer et al., 2016). Agile validation is useful for validating the existing agile framework for the organization and suggests if any changes are necessary. Analyzing the cause of the issue (Issue analyzer) and finding a solution can be handled by issue resolution. Later all these are connected to the Knowledge consolidator which acts as a repository. This entire framework was not well defined and there is no proper proof of work.

The article proposed Agile methodologies are the best solution and the author focused only on Scrum techniques and XP techniques/tools (Zaheer et al., 2016).

Critical evaluation:

Raja Asad Zaheer, Aisha Tanveer, Hafza Mehreen Fatima presented this article in 2016 and entire work is done objectively.

The aim of this project is to find the challenges faced by organizations and suggest better agile methodologies for GSD to solve those problems. To get the most out of GSD, a scalable, extensible, self-learning, intelligent framework will help build and evaluate it (Zaheer et al., 2016).

According to researcher review, there are a few points to note down for GSD. They are List of Challenges, provided challenges and frameworks for GSD.

Agile methods have some special improvements like scrum meetings every day and sprint planning for two days which makes the active team, and this article covered this point nicely (Zaheer et al., 2016). Agile project team members' transparency and clarity are increased through the use of the Scrum methodology.

The author failed to take the daily feedback from employees, which will help clients to understand employee problems and resource issues. This feedback will be very useful for improving communication between them and help in filling the resource gaps.

Creating knowledge centres is the best idea to share everyone's ideas and for brainstorming, but the author is not addressed this point. Expressing individual thought processes and new ideas for project improvement is a very good idea for establishing a new workspace.

Taking anonymous feedback is also important because colleagues have some internal issues or maybe they have problems with higher officials' behaviour. At this point, employees won't be able to share the data directly so this process will be helpful.

Conducting a survey from the investors whether the designed framework is efficient or not will be very useful and the author missed touching on this point while explaining the framework.

The Author described some key points, including Communication and Coordination, Temporal difference, Knowledge sharing, Cultural difference, and Speed, however, no project-based examples have been provided (Zaheer et al., 2016). The negative point of this article is lack of concrete examples.

Conclusion:

The entire research is about how GSD overcomes the problems of traditional methods by using Agile technology. Here we analysed all the challenges faced by organizations and tried to find the best-suited agile methods for managing GSD (Zaheer et al., 2016). The theoretical framework was used by the researchers to identify the challenges and problems that employees face both locally and globally. The article describes the Global Software Impediments and lists the difficulties that arise when trying to deploy them globally.

The major flaw of this paper is the adoption of an agile system framework, which cannot be applied universally and must periodically alter based on the requirements of the workforce and the business.

Critique 2: “New Fundamentals for CSCW Research: From Distance to Politics”.

Introduction:

The paper is “New fundamentals for CSCW research: From distance learning to politics” by “Pernille Bjorn” which was published in 2016. The author mentioned a famous paper that was published fifteen years ago by Gary and Judith Olson, which said distance is a huge problem in collaborative settings. Pernille Bjorn is a professor at CSCW in the Computer Science department. The main purpose of this paper is to design collaborative technologies which mainly focus on the politics behind work conditions (Bjorn, 2016). There are four main distance attributes, from which the best collaboration across distance takes place in closely coupled work environments. In distance collaboration, it is important to enable stable, accessible, and available technologies to facilitate the extra work of creating socio-technical connections.

Summary:

The research paper written by Bjorn in 2016 gives us ideas about collaboration and how distance is an important factor in collaborating. As technology advances, it is important to maintain the advancement of collaboration between team members to achieve success in projects. In this paper, the author mentioned four main attributes of distance framework: Common ground, collaboration readiness, Collaboration technology readiness, and coupling of work (Bjorn, 2016). The main aim of their search is to overcome the challenges while communicating with people at different locations and times.

Critical evaluation:

The author of this paper (Bjorn, 2016) has conducted research on basic CSCW principles in distance to politics under a framework that uses a specific approach to collaboration tools. This paper is a collaboration from distance in which there are four main attributes of distance common ground, collaboration readiness, collaboration technology readiness, and coupling of work. The author mentioned that

common vocabulary and understanding of interaction is the main problem that can be solved by creating and developing a shared language (Bjorn, 2016). However, she failed to give details about the process and techniques which are followed. Vocabulary issues could be solved by providing professional language training for each new employee. In Collaboration readiness, the author said that distance, time, culture, professions, technology, and work practices are the challenges while collaborating (Bjorn, 2016). But she didn't mention the process or methodology which can help to overcome the problem. The time and culture issue can be solved by providing a flexible work schedule for employees so that they can communicate with other employees accordingly. This paper has some case studies, GLOBALSOFT is a study in which she spent time with Danish and The Philippines for 3 years but failed to give details about what observations were done and which methods were applied. The INIT case study has details about how much time they spent as they went to Bangalore (India) and Europe. Although she didn't mention what they studied, and which process they used to overcome collaboration challenges.

Conclusion:

This article (Bjorn, 2016) provides a brief overview of collaboration and its attributes that helped her to overcome challenges regarding collaboration over distance and politics. However, there is a scope for improvement in the future as the author fails to mention appropriate solutions for collaboration issues. Collaboration is discussed briefly in the research, along with the factors that affect these attributes in the management of organizational aspects, such as outsourcing problems and distance work problems caused by organizations because the length of time is a barrier to work, and developers face increased pressure to produce better results. The author mentioned that we could create a future environment in which employees are empowered in a friendly and supportive way for remote cooperation so that we can mitigate risks and maintain humanity.

Critique 3: “The Impact of Agile Methods on Software Project Management”

Introduction:

A critical review has been done on the Impact of Agile Methods on Software Project Management. The authors Michael Coram and Shawn Bohner discussed concepts on how different agile methods are involved, processed, developed, and evaluated projects. Agile methods have been created in different work environments. Different methods were utilized in software project management like XP, SCRUM, and DSDM. The main motive of this paper is to improvise students, practitioners, and managers with a relevant agile methodology for further use in developing software projects.

Summary:

The primary goal of the research is to provide details on several agile approaches, including dynamic system development, scrum, and extreme programming. Furthermore, this paper gives knowledge through different improvised methods on the outcomes of different software projects. The project roadmap is crucial since it serves as the system's architecture and makes it possible for modifications because it is rightfully pointed out. The writers have discussed how various entities such as executive management, testers, developers, clients, teams, and others have an impact on project management. Additionally, as the use of software development processes within planning, development, and documentation has a significant impact on project management activities, they are also highlighted.

Critical evaluation:

The author Michael Coram and Shawn Bohner proposed the article called ‘The impact of Agile methodologies on Software Project management. This entire article is presented objectively to find the impacts and usage of different agile methodologies which will help project growth. The goal of this research is to establish how agile methodologies will help to reach project success and to identify the flaws of the techniques for the failure of project management (Coram & Bohner, 2005). The author covered all the areas where project managers need to focus while

taking the agile methodologies before initiating the project. The aim to react fast to changing circumstances, agile methodologies are particularly beneficial for projects with insufficient and flexible requirements. Projects that changed are likely to have a substantial influence on them including those that use cutting-edge technology or those that the company has never done before (Coram & Bohner, 2005). The objective of this paper is reached because this article offered an in-depth explanation of the agile approaches that are essential to the success of the project. The dynamic system development method is the good agile methodology among all the three methods, the reason behind this is it finds the resources first and fixes the time.

The positive point about this article is that the author has taken highlights from other investigations and highlighted its shortcomings for better improvement.

The researcher failed to give the proper process for a successful project as they only concentrated on the refining part of the software development management. The flaw in this article is that the author is mentioning that adapting to new software techniques is very difficult for employees because of a lack of knowledge about the resources. This issue can be solved by giving training to employees about new software and tools.

One week to one month is the length of each Sprint. Before the system is finished being developed, three to eight sprints are run (Coram & Bohner, 2005). The author was unable to concentrate on the idea of what would happen if the developer failed to complete the goal inside the sprint. Because the production delivery date would be delayed if the stories are forwarded to the following sprint.

Planning is the key principle for agile methodologies, and the author mentioned it clearly about planning. The author's point of view is to make the perfect planning method before initiating the project otherwise improper planning leads to failure in results.

Conclusion:

The critical evaluation has been done on the research paper written by Michael Coram and Shawn Bohner, which has given appropriate objectives on agile methodologies. The authors must have placed a strong emphasis on giving contrast and comparative evaluation of agile approaches in various contexts. In this paper, methods and phases have been described but not mentioned under what circumstances these agile methods are utilized. Due to a lack of awareness of agile technologies, the agile approaches won't be appropriate for all local and global projects.

Overall Conclusion:

The article describes the Global Software Impediments and lists the difficulties that arise when trying to deploy them globally. The article 'An Agile, Intelligent and Scalable Framework for Global software Development' aimed to examine the challenges, providing frameworks, and mentioned which technology is suitable. 'New fundamentals for CSCW research: From distance learning to politics' is article which provides brief overview of the collaboration across the distance and overcome the challenges regarding collaboration. 'An impact of Agile methods on software project management' article successfully explained how agile methods are effecting software development with brief examples.

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