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Problems in The Adoption of Agile-Scrum Software Development Process in Small Organization: A Systematic Literature Review

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Abstract: Agile methods are becoming increasingly popular in modern corporate strategies, which represents a paradigm change in project management techniques. The concept of pragmatic agility has become essential for enterprises to manage the complexities of ever-changing contexts. However, some organizations—especially small ones with limited resources—face unforeseen difficulties while implementing Agile-Scrum software development. In order to clarify the challenges small businesses, encounter throughout this adoption process, this study combines ideas from fifteen studies into a thorough and systematic analysis of the literature. The issues that have been discovered may be categorized into four primary areas: technology, people, process, and organization, and agile techniques. Organizations are able to anticipate obstacles by using a comprehensive understanding provided by the methodical examination and classification of situations. This proactive approach is essential to preventing unfavorable outcomes, as those seen in the past when implementation errors were made worse by culture problems, insufficient support from upper management, and waning consumer cooperation. This research provides small firms with a navigational aid by synthesizing lessons from the literature, enabling them to plan an Agile-Scrum adoption process that is more smoothly executed. Organizations may enhance their preparation, protect themselves from frequent traps, and ultimately maximize the transformative potential of Agile techniques in their developmental undertakings by adopting these insights.

Keywords: agile; agile software development; scrum adoption; systematic literature review; adoption problem

INTRODUCTION

Social and economic changes have become a major drive for startups to keep innovating and going digital (Rasheed et al., 2021). Organizations were competing to make a digital product that could meet the needs of their customers. This condition became a significant influence on the implementation of information technology in the organization. The organization also needs to ensure that the digital product to be launched is in accordance with the business strategy and objectives of the organization. Small organizations face more challenges because, even with limited resources, they must compete in the industry. According to ISO/IEC 29110, a small-scale organization is an organization that has fewer than 50 employees. Fewer employees provide a positive advantage yet also provide challenges in the software development process for the digital product.

To create a digital product, a series of procedures known as the software development process must be completed. Agile software development is one of the most well-liked software development approaches. There are many frameworks available in the area of agile development, with Scrum serving as a notable example. Scrum is a methodology for agile software development that gives team members the freedom to manage their own work while fostering accountability, cross-functional cooperation, and ongoing learning through an iterative process (Palomino, Dávila, Melendez, & Pessoa, 2017). Small and large organizations have been starting to use this methodology because of its ability to help the organization be prepared for a dynamic environment and an uncertain future. Many organizations have achieved success and had a good impact from the implementation, but several organizations were struggling with failure.

According to the research findings in Sahota's work, the percentage of failure in agile software development for small-to-medium companies in 2020 was 84% (Skala, 2019). The level of failure for large organizations is more common in the industry compared to the failure rate of implementation in small organizations. As Kelle,

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2015, stated in his research, agile software development is more suitable for small teams, small projects, and small companies (Reginaldo & Santos, 2020) . The reality keeps hitting, and some small organizations experienced unsuccessful implementation and were facing enormous challenges and problems they were not prepared for. This unsuccessful development could lead to another problem for the organization.

The purpose of this study is to determine the potential problems for small organizations to face in the adoption of Agile-Scrum software development. Knowing the key problems will generate an understanding of the probability of the situation and the potential risk. It will be the key consideration for the company in the adoption. This understanding allows the company to have proper preparation and risk mitigation to minimize problems and failure. This study used a systematic literature review to gather reliable findings from researchers related to key problems in the agile software development process for small organizations. Many previous studies summarized the key problem of implementation for large-scale organizations, but no research was conducted to summarize the problem that was likely to happen for implementation in a smaller organization.

LITERATURE REVIEW

Software Development

Software development starts with the activity of gathering user requirements to meet user needs (Schwaber & Sutherland, 2020). In software development, four main activities must be carried out in the process, as follows:

The software development life cycle encompasses several key stages that collectively contribute to the creation and maintenance of effective and user-centric software. The first stage involves software specification, where the identification of requirements, features, and the overall scope of development takes place. This crucial step lays the foundation for subsequent actions, ensuring a clear roadmap for the software's functionalities. Following this, the software design and implementation phase come into play, where detailed specifications are crafted based on the user requirements previously gathered. This stage involves the actual creation of the software, translating conceptual designs into tangible, functional code.

Once the software is developed, the focus shifts to software validation—a meticulous audit process designed to confirm that the entire development aligns with the established goals and fulfills user needs. This step is pivotal in ensuring that the software functions as intended and meets the expectations set during the earlier stages. Lastly, the software evolution stage recognizes the dynamic nature of user requirements over time. It involves ongoing updates and modifications to the software to keep it aligned with evolving user needs. This iterative process allows the software to adapt and grow, ensuring its relevance and effectiveness in an ever-changing technological landscape. Together, these stages form a comprehensive framework that guides the development, validation, and evolution of software systems.

Several models can be used in software development. These models can be adopted based on the circumstances of the organization and the aspects of consideration in development (Akbar, Sang, & Khan, 2017). There are six main aspects to be considered in the software development process. Those aspects are scope, scheduling, budget, risk, resource, and quality. Akbar et al., 2017, stated in their research how to improve the quality of software development with a new methodology called the A-Z model (Akbar et al., 2017). Software Development

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distinct approaches to managing the complexities of the development process. The Waterfall method is employed when user requirements are well-defined, though it poses challenges in adapting to changes and improvements. The Iterative method allows for cyclical progression, addressing requirements incrementally, but grapples with difficulties in managing user involvement and making conclusive decisions. Rapid Application Development (RAD) relies on a skilled team to model user requirements efficiently. The Rational Unified Process (RUP) focuses exclusively on functional requirements, potentially limiting its scope. The Spiral method, albeit comprehensive, introduces complexity through the demand for numerous documents. Agile methodology emphasizes user interaction and iterative development, fostering team collaboration. Finally, the V-Model, characterized by high uncertainty and risk, is deemed unsuitable for certain contexts due to these inherent considerations. The diversity in these methods provides organizations with flexibility to choose an approach that aligns with their specific project needs, balancing factors like user involvement, adaptability, and risk tolerance.

Agile-Scrum Software Development

Scrum is a framework that can help teams and organizations generate value through adaptive solutions to solve complex problems in the organization (Altuwaijri & Ferrario, 2021). Schwaber & Sutherland also describe on Scrum Guide that Scrum also helps an organization achieve its goals and create value with the philosophy, theory, and structure applied to agile principles (Altuwaijri & Ferrario, 2021). An iterative and incremental approach is used in Scrum to optimize prediction and risk control. To support those approaches, three pillars must be adhered to throughout the whole process of development. Those pillars are transparency, inspection, and adaptation.

The Scrum team consists of at least one Scrum Master, one project owner, and developers. Scrum has no sub-teams or hierarchical structure. Scrum teams with less than ten members can maintain agility and team communication and are likely to be able to complete important tasks in a sprint. In Scrum, there are several events to be carried out to provide project transparency and monitor the progress of each member of the team. All Scrum events are opportunities to inspect and modify Scrum artifacts. Those events are the release planning meeting, sprint planning meeting, daily scrum, sprint, and sprint retrospective. In the process, scrum also produces three main objects called artifacts as deliverables in the development process. There are product backlogs, sprint backlogs, and increments (Altuwaijri & Ferrario, 2021).

Failure Research in Agile Software Development Projects

According to Chow's 2008 survey study employed a quantitative methodology to explore the essential factors for success in Agile software development projects. The study reviewed success factors documented in the agile literature, conducted reliability and factor analyses on these elements, and then consolidated them into a final set of 12 potential critical success factors for each of the four project success categories: quality, scope, time, and cost. Although certain project types offer valuable insights and challenges, most of them have enough characteristics in common to permit generalization. Four main areas can be used to summarize and arrange these findings: people, process, organization, and technical (Chow & Cao, 2008).

METHOD

A systematic literature review entails a thorough evaluation of scholarly articles, books, journals, and reliable sources in order to integrate research findings related to a particular area of inquiry and incorporate known theories (Reginaldo & Santos, 2020). The goal of this study is to provide a thorough summary, identify any knowledge gaps that may exist, provide a broad perspective, and provide a variety of opinions that may be useful for future research projects as well as the general public.

According to Kitchenham, 2007, there are three main activities in the systematic literature review. The first activity that needs to be carried out is SLR planning. The second activity is SLR implementation, and the last activity is SLR reporting (Barbara Kitchenham, 2014). The detailed process of the activity can be accessed in Fig 1.

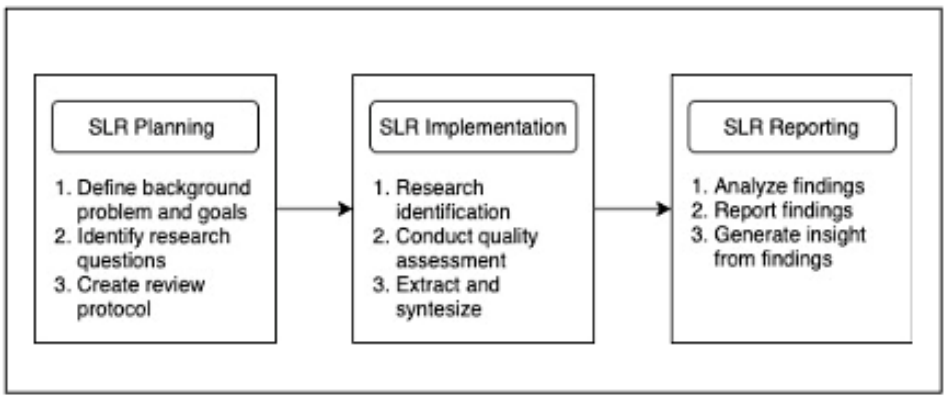

Fig 1. SLR Process

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SLR Planning

The first stage in systematic literature review is SLR planning. In this stage, the researcher defines the urgency and the background problem of the study. The researcher also needs to define a review protocol, define the PICOC (Population, Intervention, Comparison, Outcomes, and Context) framework as a guide to research question identification, generate research questions, and use search process strategies such as search strings, inclusion criteria, and exclusion criteria for publication(A. Mishra, Abdalhamid, Mishra, & Ostrovska, 2021). The PICOC framework can be seen in Table 1.

Table 1. PICOC FRAMEWORK

Population	Project, Project Management, Software Development, Small Organization.
Intervention	Adoption, Scrum Methodology, Agile Software Development.
Comparison	None
Outcomes	Key problems in Agile-Scrum Software Development Adoption for small organization.
Context	Studies in Organization or Academia, small scale and large scale data.

After the scope and focus of the study were generated using the PICOC framework, the researcher needed to define the research question of the study and its motivation. The research question and motivation of this study are shown in Table 2.

Table 2. Research Question

Research Question	What are the key problems in the adoption of Agile-Scrum Software Development in small organizations?
Motivation	Identify key factors problems in the adoption of Agile-Scrum Software Development process in small organization?

The strategy used in this research is to create a search string based on the keywords generated in PICOC. In addition, we also looked for synonyms for those keywords to increase the frequency of their occurrence in the expected research.

Search String:

(“software development” OR “scrum” OR “agile” OR “agile software development” OR “agile development”) AND (“small organization” OR “startup OR "sme" OR "small enterprise" OR "small medium enterprise") AND (“problem*” OR “challenge*” OR “barrier*” OR “identif* OR "adopt*" OR “factor*” OR “transform*” OR “transition” OR “migrat*”)

Inclusion and exclusion criteria are used to ensure the selected studies are reliable, related to the focus study, and reflect the current situation. The criteria for inclusion and exclusion in this study are presented in Table III.

Table 3. Criteria of Filtering Literature

ID	Criteria	Type
IN1	Publication year in the period of 2014-2021.	Inclusion
IN2	Publication are written in English.	Inclusion
IN3	Publication in the form of journals, books, book chapters and proceedings.	Inclusion
IN4	Publication can be accessed in full-text version document.	Inclusion
IN5	Publication are related with the studies, methods and population.	Inclusion
EX1	Publication are an opinion, non-research books, articles, magazines, blogs, or websites.	Exclusion
EX2	Publication generates statement without strong validation.	Exclusion

The second stage of a systematic literature review is SLR implementation. In this stage, all the defined plans from the previous stage are conducted. The reliability of the publication is one of the most important aspects of the research. In this study, we used a reliable digital library such as ACM Digital Library, IEEE Explore, Scopus, Science Direct, and Springer Link to ensure the credibility of the publication.

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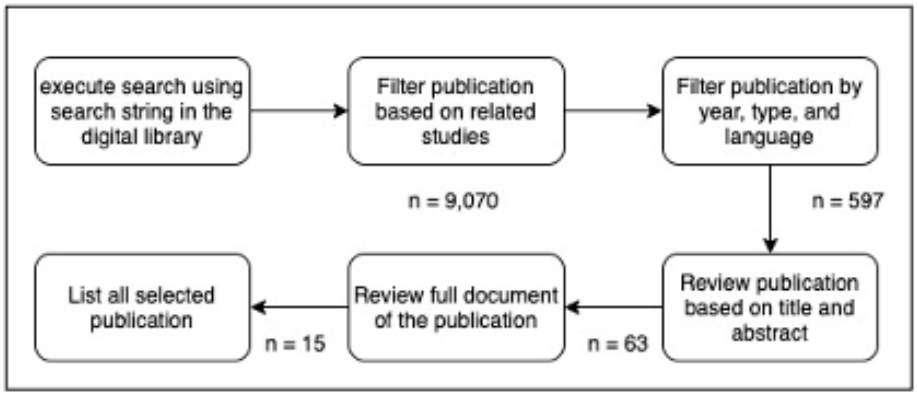

Fig 2. Search Process

The search process was divided into six specific activities that can be seen in Figure 2. Automatic search is the strategy to filter publications using the search string defined in the previous section. Another filtration was then executed to ensure the publications were related to the study. The result of this process generated 9,070 publications. Reliable and time-variant are also significant considerations for this study, and then we added year, type, and language filter. This process generated 597 publications. After collecting reliable publications, they need to be reviewed based on their title and abstract to ensure alignment with the focus study. 63 publications are selected to be reviewed based on the full-version document. The final outcome of the entire process included 15 publications. Following the synthesis and extraction processes, the combined count of the selected publications will be applied, taking into consideration the associated database sources, as shown in Table 4. Those publications will be assessed to evaluate the quality of the research and findings.

Table 4. Selected Paper

Database	Total Paper
ACM Digital Library	4
IEEE	2
Scopus	2
Science Direct	2
Springer Link	2
ProQuest	2
Wiley	1
Total	**15**

The assessment questions are used to ensure the quality of publications. In this study, three questions are generated to assess publication as an extension to strengthen the inclusion and exclusion process. The questions of publication-quality assessment are shown in Table 5.

Table 5. Quality Assessment Questions

Q1	Is the discussion in publication within the scope of the study, method, and population?
Q2	Does the publication provide strong validation of the statement?
Q3	Were the data collection and analysis method reliable?

In the assessment process, each publication will be measured against every assessment question. The publication will be rated 1 if the quality is not good enough, 2 for adequate, and 3 for good quality. The total score of this assessment requires a 4.5 score at the minimum to pass the quality assessment process. The results of this activity can be accessed in Table VI.

Table 6. Quality Assessment Result

ID	Reference	Q1	Q2	Q3	Total
P1	(Fontana & Marczak, 2020)	3	3	3	9
P2	(Hajjdiab & Taleb, 2011)	2	3	3	8
P3	(Reginaldo & Santos, 2020)	3	3	3	9
P4	(Sahota, 2012)	3	3	3	9

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P5	(Abdalhamid & Mishra, 2017)	2	3	3	8
P6	(Gupta, Manikreddy, & Arya, 2017)	2	3	3	8
P7	(Chow & Cao, 2008)	3	3	3	9
P8	(Altuwaijri & Ferrario, 2021)	3	3	3	9
P9	(Raharjo & Purwandari, 2020)	3	3	3	9
P10	(Rasheed et al., 2021)	2	2	3	7
P11	(Inayat, Salim, Marczak, Daneva, & Shamshirband, 2015)	2	3	3	8
P12	(D. Mishra, Mishra, & Abdalhamid, 2023)	3	3	2	8
P13	(Mamoghli & Cassivi, 2019)	3	3	2	8
P14	(Reginaldo & Santos, 2020)	2	3	3	8
P15	(Julian, Noble, & Anslow, 2019)	3	3	3	9

SLR Reporting

The last stage of a systematic literature review is SLR reporting. In this stage, all selected publications will be used to find key problems in Agile-Scrum software development adoption for small organizations. All the selected papers in this study can be seen in Table 7.

Table 7. Selected Publication

ID	Title	Year	Ref
P1	Challenges in Agile Transformation Journey: A Qualitative Study	2020	(Fontana & Marczak, 2020)
P2	Facilitators and inhibitors of Agile methods adoption: Practitioners view	2023	(Hajjdiab & Taleb, 2011)
P3	Organizational issues in embracing Agile methods: an empirical assessment	2020	(Reginaldo & Santos, 2020)
P4	Agile ERP Implementation: The Case of a SME	2019	(Sahota, 2012)
P5	Characteristics and Challenges of Agile Software Development Adoption in Brazilian Government	2020	(Abdalhamid & Mishra, 2017)
P6	Transitioning from Plan-driven Methods to Agile Methods - Preparation for a Systematic Literature Review	2020	(Gupta, Manikreddy, & Arya, 2017)
P7	Factors affecting Agile adoption: An industry research study of the mobile app sector in Saudi Arabia	2022	(Chow & Cao, 2008)
P8	A Framework for the Adoption of Agile within Software SMEs in Saudi Arabia	2021	(Altuwaijri & Ferrario, 2021)
P9	Agile Project Management Challenges and Mapping Solutions: A Systematic Literature Review	2020	(Raharjo & Purwandari, 2020)
P10	Requirement Engineering Challenges in AgileSoftware Development	2021	(Rasheed et al., 2021)
P11	Agile Adoption Experience : A Case Study in the U.A.E	2021	(Inayat, Salim, Marczak, Daneva, & Shamshirband, 2015)
P12	Adopting of Agile methods in Software Development Organizations: Systematic Mapping	2017	(Mishra, Mishra, & Abdalhamid, 2023)
P13	Factors in Agile Methods Adoption	2017	(Mamoghli & Cassivi, 2019)
P14	Pragmatic Scrum Transformation: Challenges, Practices & Impacts During the Journey A case study in a multi-location legacy software product development team	2017	(Reginaldo & Santos, 2020)
P15	Agile Practices in Practice: Towards a Theory of Agile Adoption and Process Evolution	2019	(Julian, Noble, & Anslow, 2019)

RESULT

Four areas were used to group the study's findings: people, process, organization, and technical. All identified problems in Agile-Scrum software development adoption for small companies generated from fifteen resources can be seen in Table 8.

Table 8. Identified Problems

Problems	Publication	Total
People		
Lack of collaboration and communication	[P1], [P3], [P7], [P8], [P9], [P13], [P14]	7
Resistance to the change.	[P1], [P5], [P7], [P8], [P13], [P15]	6
Team members had individual goal	[P5], [P6], [P13]	3
Lack of skill and knowledge	[P7], [P8], [P9]	3

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Unaligned team	[P9], [P13]	2
Lack of commitments	[P2], [P9]	2
Lack of Participatory decision making	[P9], [P14]	2
Rotating team member	[P9]	1
Wrong mindset	[P14]	1
Team size	[P3]	1
Process		
Customer collaboration	[P2], [P5], [P7], [P8], [P9], [P10], [P13], [P15]	8
Agile practices customizing	[P1], [P2], [P5], [P7], [P8], [P12], [P15]	7
Requirement change	[P2], [P3], [P6], [P9], [P10], [P13]	6
Documentation requirements	[P5], [P10], [P11], [P13], [P15]	5
Planning Prioritization	[P3], [P6], [P9], [P10], [P15]	5
Lack of the right Agile practices	[P2], [P11]	2
Inconsistent processes and practices	[P1], [P2]	2
Scope definition	[P10], [P13]	2
Project size	[P3], [P9]	2
Difficulties in identifying alternatives and requirements for adoption	[P1]	1
Integration challenge	[P4]	1
Organization		
Cultural issues	[P1], [P3], [P4], [P5], [P6], [P7], [P8], [P9], [P12], [P13], [P14]	11
Top management commitment	[P1], [P3], [P5], [P7], [P9], [P8], [P9], [P11], [P14], [P15]	10
Inadequate management support	[P1], [P3], [P7], [P8], [P9], [P13], [P15]	7
Defining the business value	[P1], [P5], [P12], [P13]	4
Insufficient or inadequate training	[P1], [P5], [P7], [P8]	4
Quality control	[P2], [P6]	2
Work pressure	[P6], [P11]	2
Lack of formal guidance	[P5]	1
Addressing Organization Limitations	[P8]	1
Measuring agile success	[P5]	1
Unclear role position	[P11]	1
Adoption of agility with a commercial focus	[P1]	1
Technical		
Tools and technology are Inappropriate	[P7], [P8], [P12]	3
Lack of tracking mechanisms for Agile progress.	[P2], [P10], [P13]	3
Tools for validation process	[P2], [P10]	2

People

People management was always the main problem in organizational transitions. Lack of collaboration and communication by the team has a significant impact on the success of the implementation (Fontana & Marczak, 2020) (Hajjdiab & Taleb, 2011)(Reginaldo & Santos, 2020)(Chow & Cao, 2008) (Raharjo & Purwandari, 2020) (Mamoghli & Cassivi, 2019) (Reginaldo & Santos, 2020) (Julian, Noble, & Anslow, 2019). Developers and other roles in the team tend to focus on their individual goals and are not aware of the organization's goals (Abdalhamid & Mishra, 2017) (Gupta, Manikreddy, & Arya, 2017) (Mamoghli & Cassivi, 2019). The small number of employees causes the organization to put their employees in several projects, and the rotation of team members has no pattern (Raharjo & Purwandari, 2020). Other important issues of adoption in resistance to change (Fontana & Marczak, 2020) Organizations need to pay attention to these issues by motivating employees to understand how powerful this methodology is. Lack of participatory decision-making (Raharjo & Purwandari, 2020) and lack of skill and knowledge, a wrong mindset of agile practice, team size, and employee commitment would also become problems in the adoption.

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his section, the researcher will explain the results of the research obtained. Researchers can also use images, tables, and curves to explain the results of the study. These results should present the raw data or the results after applying the techniques outlined in the methods section. The results are simply results; they do not conclude.

Process

The adoption process needs a well-considered plan. The inconsistency of the process, adoption alternatives, the requirement change process, document requirements, integration with other methodologies applied in the company, plan a prioritization, and also scope definition. This process will clarify the practice to the main goals and maintain the alignment of the adoption (Gupta, Manikreddy, & Arya, 2017) . One of the main problems experienced by small organizations while adopting this methodology is a lack of understanding of the concept and principles (Hajjdiab & Taleb, 2011)(Inayat, Salim, Marczak, Daneva, & Shamshirband, 2015). Most organizations were rushing to apply this concept, given that many other organizations had already used it and achieved benefits for the organization. This category contains specific problems that could potentially become the failure factor of adoption.

Another problem that also needs attention is customer collaboration (Hajjdiab & Taleb, 2011)(Abdalhamid & Mishra, 2017) (Chow & Cao, 2008) (Altuwaijri & Ferrario, 2021) (Raharjo & Purwandari, 2020) (Rasheed et al., 2021) (Mamoghli & Cassivi, 2019) (Julian, Noble, & Anslow, 2019) and project size (Reginaldo & Santos, 2020)(Raharjo & Purwandari, 2020). Agile practice customizing gets the highest number of references (Fontana & Marczak, 2020) (Hajjdiab & Taleb, 2011)(Abdalhamid & Mishra, 2017) (Chow & Cao, 2008) (Altuwaijri & Ferrario, 2021) (Mishra, Mishra, & Abdalhamid, 2023) (Julian, Noble, & Anslow, 2019). Small organizations adopt the whole process of development without aligning the practice with the project.

Organization

Organizational issues play a big role in adoption failure or success. Cultural issues among people in the organization are hard to fix. This is a big challenge for management and top-level employees to initiate and motivate them to change their habits for adoption. To achieve success, organizations need to clarify their definition of success (Abdalhamid & Mishra, 2017), assess their limitations (Altuwaijri & Ferrario, 2021), and ensure the alignment of agile practices with organizational business value. Inadequate training was a major problem; companies were not prepared enough for the training, and in the end, the training itself did not have any impact on the whole transition (Fontana & Marczak, 2020) (Abdalhamid & Mishra, 2017). Other problems to consider were the formal guidance for the process, unclear role position (Inayat, Salim, Marczak, Daneva, & Shamshirband, 2015), quality control and evaluation, and work pressure for all employees.

Technical

Some organizations that have been implementing this methodology were not paying attention to tools and technology to facilitate the whole process of implementation, such as tools for the validation process and tracking agile progress (Hajjdiab & Taleb, 2011)(Rasheed et al., 2021). These tools will help the organization evaluate and audit its running process. Another problem related to technology is incomplete and inappropriate technology. This problem probably arose from the allocated budget for the project (Mishra, Mishra, & Abdalhamid, 2023).

DISCUSSIONS

The research trials on Agile methods reveal a shifting landscape in modern corporate strategies, marking a paradigm change in project management. The significance of pragmatic agility has become evident for enterprises grappling with the complexities of dynamic contexts. However, a notable challenge surfaces, particularly for small organizations with limited resources, as they encounter unforeseen difficulties in implementing Agile-Scrum software development. To elucidate the hurdles faced by small businesses in this adoption process, the study amalgamates insights from fifteen research papers, offering a systematic analysis of the literature.

The identified challenges span four key areas: technology, people, process, and organization, along with Agile techniques. Through a methodical examination and categorization, organizations can gain a comprehensive understanding of potential obstacles, enabling a proactive approach to prevent unfavorable outcomes. Historical implementation errors, exacerbated by cultural problems, inadequate upper management support, and diminished consumer cooperation, underscore the critical need for such foresight.

This research serves as a navigational aid for small firms by synthesizing lessons from the literature, facilitating the planning of a more seamlessly executed Agile-Scrum adoption process. Armed with these insights, organizations can enhance their preparation, fortify against common pitfalls, and ultimately harness the transformative potential of Agile techniques in their developmental endeavors. The study underscores the importance of proactive measures, equipping small businesses to navigate the challenges inherent in Agile adoption and optimizing their strategies for success.

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CONCLUSION

This study conducted a systematic literature review to summarize findings related to Agile-Scrum software development adoption for small organizations. The result of this study found that the key problems of adoption were generated by various factors, such as the understanding of people issues, unclear processes, organization readiness, and technology to facilitate the whole agile process.

The primary issues highlighted as potential causes for adoption failure in this study predominantly revolve around cultural issues within the organizational area, which were mentioned a total of eleven times. Subsequently, the study identified top management commitment as another critical factor stemming from the organizational area, along with customer collaboration within the agile practice area.

Furthermore, the customization of agile practices within the agile practice area, team collaboration among people, insufficient support from management within the organizational area, and resistance to change exhibited by individuals were identified as significant issues. Therefore, organizations should proactively address these factors and challenges prior to embracing Agile-Scrum software development to mitigate potential future risks.

Therefore, the most potential problem in agile adoption for small organizations is cultural issues. Future researchers can consider exploring how cultural issues impact agile adoption in small organizations and also investigating how leadership styles and company communication strategies influence the implementation of agile methodologies in a smaller organizational context.

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