Onboarding Model to Integrate Newcomers into Scrum Team at an Insurance Company

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Abstract

The average IT employee turnover rate at Company XYZ between 2020 and 2022 was 14.5%. When a new employee is hired, the company needs to help them learn the system development process used at the company. Company XYZ's IT division uses the Scrum framework to meet user demands quickly, but they don't have a specific onboarding process to help new employees adapt to Scrum and integrate new employees into the Scrum team without disrupting the ongoing projects. Therefore, our study aims to develop an onboarding model that will enable new team members to achieve successful onboarding and effectively integrate into their new team. This research used a qualitative approach by conducting interviews to gather in-depth and personal insights from the members of a hybrid working Scrum team. The interview data was thematically analyzed using a model derived from Peggy Gregory's onboarding theory because it has a useful set of meta-level categories for our study. Our study adjusts existing theory to fit the case study, the adjustments are within onboarding activities and newcomer adjustment category. A practical guide is also provided to improve successful onboarding for the newcomers into the Scrum team.

Keywords: onboarding activities, onboarding model for agile, onboarding adjustments, scrum; new employee

Introduction

Scrum is a framework that helps people solve complex and adaptive problems productively and creatively while producing products of the highest value (Schwaber and Sutherland 2020). It has been

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used since the early 1990s to manage work on complex products and to produce valuable products with well-distributed teams (Manteli et al. 2014). Scrum is not a standardized process where people follow a prescribed set of activities to create products in a timely and cost-effective manner. Rather, it is a framework for managing and organizing agile work.

The unavailability of an onboarding mechanism for implementing Scrum has presented several challenges. New team members encounter difficulties adapting to Scrum and the tools used for system development. Furthermore, the capacity and capability of new members are often overlooked when assigning workload, resulting in incomplete backlog targets at the end of sprints. Consequently, it is important to establish an onboarding model for the agile team at Company XYZ to suit the conditions and environment. This initiative will not only enhance the company's system development process but also increase the likelihood of successful onboarding for new members.

Company XYZ has experienced an average turnover rate of 14.5% for its information technology employees from 2020 to 2022. This means that every three months, there are team members who leave or join the team. The reasons for turnover include the completion of work contracts, employee resignations, and employees who do not pass probation. A turnover rate above 10% is considered high, and the company needs to aim for a turnover rate of less than 10% to maintain workforce stability (Pavlou 2023). The high turnover has resulted in the need for the company to recruit new employees to meet workforce needs and fulfill reduced resources due to employees leaving. Each new employee must be supported in adapting to the Scrum method used for the company's system development process.

The onboarding process at Company XYZ is currently quite general and traditional. It involves explaining company regulations, which are detailed in the standard operating procedure documents for each division, and providing insurance information, which is explained in the new employee orientation program document (NEOP). However, the information technology division at Company XYZ does not have a specific onboarding method to help new employees adapt to the implementation of Scrum.

In the context of new employee assimilation, companies need to conduct effective recruitment and selection with strategic orientation to maximize employee performance. Orientation, also called organizational socialization, is the process through which new employees acquire the knowledge, skills, and behaviors required to become effective organizational members (Bauer 2010). As highlighted by Bauer and Erdogan (2011), new employees typically have a probationary period of approximately 90 days to demonstrate their capabilities in their new role.

The purpose of this study is to create a comprehensive onboarding process for integrating new members into the Scrum team at Company XYZ. This is necessary as the company has implemented a hybrid working style, combining collocated and remote working environments, in response to the COVID-19 pandemic. The baseline model for this study is adapted from the onboarding model proposed by Gregory et al. (2022), which provides a framework of categories and activities suitable for this research. Adjustments have been made to the onboarding model to align with the specific conditions at Company XYZ. The findings of this research can serve as a foundation for helping newcomers efficiently adapt to Scrum in our unique context. It is expected this study can enhance practitioners' understanding of onboarding support in Scrum teams by presenting effective practices identified by team members. These contributions are anticipated to improve onboarding, enhance newcomer satisfaction, and boost team productivity.

Literature Review

Research conducted by Sharma and Stol (2020) established a theoretical model that outlines the relationship between onboarding activities (such as orientation, training, and support), onboarding success, organizational fit (job satisfaction and quality of workplace relationships), and turnover intentions. A noteworthy discovery was that orientation and support had a strong correlation with onboarding success. Dagenais et al. (2010) identified three key factors that help new developers integrate into software projects. These factors are early experimentation, internalization of different structures and cultures, and frequent validation of progress. The study involved 18 developers who

had recently joined an ongoing project. Despite most of the respondents being experienced developers and working on agile teams, the focus of the study was not specifically on agility in agile teams. The only Agile practice highlighted as helpful and effective during orientation was the daily Scrum meeting. Yates et al. (2020) investigates how new software developers comprehend the code base of existing systems. The study examines the various types of information conveyed from internal experts to new team members during the onboarding process. The findings suggest that mentoring new members can offer four perspectives of a program (temporal, structural, algorithmic, and rationale), and each perspective is valuable for onboarding into software development projects. Britto et al. (2020) emphasizes a single case study to enhance our understanding of onboarding processes in large, globally distributed software projects. The study revealed that successful onboarding was influenced by factors such as proximity to mentoring and formal training, adaptation to sociocultural backgrounds, task allocation, and team stability. Although the research investigated agile teams, the primary focus was on onboarding within globally distributed projects rather than agile teams. Gregory et al. (2022) identified a unique onboarding model designed specifically for agile software development. The study delves into the onboarding process by analyzing a case study of an agile team working in a co-located environment. It explores the perspectives of all team members, including both new and established members, and examines the evolution of onboarding within the team over time. This approach provides a more comprehensive understanding of the phenomenon compared to a simple interview study involving participants from different organizations. The study focuses on how the team utilizes and customizes agile practices to create effective onboarding techniques. Finally, the findings are aligned with existing onboarding literature from Bauer (2010) to create a model of onboarding within the agile context.

Methodology

An overview of this research methodology is shown in Figure 1. The first step of the research is to identify the problem faced within the case study to get the gap between reality and expectations, the identification is conducted by interviewing the Scrum team's product owner and scrum master to gather an overview of the situation. The second step is to conduct a root cause analysis by identifying the main issue that is creating the gap between reality and expectation, one key factor causing the issue is because there is no agile onboarding method currently to help newcomers integrate into the Scrum team. The third step is carried out by searching the theories and previous research related to this research, the theories mainly about agile onboarding activities, agile methodology, and Scrum. The fourth stage is to build the theoretical framework based on the literature review; the main theory used as a baseline for this study is an onboarding model by Gregory et al. (2022).

The initial step involves identifying the problem within the case study to address the gap between reality and expectations. This is identified by interviewing the Scrum team's product owner and Scrum master to gain insight into the situation. The second step is to conduct a root cause analysis to pinpoint the main issue contributing to the gap between reality and expectations, one significant factor contributing to this issue is the absence of an agile onboarding method to assist new members in integrating into the Scrum team. The third step involves exploring theories and previous research related to this topic, with a focus on agile onboarding activities, agile methodology, and Scrum. The fourth stage is to construct the theoretical framework based on Gregory et al. (2022). The fifth stage of this research involved preparing research instruments, which were formed from the onboarding framework and agile onboarding model. In-depth interviews were conducted with team members using probing questions to gather detailed insights and personal perspectives. The focus of the interviews was to gather information about the implementation of Scrum, onboarding experiences, work atmosphere, and other relevant insights. Finally, the conclusions are made based on the data analysis findings.

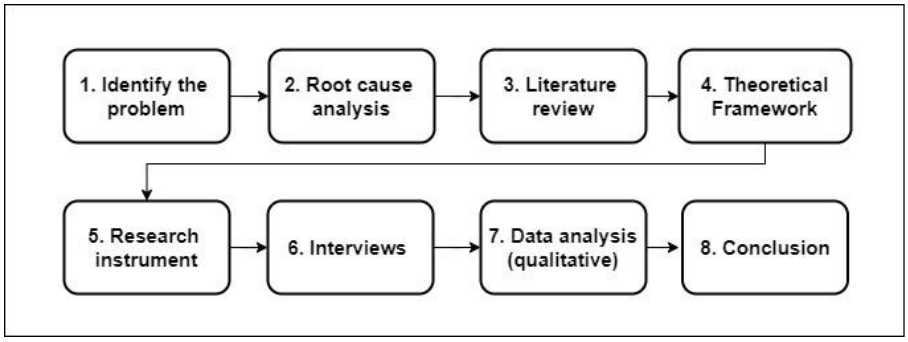

Figure 1. Flow of the Research Methodology

This study utilized an onboarding model developed by Gregory et al. (2022) as the basis or baseline for examining onboarding activities. This model is comprised of three main categories: onboarding activities, newcomer adjustment, and workplace adjustment as can be seen in Figure 2. Onboarding activities consist of 27 codes organized into six sub-categories, newcomer adjustment comprises six codes grouped into five sub-categories, and workplace adjustment includes four codes grouped into three sub-categories.

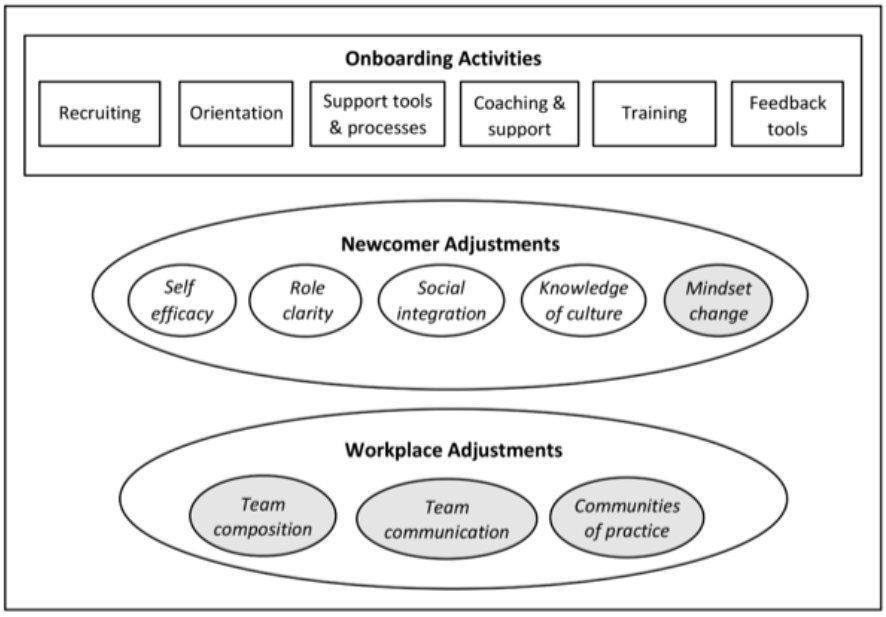

Figure 2. Peggy Gregory Onboarding Model

The researchers utilized the onboarding model as an analytical framework due to its comprehensive categories and activities that aligned with the research objectives in the case study. This method, known as elaborative coding, involves using existing theoretical categories or themes to guide the analysis of the current research (Saldana 2015). Since this research is a qualitative case study, the researchers did not quantify the frequency of each code provided by participants. Instead, the study used relevant or verbatim quotations to illustrate the conveyed code and made sure to include at least one quotation from each participant (Saldana 2015). Elaborative coding was employed to identify codes not present in previous theories, thereby enhancing the understanding of the case studies. The stages for the data analysis are shown in Figure 3.

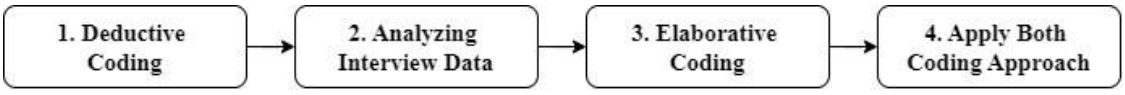

Figure 3. Stages of the Data Analysis

The initial stage involves deductive coding, where pre-established codes from the onboarding model by Gregory et al. (2022) are applied to create a coding scheme outlining the research themes. The second stage involves analyzing interview data by familiarizing with the codes from Gregory et al. (2022) and examining the data. Similar sections are tagged with existing codes, and verbatim quotations are included to illustrate or support the coded themes. The third phase includes conducting elaborative coding to explore additional themes or patterns that arise from the data. This involves a thorough exploration of the data to discover new concepts or insights that go beyond the initial coding scheme. The last step involves integrating all the codes obtained from both coding methods by combining the findings from both deductive and elaborative coding to create a comprehensive understanding of the data.

Result and Discussion

This study takes the perspective of a team that incorporates a hybrid way of working, with four days of remote work and one day of co-located work. The team is made up of nine members, including a scrum master, four quality assurance or system testers, and four software developers who utilize the scrum framework for software development (Table 1). The team operates on a one-week sprint cycle and consists of both new and established members. New members are defined as employees who have been with the project team for less than a year, while established members have been on the team for a year or more. New members share their experiences as newcomers, while established members offer broader insights based on their own experiences and observations of others during the onboarding process.

Table 1. Team Member Profiles for Interviews

Role and Code	**Experience at Company XYZ**	**Previous Agile Experience**
Scrum Master [SM]	4 years	1 year
Software Developer Team Leader [DEV1]	6 years	4 months
Quality Assurance Team Leader [QA1]	6 years	7 months
Software Developer Team Member [DEV2]	2 years	1 year
Software Developer Team Member [DEV3]	1 year	4 months
Quality Assurance Team Member [QA2]	2 years	7 months
Quality Assurance Team Member [QA3]	1 year	3 years
Software Developer Newcomer [NC1]	4 months	4 years
Quality Assurance Newcomer [NC2]	7 months	none

The interview took place in a semi-structured virtual mode using Microsoft Teams. The interviewer remained open to new ideas and sought further information related to the topic. Participants provided consent for audio recording of the interviews, which were then transcribed for analysis. The onboarding model for Scrum teams, developed from this research, is shown in Figure 4. The shaded portion indicates an adjustment within that specific area in this case study. The term "adjustment" implies a change or addition to the code from the Gregory et al. (2022) onboarding model as identified in this study.

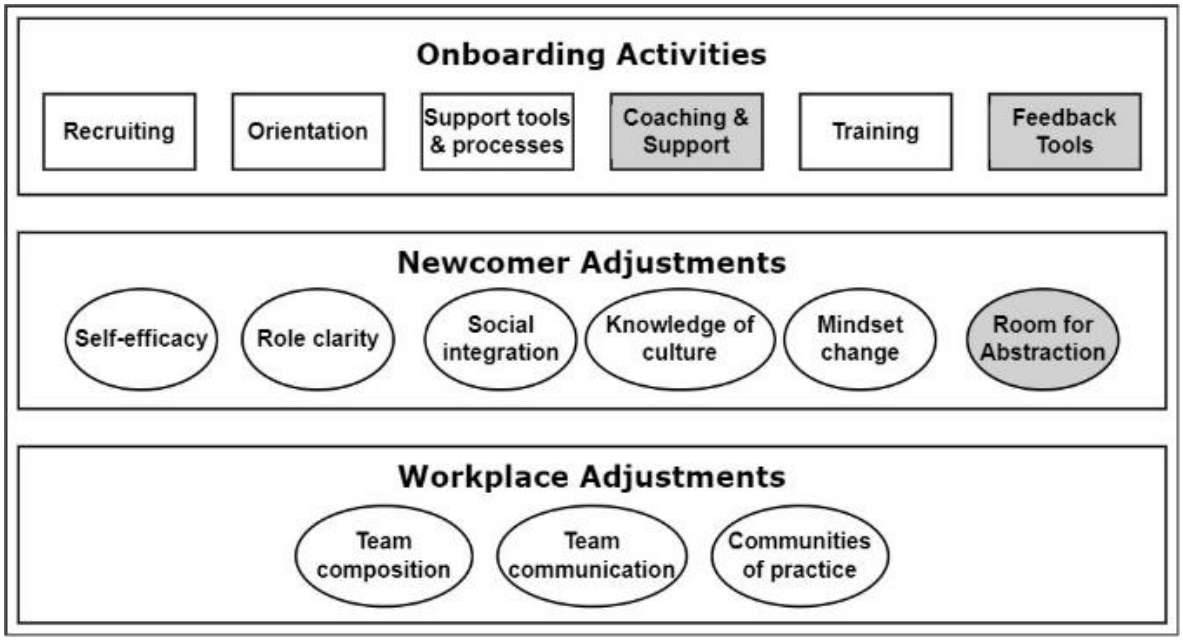

Figure 4. Onboarding model for the Scrum Team at Company XYZ Adopted from Gregory et al. (2022)

Onboarding Activities

For the sub-categories of recruiting, orientation, support tools and processes, and training, there are no code adjustments because the application more or less matches the case study and the existing theory research. For the coaching & support category, there is a code adjustment which is the addition of the pair testing code because it was found that the application of pair testing in the case study was to help team members in daily work, there is a code adjustment from previously co-location to hybrid working because team members work in a hybrid manner, which is one day co-located at the office and four days of working remotely, there was also an adjustment to the code from previously ceremonies to become Scrum events because in the case study the entire Scrum events is a methodology to help team members in providing support to each other and also provides coaching. For the feedback tools category, there are adjustments to the retrospective code, sprint reviews, and sprint refinements which have been moved into the Scrum events code because this series of activities is included in the Scrum events. Onboarding activities are divided into six sub-categories and 23 codes describing the factors that play a role in onboarding, as seen in Table 2.

Recruiting

The recruitment process is carried out formally and has its operational standards. The initial stage of the recruitment process is that applicants register through the company's job posting, and then an administrative selection process is carried out, after that the applicants will be invited for an interview, and in the interview technical and non-technical evaluations are carried out to assess the applicant's suitability. When applicants have joined, they will be assigned to a team and will be given orientation.

Long-Term Recruitment Strategy: The unit has a long-term recruitment strategy (Bauer and Erdogan 2011), specifically recruiting students who are still studying or doing internships at the company while completing their studies. Once the interns complete their studies, they can become permanent employees. This strategy means that these employees require minimal orientation because they are already assigned to a suitable team, understand the team goals, products, and technology used by the Scrum team: *"Because students who do internships can become a permanent employee at Company XYZ after completing college and after being evaluated by human capital and superiors"* [NC2].

Onboarding During Recruitment: During the recruitment process, knowledge gaps of the candidate are identified (Bauer & Erdogan 2011): *"To find out how experienced they are with Scrum, so we can*

predict their needs when they joined in" [DEV1], *"So that we can measure the ability of the candidate to implement Scrum, but we still accept candidates who have never applied Scrum, most of them are fresh graduates"* [QA1]. By understanding new members' knowledge gaps, the team can predict the needs of new members to help them adapt to agile methods.

Table 2. Onboarding Activities with Sub-Category and Codes

Category	Sub-category	Code	Adjustment
Onboarding Activities	Recruiting	Long-term recruitment strategy	-
		Onboarding during recruitment	-
	Orientation	New staff pack	-
		Working with the client pack	-
		Agile method pack	-
		Socializing	-
	Support tools & processes	Information radiator	-
		Communication tools	-
	Coaching & support	Mentoring	-
		Role modeling	-
		Pair programming	-
		Pair Testing	✓
		Scrum Events	*
		Hybrid Working	✓
	Training	Immersion	-
		Self-study	-
	Feedback tools	One-to-ones	-
		Immediate feedback	-
		Code reviews	-
		Small tasks	-

Symbol – indicates no adjustment from Gregory (2022) onboarding model, ***** indicates an adjustment from Gregory (2022), ✓ indicates new adjustment identified in this study.

Orientation

Orientation has a social role, helping new members feel welcome by introducing them to coworkers and other individuals in the organization (Bauer, 2010).

New Staff Pack: New members are given a file called the NEOP, which in general is a document explaining and describing standard procedures, laws, and business processes that apply in the company. Providing this file is a general orientation process for case studies.

How Our Team Works with the Client Pack: This document provides examples of how the team works with users, such as before-after conditions for a feature, how to document testing scripts, and administration of document signing by users. This helps new members to get an idea of how to work together with users.

Agile Method Pack: Documents such as The Scrum Guide (Schwaber and Sutherland 2020) help new members learn about agile and how to apply it to agile teams (Gregory et al. 2022). The company

must be able to provide a summary of how the Scrum implementation is expected from new members, so that new members will get an idea of the company's expectations and standards for implementing Scrum.

Socializing: Team members always make an effort to socialize and get to know each other, because this helps new and established members build trust, and makes new members more confident in interacting and communicating with others, *"I really enjoy working here because the team is very positive and supportive. "The team here also often holds events outside the office, so I get closer to others and it's not awkward to chat when WFO (work from the office)"* [NC2]. For new members, this is the beginning of adjusting to the team and building trust with other team members, which is an important part of new member orientation, therefore new members need to constantly socialize to increase trust in each other.

Support tools and processes

The team uses a variety of tools for communication and coordination which new members have to learn.

Information radiator: a tool that is a physical object such as a whiteboard, to provide a summary of the team's work progress and is always clearly visible. This tool is commonly used in agile teams to coordinate work (Cockburn 2006). The team has a large whiteboard and also has a virtual board, specifically using the Jira application, where the team can track and see how many tasks they have completed from the previous day, *"When we are working from home, we do a daily standup to discuss what each personnel did for that day, then we discuss the burndown chart to remind how much more work needs to be completed. The team thinks that these tools are also useful for new members, "we write each member's task on the whiteboard as a reminder, because usually there is a work dependency between team members."* [SM]. When team members see an overview of the team's work, they will remember what tasks are related to each other between team members: *"By reminding other members of their tasks that are related to ours, we learn time management, teamwork, and communication. Because those things are important for the quality of the team"* [QA2]. This tool can guide new members to monitor in general how the task process is carried out from time to time.

Communication tools: The team uses several applications for communication such as Microsoft Teams, WhatsApp, Zimbra, and Microsoft Outlook. Communication tools are frequently used in co-located agile teams (Calefato et al. 2020), the team always uses communication tools when the team is working remotely or virtually: *"When I first started, I always paid attention to how team members did Scrum planning, daily standup, coordination via chat or email, and used Jira so that it could be used as an example."* [DEV2]. Communication tools are also very helpful for team members to be able to monitor the work status of team members and can notify indirectly if a team member is busy and focused on doing something: *"Usually I don't reply to their chats if I'm busy, I will also put busy status on teams."* [QA3]. New members must be able to adapt and utilize the communication tools used by the team.

Coaching and support

Many aspects of implementing agile provide support for newcomers, such as agile ceremonies, self-organizing teams, pair-programming, pair-testing, role-modeling, and sprint velocity. All team members encourage a positive and supportive work atmosphere, established members understand how to support new members to adapt to the team because they have also experienced being new members. Buchan et al. (2019) explains that mentoring is the activity that most contributes to increasing successful onboarding.

Mentoring: Mentoring helps new employees learn the ins and outs of the company. A mentor can teach new employees about the organization, provide advice, and assist with work instructions. New employees may come to their mentors with questions they were afraid to ask their superiors for fear of appearing incompetent (Bauer 2010). However, Company XYZ has not implemented a mentoring method for new members, therefore mentoring should be implemented to help new members integrate into the team.

Role Modelling: Team members stated that role modeling is beneficial for newcomers. This is very important to convey the importance of honesty and transparency in work, *"I often ask questions in groups for discussion or directly to the team when I'm in the office because I don't know how to do the task. Because usually, I see the scrum master often invites team members to discuss when they are confused."* [QA3]. Team members understand that they will encounter obstacles that they cannot overcome themself, they can imitate the way the scrum master coordinates to solve these obstacles.

Pair Programming: A technique in which two programmers work side by side to complete a task. This technique is seen as an effective way to get to know code that is already running, and how to create code in a team context, and is useful for getting to know other team members (Buchan et al. 2019): *"From my experience, the best way to learn was pair programming, I was paired with a senior team to solve complex algorithms, and from here I also learned how to become open to new ideas"* [DEV3].

Pair Testing: A collaborative system testing technique where individuals work together to test a product or application, this is done to improve communication and provide a new perspective for conducting system testing: *"I often ask for opinions or points of view from other co-workers when testing, because other people may have different ways"* [QA2].

Scrum Events: Scrum has four ceremonies or events, they are sprint planning, daily stand-up, sprint review, and sprint retrospective (Schwaber and Sutherland 2020). The four activities in Scrum are briefly explained to new members, then new members will be directly involved in the series of activities so that they better understand what the practices are like in the team: *"Each person will explain what they are working on that day, then they will also tell you if there are any obstacles that they have not been able to resolve.", "Sprint reviews are usually held on Tuesdays and will be attended by users, product owners, and department heads from each role. Then explain what the team has done in the week's sprint. The superiors will provide input on what the next job will be like."* [NC1]. Scrum activities help new members understand what the expected results are for the team.

Hybrid Working: Hybrid work practices are practices that implement co-location and remote work. Working co-located or in the same room makes it easier for team members to understand the team situation and ask questions directly, *"WFO helps colleagues to coordinate directly, usually if someone is confused, they immediately ask the person next to them, sometimes the person next to them helps answer the question. listen to it"* [SM]. Working remotely can provide flexibility to team members, reduce distractions, strengthen the use of technology, and increase trust in each other, *"WFH improves work-life balance because it reduces time spent traveling to the office. If someone is sick, they can also rest more and reduce the spread of the virus. And the most important thing is to increase trust in each other because we believe that each member can be given ownership of their tasks and they will provide results independently without us having to ask them repeatedly"* [SM].

Encouraging teamwork: Old team members often share knowledge and provide mutual support within the team, especially towards new members. Working as a team and building trust is critical to implementing agile, *"Asking team members, we are encouraged not to be afraid or embarrassed to ask others if we have difficulties or are confused about work or things outside of work."* [NC1].

Encouraging learning: Learning related to company norms and improving the quality of work helps new members adapt during the initial period after joining the team, also has a positive impact on the employee's desire to stay in the organization and increases job satisfaction (Bauer 2010): *"Sometimes we get feedback to improve the implementation of the SOLID principle so that our code is easy for other people to read and understand. This feedback encourages us to improve our performance and quality of work."* [NC1].

Empathy: Because established members still remember what the onboarding experience was like, they stated that these memories helped them to sympathize and understand what kind of obstacles new members faced, *"Teach them with step by step or stage by stage, because in my experience when I first joined there were a lot of things to learn and it felt like I couldn't handle all of them because it was too much."* [DEV2].

Training

Training is to improve employee skills in terms of hard skills and soft skills. This training can illustrate to new members how to proactively help them acclimate thereby encouraging successful onboarding (Bauer 2010). The training carried out in the case study was to invite new members to work together with the established team members while diving directly into the work. This is very effective in speeding up new members' understanding of technical and non-technical aspects.

Immersion: Experimental learning techniques for new members, they dive straight into tasks on their first day and most of their training is achieved by becoming productive members of the team. This technique is aligned with agile methods, where teams work to deliver value as quickly as possible, *"Involve them directly in every teamwork activity, so that they are hands-on on the task they choose, provide documentation of existing work, and direct them to ask questions if they are confused or in doubt about something."* [DEV1]; *"And new members have similar experiences as the development team leader said involved in meetings, even if only listening."* [NC1].

Self-study: New members will increase their onboarding success if they can learn independently regarding material or aspects that support their work, *"I just study independently from the source code used, or usually I ask other experienced members"* [DEV1]; *"With online courses, read the literature and immediately practice agile"* [DEV3].

Feedback tools

New members receive informal feedback or input regarding their work when working in pairs because they work on minor or small tasks. More formal feedback is received during sprint reviews, code reviews, and sprint retrospectives. This is very useful for newcomers to help them adapt to the team.

One-to-Ones: All new members have regular face-to-face meeting sessions approximately every week, with the team leader (Klein and Beth 2012). This method allows them to get guidance on technical issues and reflect on their work practices.

Immediate feedback: New members will get feedback on their work relatively quickly, as the team uses one-week sprint phases. Feedback is important for new members (Bauer 2010). A new member shared his experience when his work was being tested, *"We often get feedback when the QA team is testing, for example, something like this 'for this process it seems better and easier to understand if it's like this... for rich colors, it's not pleasing to the eye but that's what I think, maybe it can be done. discussed together.' That's more or less the input."* [NC1].

Code reviews: Informal code reviews where a group of developers read and review a section of code. This technique is used to provide feedback and help learning for all members, including new members. This technique helps new members to learn by listening and listening to the whole group discussing detailed points about coding practices and problem-solving, *"a code review is carried out to review the code that we have written so that we can find more efficient ways for development"* [DEV3].

Small tasks: Agile methods often break user stories or epics into small tasks or what can be called a backlog so that developers can create code and test it in the next few days. This practice is important to ensure that estimates and sprint planning are carried out as accurately as possible (Buchan et al. 2019). This is useful for the team to be able to give small and simple tasks to new members for the initial stage, *"Often given minor but large tasks, don't give complex tasks even a few"* [NC1].

Newcomer Adjustments

For the sub-categories of self-efficacy, role clarity, social integration, knowledge of culture, and mindset change there are no code adjustments because their application is necessary and appropriate for research case studies. There is an additional sub-category called room for abstraction with two codes because there are obstacles that new members must face when onboarding virtually in the case study.

Newcomer adjustments are divided into 6 sub-categories and 8 codes describing the internal factors that play a role in onboarding, as seen in Table 3.

Table 3. Newcomer Adjustment with Sub-Category and Codes

Category	Sub-category	Code	Adjustment
Newcomer Adjustments	Self-efficacy	Empowerment	-
	Role clarity	Reimagining	-
	Social integration	Joining a team	-
	Knowledge of culture	Knowledge of agility	-
	Mindset change	Tackling problems	-
		Becoming agile	-
	Room for Abstraction	Clarity on Expectations	✓
		Personal Interaction	✓

Symbol – indicates no adjustment from Gregory (2022) onboarding model, * indicates an adjustment from Gregory (2022), ✓ indicates new adjustment identified in this study.

Self-efficacy

Self-efficacy can be interpreted as an individual's belief in his ability to complete a task given to them (Britto et al. 2017). Self-efficacy is related to workload delegation because confidence in one's ability to complete a task is the origin of the ability to work independently to achieve that task. Working in agile teams assumes that team members are empowered and can organize themselves to complete the tasks they undertake, either by working alone or in collaboration with other team members.

Empowerment: A process that allows individuals or groups to gain control, make decisions, take action, and self-confidence in their professional lives, *"I also sometimes appoint new members to work on something they have never held before, so they can learn a lot from it"* [SM].

Role clarity

New members need to understand their role on the team. For example, a developer has special skills such as front-end or back-end roles. Agile team members must be ready to take on various types of tasks and should not only work based on their specialty. Team leaders support new members to find their place. One technique used is reimagining to help staff reimagine themselves into new roles (Gregory et al. 2022).

Reimagining: team leads use one-to-ones to discuss how to work with new members to help them reimagine themselves in their new roles. This helps them make the transition, *"I also ask if they can learn something new outside of what they already know, so they can fill the workforce if needed"* [DEV1]. This process needs to be carried out to help new members reimagine their abilities in the role given to them.

Social integration

Social integration helps newcomers become part of an agile team because team members work together as a unit.

Joining a Team: New members shared that they felt comfortable and easy to integrate into the team, as there was a positive atmosphere in the workplace; *"I feel very cool working here because the whole*

team has a good attitude and supports each other, making it easier for us to interact with each other, when WFH or WFO" [NC2]. This positive atmosphere helps new members integrate into the team.

Knowledge of culture

The team working culture is context-oriented at several levels that influence how things are done. Team members shared that the best way to help new members learn their work culture is through experiential learning within the team.

Knowledge of agility: Gregory et al. (2022) imply that the main problem of onboarding is integrating inexperienced newcomers with knowledge of agile ways of working into a team that has a strong agile culture. An introduction process regarding agile work culture is needed for new members to broaden their horizons regarding its application.

Mindset change

Mindset change is important for agile team members because research has found that this is an important concept that is an essential part of agility (Mordi and Schoop, 2020). A mindset refers to a person's attitude or way of thinking and is therefore different from knowledge of culture. Mordi and Schoop (2020) uses theory literature and primary data to define the agile mindset as "a mindset based on the values and principles of the Agile Manifesto, whose main characteristics are trust, responsibility and ownership, continuous improvement, a willingness to learn, openness, and a willingness to continually adapt and grow". In their study, the five aspects with the highest levels were: finding solutions to problems, being motivated, helping each other, listening to each other, and focusing on achieving common goals.

Tackling problems: For the fresh graduates in this team, this is their first work experience in the information technology sector, they have no previous experience in working on application development which is crucial from a business perspective in companies. This learning needs to begin with new members during their first few months on the job (Gregory et al. 2022).

Becoming agile: Team members, especially new members, find it difficult to maintain the process of implementing an agile mindset without following the example of the team leader or Scrum Master. Following a series of Scrum events can help new members move towards a change in mindset.

Room for Abstraction

New members may experience various abstractions or challenges when onboarding virtually, the company needs to address the challenges because it is essential for creating a positive and effective onboarding experience that sets new members up for success in their roles, improves engagement, retention, and strengthens organizational culture in a hybrid working environment.

Clarity on Expectations: New members need clarity regarding team expectations to meet the team's criteria. Onboarding online or virtually can create ambiguity regarding job responsibilities, performance expectations, and organizational processes. Without direct supervision, new members may struggle to fully understand the roles and responsibilities they are required to perform.

It is important to provide new team members with clear guidance on team expectations to ensure they meet the criteria set by the team. Onboarding virtually can create confusion around job responsibilities, performance expectations, and organizational processes. Without direct supervision, new members may struggle to fully grasp their roles and responsibilities. Consequently, new team members are advised to engage with existing members to gain clarity about the team's expectations.

Personal Interaction: In remote or online onboarding, the absence of in-person interactions with colleagues or managers can pose a challenge for new employees in forming personal connections and fostering positive relationships with their team. The lack of face-to-face contact may impede the development of relationships and integration into the company culture. It requires bravery for new team members to initiate conversations and seek guidance from other team members: *"We sometimes*

could not sure if they understand with the instruction I gave to them, because we could not see their reaction, so we need to ask a couple more times to ensure" [SM].

Workplace Adjustments

There is no code adjustment for this category because its application is necessary and appropriate for the research case study. Work environment adjustments are divided into 3 sub-categories and 4 codes describing work environment factors that play a role in onboarding, as seen in Table 4.

Table 4. Workplace Adjustment with Sub-Category and Codes

Category	Sub-category	Code	Adjustment
Workplace Adjustments	Team composition	Adjusting the team	-
		Mentor availability	-
	Team communication	Accommodating newcomers	-
	Communities of practice	Agile community of practice	-

Symbol – indicates no adjustment from Gregory (2022) onboarding model, * indicates an adjustment from Gregory (2022), ✓ indicates new adjustment identified in this study.

Team composition

The team composition in an agile development team is very important in the progress of development because agile teams are required to be able to carry out tasks quickly. When there are new members in an agile team, the team composition will change and adjustments will need to be made to accommodate the new team configuration. Ideally, an agile team should have more permanent employees than contract or internal employees. This can avoid changing team composition too often. The Scrum Team at Company XYZ has a 50:50 ratio between permanent and non-permanent employees, non-permanent employees contribute to a high turnover rate in the team. Due to the high employee turnover rate causing frequent changes in team composition, this can result in sprint targets not being achieved which results in a setback in the project timeline.

Adjusting the team: As time goes by, the team members consist of many permanent employees so they have fewer non-permanent members. This balance increases the team's ability to continue to develop because the dynamics of team change can be minimized (Gregory et al. 2022). Therefore, the Scrum team in the company must be able to maintain its composition to remain stable.

Mentor availability: New members need guidance in their first period of work, so they need a mentor who can guide them during their work adjustment period. The role of mentor is best carried out by the team leader, but often they are busy and do not have free time to accompany the new member. Apart from that, there was never a handover of work between the old team members who were leaving and the new team members: *"The recruitment process often takes a very long time, so even though the established members who are leaving have done a one-month notice or have been notified one month beforehand, they still cannot hand over their jobs to the new team. This is because the replacement only arrived several months later."* [SM]. This makes knowledge transfer and handover impossible. Therefore, experienced team members need to be willing to serve as mentors to newcomers.

Team communication

Agile teams aim to be well-integrated and have effective ways of communicating. When new members join a team, existing members need to change their way of communicating to explain to newcomers in simpler language so that new members can better understand.

Accommodating Newcomers: Communication is an important thing in adjusting the work environment. Often the problems faced by agile teams are lack of communication, poor

communication, and lack of documentation in discussions. This needs to be avoided because to be able to support new members during their adjustment period, it is by using good communication in simple language that is generally understood by everyone and this should be done by all team members.

Communities of practice

The IT division at PT XYZ consists of 14 agile teams that develop different applications. Even though one agile team has carried out its duties effectively, this may not necessarily be the case for the other team. Therefore, it is necessary to create a community of practice. A community of practice is a group of people who share information and experience about something they do and learn how to do it better when they interact regularly.

Agile community of practice: It is necessary to create a community of practice that is specific to the topic of agile. This community consists of several agile teams who share information and experiences in doing their work. There needs to be regular discussions in the community at least once a month. This can open up new perspectives in doing work, especially for new members who are adapting.

Conclusion

This research explained how an onboarding model is well-suited for integrating new members into Scrum teams within the information technology division of an insurance company, particularly those adopting a hybrid working approach (a combination of co-located and remote work settings). We primarily focused on the onboarding activities and newcomer adjustment categories, tailored to fit the specific context of the case study. This adjustment was prompted by the onset of the COVID-19 pandemic and the subsequent adoption of a hybrid working model within the study case to accommodate the evolving work environment.

Implementing the onboarding model in the study case can improve the onboarding experience for newcomers. This can lead to smoother integration of newcomers into the Scrum team, resulting in increased productivity, better team cohesion, faster adaptation to the hybrid working environment, and increased contribution to overall organizational effectiveness. A practical way to help new members is by implementing important practices from the onboarding model to increase the chances of successful onboarding into a Scrum team, such as:

1. Onboarding activities: the company can implement mentoring in the company, have newcomers imitate other team members who are viewed as role models, engage in pair programming or pair testing, participate in the entire series of Scrum events, immerse themselves in tasks that fit their roles, conduct one-on-one sessions, pursue career-support learning independently, and consider the feedback provided by other team members.

2. Newcomer adjustments: new team members should feel confident in their ability to complete tasks, understand their roles and responsibilities, adapt to the team's work culture, and embrace agile thinking. They should also work on aligning their expectations with those of other team members.

3. Workplace adjustments: the team needs to ensure stability by managing the team composition, preparing mentors for new members, and adjusting communication methods when interacting with new team members.

The adaptation of the onboarding model to suit a hybrid working environment provides valuable insights into the dynamically increasing team and organizational change management. This study highlights the importance of flexibility and adjustment in applying theoretical frameworks to real-world contexts. This theoretical implication highlights the need for ongoing research and development in human resource management strategies to keep pace with changes in the modern workplace.

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