



Article Reciprocal Influence between Digital Emotional Intelligence and Agile Mindset in an Agile Environment

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Abstract: In today's digital era, where communication is primarily conducted using computers and other technological devices, an agile mindset is not enough to be sustainable. Given the significant influence of human behaviour in agile environments, it is common for emotions to come into play among team members, particularly when they seek to assert their opinions or perspectives. Having digital emotional intelligence (DEQ) is crucial for agile team members in the current digital age, as it allows them to comprehend the emotions of their fellow team members using digital tools and technologies. This study focused on determining the reciprocal influence for team members between DEQ and an agile mindset in an agile environment. Qualitative research was implemented using semi-structured interviews. The identified participants were industry agnostic and were the team members working in agile projects, transitioning to agile and working in hybrid projects. The findings revealed that the intersection of agile mindset and DEQ is self-awareness. Self-awareness includes psychological empowerment, communication and collaboration, and respect. Possessing an agile mindset and DEQ in an agile environment has advantages, including improved virtual collaboration, faster adaptation to new technologies, better management of digital distractions, enhanced customer focus in digital channels, and improved data literacy.

Keywords: agile mindset; agile mindset; emotional intelligence; digital emotional intelligence; agile project management

1. Introduction

Change is an inevitable aspect of the business world, and organisations frequently encounter challenges when adapting to new industry practices and updates to remain competitive (Ghani and Bello 2015; Rehman et al. 2020). Information Systems (IS) implementations are no exception to these challenges, and to achieve an agile environment, they should apply the Agile Manifesto principles (Ghani and Bello 2015; Tanaka et al. 2020). However, applying the Agile Manifesto only does not guarantee that an agile environment will be achieved, as human attitudes, behaviours, and ways of thinking influence the implementation of agile (Tanaka et al. 2020). Subsequently, it is necessary to have an agile mindset, which indicates a way of thinking, behaving, and having a certain attitude (Ozkan et al. 2020).

An agile mindset allows for change and improvement and implies that one must always strive to improve (Dweck 2017). Additionally, individuals with an agile mindset feel they can achieve anything if they work hard and dedicate themselves (Dweck 2017). It implies that despite barriers, setbacks, and stagnation, an individual perseveres in overcoming challenges with consistent effort and interest (Duckworth et al. 2007). However, in today's digital era, where communication is primarily conducted using digital channels (Haris 2016), an agile mindset is not enough alone (Park 2019).

Given the significant influence of human behaviour in agile methodologies, it is common for emotions to come into play among team members, particularly when they seek



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Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). to assert their opinions or perspectives (Cohn 2010). Therefore, possessing digital emotional intelligence (DEQ) will be beneficial. DEQ refers to the capability to perceive, navigate and express emotions in digital intrapersonal and interpersonal interactions. It is guided by the principle of "respect for others" (DQ Institute 2018). Having DEQ is crucial for agile team members in the current digital age, as it allows them to comprehend the emotions of their fellow team members using digital tools and technologies (Oluwatofunmi and Amietsenwu 2019). Additionally, DEQ allows individuals to understand and manage human behaviour, especially since agile is people-extensive and emphasises collaboration. Both an agile mindset and DEQ are important skills to have in an agile environment. Studies show that individuals who tend to have positive emotions tend to show an agile mindset trait (Dweck 2017; Humphries and Kosse 2017; Tugade et al. 2020).

The agile mindset is psychologically inclined (Eilers et al. 2020). Before even applying agile techniques, an individual needs to be in the right state of mind. Change requires a mindset change to be adaptable (Gandomani and Nafchi 2016), although it can be overwhelming. Not only that, but when it comes to agile projects, collaboration is encouraged, meaning that conflicts or misunderstandings are bound to happen, and as a result, DEQ is necessary. Studies show the influence of having an agile mindset to benefit the agile projects' success (Hamdani and Butt 2018; Tam et al. 2020). Additionally, studies also demonstrate the benefit of having emotional intelligence in an agile project (Luong et al. 2019; Fitzpatrick 2022). However, there is a gap in studies focusing specifically on the impact of DEQ in an agile environment.

Even though studies determine that having an agile mindset on its own is not enough to be sustainable in today's digital era and that digital emotional intelligence is required as well, there is a gap in how the two relate and influence each other in the agile environment. The existing literature concerning effective agile environments has predominantly centred on leadership while neglecting the crucial role played by team members (Saputra 2023). However, it is imperative to acknowledge the significance of team members, as they bear the responsibility for carrying out the tasks and play a decisive role in the project's ultimate success. Consequently, this paper places its primary emphasis on team members exclusively, without delving into the realm of leadership. This paper aims to demonstrate the potential reciprocal influence between an agile mindset and DEQ in an agile environment. To achieve this goal, the following research questions have been formulated:

- (1) **RQ1**: What are agile mindset characteristics required to successfully implement agile?
- (2) **RQ2**: What are the DEQ characteristics required to successfully implement agile?
- (3) **RQ3**: How do an agile mindset and DEQ influence each other to successfully implement agile?

The purpose of this study was to determine the agile mindset and DEQ characteristics for a successful agile environment. This study demonstrates the agile mindset characteristics, identifying which traits are required to enable successful agile implementation. The study further determines the DEQ characteristics by dissecting and analysing its three components, i.e., digital empathy, self-awareness and management, and relationship management. Finally, the study determines how an agile mindset and DEQ characteristics influence each other. The study was conducted on the project level through the team member lens.

2. Literature Review

2.1. Agile Mindset Characteristics

Agile is a mindset, not a set of techniques and tools that can be learned and applied (Girvan and Paul 2017; Mikhieieva and Stephan 2020). Gandomani and Nafchi (2016) identified mindset as a key factor in the resistance to agile adoption. Mordi and Schoop (2020, p. 9) performed a study to identify agile mindset and defined agile mindset as "*A mindset based on values and principles of the Agile Manifesto, which includes trust, responsibility and ownership, continuous improvement and an openness to learn, as well as an ability to adapt and grow.*" This mindset necessitates robust leadership, and to be successful, one should be agile

rather than do agile (Denning 2016). Doing agile means adopting agile processes without adhering to agile principles and values (Rahman et al. 2018; Eilers et al. 2020). Being agile means adopting the appropriate mindset to embrace the agile principles and values that enable continuous progress (Krehbiel et al. 2017). In simple terms, doing agile is a manner of working in an agile environment, and being agile reflects an individual's behaviour in an agile environment (Eilers et al. 2020). This individual's behaviour, which includes their attitude, mindset, and inclination, is required when applying the Agile Manifesto principles and values (Miler and Gaida 2019; Ozkan and Gök 2020).

Individuals who possess an agile mindset are open to change, and they welcome and embrace challenges (Popova 2014; Rising 2016; Miler and Gaida 2019). They exhibit a positive attitude, which allows them to persist when faced with challenges (Popova 2014; Rising 2016). In fact, they embrace these challenges as they see them as opportunities to learn more (Sidky 2010; Dweck 2017; Anderson 2018; Beatson et al. 2019; Pusenius 2019). Similar to challenges, agile mindset individuals see failures as mistakes encountered on their learning journey (Moser et al. 2011). They gain confidence through these mistakes, knowing that they are improving and gaining more knowledge (Rising 2016; Schroder et al. 2019) and have confidence in increasing their intelligence through hard work and effort (Moser et al. 2011; Anderson 2018). For this study, an agile mindset is operationalised as the ability to be agile through the resilient and reflective implementation of agile principles and values to operate within a robust, agile environment.

The ability to embrace change and confront new challenges, which are the key attributes of an agile mindset, is particularly significant in the digital era, where there are high expectations and obstacles (Haris 2016). Having an agile mindset enables individuals to develop digital intelligence (DQ), which in turn allows them to adapt to changing digital needs and overcome challenges (Solberg et al. 2020). Given the dynamic nature of agile environments and the challenges posed by modern technologies, individuals must be able to regulate their emotions and demonstrate empathy towards others. In an agile environment, collaboration is emphasised; thus, it is critical to have the necessary abilities to engage with others. The literature demonstrates how, in an agile mindset, individuals can comprehend and recognise their own and others' emotional responses, which guides their thinking and decision-making, using feedback to improve their knowledge and skills (Dweck 2006, 2017). Moreover, DEQ, as one of the DQ competencies, enables an individual to recognise their own and others' emotions when dealing with them; thus, understanding what this entails is critical.

2.2. DEQ Characteristics

DEQ can be defined as "the ability to recognise, navigate, and express emotions in one's digital intra- and inter-personal interactions" (Park 2019, p. 14). DEQ refers to the capability to perceive, navigate and express emotions in digital intrapersonal and interpersonal interactions. It is guided by the principle of "respect for others" (DQ Institute 2018). DEQ is one of the areas of the DQ framework developed by Park (2019). The development of the framework was influenced by how technology has revolutionised how we connect and work, necessitating the addition of cognitive skills to digital skills to manage interpersonal interactions, conflicts, and negotiations (DQ Institute 2017; Park 2019). The DQ framework consists of eight areas, and within those areas, there are competencies distinguished by three levels. The Universal Declaration of Human Rights guides each area and has respect as its moral principle (DQ Institute 2018). To have a deep understanding of digital competencies, DQ is divided into three DQ levels of maturity: digital citizenship, digital creativity, and digital competitiveness.

Linked to these DQ levels are the eight DQ areas that produce twenty-four competencies. These areas and competencies enable learning to progress based on what aspects of an individual's life may be the most pertinent now (Park 2019; IEEE-Standard 2020). Figure 1 illustrates the eight DQ areas.



Figure 1. Eight areas of DQ Framework (Park 2019; IEEE-Standard 2020).

As stated by Park (2019) and Tai (2020), moral values play a crucial role in adapting digital skills to differentiate humans from machines. Digitally intelligent individuals can effectively harness digital tools, comprehend and cultivate appropriate online conduct, and solve complex problems in the digital environment (Stiakakis and Barboutidis 2022). In the context of agile projects, human interactions are equally pivotal alongside digital tools. DEQ is arguably one of the eight DQ areas that combine psychology and technology to enhance interpersonal interactions, fostering greater personalisation, intimacy, and experiential engagement across physical and digital channels (Dennison 2017). It is essential for team members to comprehend their own emotions as well as those of others, evaluate their emotions and utilise them effectively (Yeke 2023). DEQ enables individuals to digitally perceive their own emotional response and that of others and to use this affective information to guide their thinking, behaviour, and decisions (Dennison 2017).

When integrated with an agile mindset, DEQ can offer substantial value within an agile environment. DEQ consists of the three competencies delineated by the three levels mentioned above. More importantly, DEQ is operationalised in this study around the three competencies of empathy, self-awareness and management, and relationship management.

2.2.1. Digital Empathy

The adoption of environment agility and remote working has transformed the agile team members' communication and collaboration patterns and affected the display of empathy in digital interactions (Fox and Rainie 2014). Digital channels allow quick sharing of thoughts, sentiments, and behaviour without the sympathetic social filter of traditional communications (Terry and Cain 2016). For instance, when attending an agile ceremony digitally, such as a daily stand-up or retrospective, there is no physical interaction that could alert the team members to how others are feeling. Digital conversations lack numerous emotional signs and indications encountered face-to-face, leading to impersonal interactions (Walther 2011). These technological advancements challenge the increasing socio-communicative components of an agile setting and necessitate digital empathy, which

is the display of traditional empathetic tendencies through computer-mediated communication (Terry and Cain 2016).

According to Friesem (2016), the concept of digital empathy aims to broaden the existing understanding of empathy phenomena in the digital space. Oluwatofunmi and Amietsenwu (2019) suggest that being digital empathetic entails having the knowledge of how data can drive physical and digital individual behaviour. The DQ Institute (2018, p. 16) defines it as the awareness, sensitivity, and support of one's own and others' emotions, needs, and concerns online. Being empathic entails caring for and accepting the other person, regardless of whether one agrees with their viewpoints or likes or dislikes them (Pichler 2020). Individuals with digital empathy have the knowledge to recognise and understand how their online interactions may effect others' feelings via synchronous and asynchronous interactions with others online (Dostál et al. 2017).

2.2.2. Self-Awareness and Management

According to Ashley and Reiter-Palmon (2012), self-awareness is an inwardly focused evaluation process in which people compare themselves to standards to learn more about themselves and improve. This definition verifies the characteristics of having an agile mindset that enforces continuous learning for improvement (Dweck 2017; Mordi and Schoop 2020). When applied in the digital setting, self-awareness and management are the ability to see and control how one's values and digital skills fit into their digital environment (DQ Institute 2018). It involves identifying interactions and utilising listening tools to collect and retrieve data (Oluwatofunmi and Amietsenwu 2019). Individuals with self-awareness have the skill to recognise and comprehend their emotions, think about how their digital experiences may affect them, and control their moods and impulses in a rational manner (DQ Institute 2018; IEEE-Standard 2020). They present awareness of their own moods and can actively control their instincts to match, which shows respect for others when communicating online (Park 2019).

Self-awareness is an evolving process of self-discovery that never reaches saturation (Rochat 2003; Rasheed et al. 2019). The process' constantly changing nature is beneficial in an agile environment as agile accommodates change (Agile Manifesto 2001; Koi-Akrofi et al. 2019). Dierdorff and Rubin (2015) believe that higher levels of self-awareness also result in better decision-making and higher levels of team performance. Eurich (2018) corroborates Dierdorff and Rubin's (2015) view that individuals with significant self-awareness tend to make better decisions, cultivate stronger connections, and communicate more effectively.

2.2.3. Relationship Management

Relationship management refers to an individual's capability to skillfully manage interactions by being aware of their own emotions as well as those of others, which will improve communication and conflict resolution (Bradberry and Greaves 2009). This is important in agile environments because communication is critical (Tam et al. 2020), and conflicts are inevitable (Tshabalala 2018). Mohamad and Jais (2016) also refer to a set of social skills that include respecting others, showing commitment, openness, compassion, empathy, and communication. Commitment is a vital attribute for an agile team member, as it contributes to the success of agile projects (Hamdani and Butt 2018; Tam et al. 2020). What also contributes to the success of an agile project is having an agile mindset, which enables openness to change (Miler and Gaida 2019). Therefore, together with communication, openness is a crucial skill to possess as it shows an agile mindset and emotional intelligence. Relationship management ensures that project team members communicate effectively and clearly (Trejo 2014).

In the digital setting, relationship management refers to the capability to manage one's online connections through cooperation, conflict resolution, and influence (DQ Institute 2018). Individuals who can manage relationships have the knowledge to comprehend and control online social environments to get consensus and outcomes, and they understand how behavioural norms and emotional responses can vary based on platform and envi-

ronment (IEEE-Standard 2020). They acquire interpersonal skills that allow them to speak and negotiate with stakeholders and exert influence in an inclusive online discussion (DQ Institute 2017). The individuals skilled in relationship management are self-motivated and committed to providing an inclusive culture that fosters mutual tolerance and teamwork to establish and expand healthy online communities (Park 2019).

2.3. Reciprocal Influence between Agile Mindset and DEQ

To succeed in today's fast-paced and ever-changing digital era, individuals must be agile and adaptable. However, being agile is more than applying agile processes and practices to realise an agile environment. Operating in the context of agile projects implies that being agile is not only about technical skills but also soft skills, such as DEQ and an agile mindset. While this encapsulates project managers and team members, the crucial role of team members is neglected, given that they are primarily responsible for executing and implementing an agile project (Saputra 2023). Consequently, this paper places its primary emphasis on team members exclusively, without delving into the realm of leadership. DEQ helps individuals sense and manage emotions, while an agile mindset helps them adapt to change and collaborate in an agile environment. An agile environment is reinforced using DEQ and an agile mindset, as this provides the foundation for applying processes and practices associated with agile projects. Together, these skills form a powerful combination that can drive innovation, productivity, and success in an agile environment. Table 1 depicts the DEQ values and skills that are connected to those of an agile mindset to be agile rather than do agile (Denning 2016).

DEQ Competencies	Values and Skills of DEQ	Values and Skills Relating to Agile Mindset
	Promotes learning and improving (Ashley and Reiter-Palmon 2012)	Creates passion for learning (Rising 2016)
Self-awareness	Evolving process (Rochat 2003; Rasheed et al. 2019)	Desires continuous learning and improvement (Sidky 2010; Dweck 2017; Miler and Gaida 2019)
	Better decision making (Eurich 2018)	Search for a solution to the problem instead of finding the guilty party (Miler and Gaida 2019)
	Team Performance (Dierdorff and Rubin 2015)	Effective team collaboration (McCormick 2012)
	Enables change (Pichler 2020)	Openness to change (Popova 2014; Rising 2016; Miler and Gaida 2019)
Empathy	Promoting trust and psychological safety (Pichler 2020) Display understanding and compassion for others while interacting online (DQ Institute 2018).	Being agile requires psychological empowerment, and psychological empowerment, in turn, enables environmental agility (Eilers et al. 2020; Ahl 2021)
	Enables understanding of user and customer demands (Pichler 2020)	Enables customer satisfaction (Cohn 2010; Ghani and Bello 2015; Masood and Farooq 2017)
	Conflict Management (Stichler 2006; Bradberry and Greaves 2009) Comprehend and control online social environments (IEEE-Standard 2020)	Ability to comprehend and recognise their own and others' emotional responses (Dweck 2006, 2017)
Relationship Management	Effective Communication (Bradberry and Greaves 2009; Mohamad and Jais 2016)	Effective communication and collaboration (Miler and Gaida 2019; Tam et al. 2020)
	Respect, commitment and openness (Mohamad and Jais 2016)	Respect, commitment and openness (Miler and Gaida 2019; Mordi and Schoop 2020)
	Self-motivated and committed (Park 2019)	Commitment (Miler and Gaida 2019; Mordi and Schoop 2020)

Table 1. DEQ and Agile mindset values and skills.

Bradberry and Greaves (2009) state that self-awareness is a core skill, and having it makes other emotional intelligence skills much easier to employ. In that way, it will allow an individual to understand themselves and their needs (Papleontiou-Louca 2003; Ashley and Reiter-Palmon 2012). Self-awareness enables the ability to see and control how one's values and digital skills fit into their digital environment (DQ Institute 2018). Having self-awareness will make it easier for individuals to communicate with ease and build healthy working relationships (Dierdorff and Rubin 2015; Eurich 2018). Being self-aware is an evolving process of self-discovery (Rochat 2003; Rasheed et al. 2019) that promotes learning and improvement (Ashley and Reiter-Palmon 2012), which is what an agile mindset individual is capable of (Rising 2016; Schroder et al. 2019). Agile mindset individuals have passion and desire for continuous learning and improvement (Sidky 2010; Dweck 2017; Rising 2016; Miler and Gaida 2019).

The ever-changing nature of the process is advantageous within an agile environment, as an agile environment embraces change (Agile Manifesto 2001; Koi-Akrofi et al. 2019). Dierdorff and Rubin (2015) contend that heightened self-awareness leads to improved decision-making and enhanced team performance. When faced with a crisis, agile mindset individuals do not seek to assign blame but rather focus on finding solutions (Miler and Gaida 2019). Eurich (2018) supports Dierdorff and Rubin's (2015) perspective, asserting that individuals with substantial self-awareness tend to make more sound decisions, foster stronger connections, and communicate more effectively. They present awareness of their own moods and can actively control their instincts to match, which shows respect for others when communicating online (Park 2019). McCormick (2012) also suggests that agile practices promote better communication using increased team collaboration. Individuals with self-awareness possess the ability to understand how their personal values impact and are influenced by their digital environments. Additionally, they gain insight into how their emotional states can impact the people around them, which will enforce effective team collaboration (IEEE-Standard 2020).

In an agile environment, change is inevitable, making an agile mindset essential. Being empathetic, which facilitates change, can be highly beneficial. For example, empathy allows for the consideration and acceptance of others, irrespective of whether one shares their perspectives or has personal preferences or biases towards them (Pichler 2020). An agile mindset individual will be receptive to change and capable of understanding diverse perspectives (Popova 2014; Rising 2016; Miler and Gaida 2019). Embracing this value is crucial within an agile environment because effective communication and collaboration are fundamental principles (Agile Manifesto 2001).

Furthermore, possessing empathetic skills fosters trust and psychological safety, allowing individuals to be themselves, as it involves recognising and understanding others' emotions and concerns (Pichler 2020). Individuals with digital empathy can discern and understand how their online interactions affect others' emotions, whether these interactions happen in real-time or asynchronously online (Dostál et al. 2017). Trust plays a pivotal role in an agile environment, particularly when dealing with resistance from team members (Gandomani and Nafchi 2016; Miler and Gaida 2019; Dwivedula and Bolloju 2020). Digital empathetic skills empower individuals to regulate their own emotions and respond appropriately, showing understanding and compassion for the feelings, needs, and concerns of others during online interactions (DQ Institute 2018). They actively listen to and understand the concerns of those resisting change (Pichler 2020), and build confidence by acknowledging their viewpoints (Engle and Nehrt 2011). When individuals are psychologically empowered, it paves the way for them to exhibit an agile environment (Eilers et al. 2020; Ahl 2021).

For instance, in cases where an agile project is implemented, and there is resistance from team members, one effective approach is to ensure they feel heard (Gandomani and Nafchi 2016; Dwivedula and Bolloju 2020). Acknowledging their concerns is crucial. Even if transitioning to agile is the optimal choice, it is unlikely that resistant individuals will embrace it without genuine attention to their input and respectful consideration of their underlying concerns (Cohn 2010; Pichler 2020). Empathy also aids team members in grasping the needs and desires of users and customers, especially when working under tight deadlines (Pichler 2020). This value holds significant importance in an agile environment where customer satisfaction is a primary focus, and an agile mindset is instrumental in achieving that satisfaction (Cohn 2010; Ghani and Bello 2015; Masood and Farooq 2017).

Relationship management involves an individual's ability to effectively handle interactions by being aware of both their own emotions and those of others, which ultimately enhances communication and conflict resolution skills (Bradberry and Greaves 2009). This skill is particularly valuable in agile environments where communication is crucial (Tam et al. 2020) and conflicts are inevitable due to the nature of agile projects (Tshabalala 2018; Koi-Akrofi et al. 2019; Khoza and Marnewick 2021). The ability to manage relationships becomes especially important in dealing with conflicts during high-pressure situations (Stichler 2006; Bradberry and Greaves 2009). Individuals proficient in relationship management possess the knowledge to understand and navigate online social environments to achieve consensus and positive outcomes, recognising how behavioural norms and emotional responses can vary depending on the platform and context (IEEE-Standard 2020). An agile mindset equips individuals to comprehend and acknowledge their own and others' emotional responses, which facilitates smooth conflict resolution (Dweck 2006, 2017).

The individuals skilled in relationship management are self-motivated and committed to fostering an inclusive culture that promotes mutual respect and teamwork, leading to the establishment and growth of healthy online communities (Park 2019). This entails building and maintaining relationships over time, meeting each other's needs, and exchanging information, ultimately enhancing team collaboration (Pettry 2006; Schuetz 2011; Mohamad and Jais 2016). Similarly, individuals with an agile mindset embody qualities such as respect, commitment, openness to change and learning, and core social and emotional strengths (Miler and Gaida 2019; Mordi and Schoop 2020). Agile mindset individuals demonstrate objectivity, active listening, motivation, empathy, and a positive attitude (Popova 2014; Dweck 2017; Jordan et al. 2017; Salvetti and Bertagni 2020).

3. Research Methodology

3.1. Research Philosophy

The objective of this study was to demonstrate the reciprocal influence between DEQ and an agile mindset in an agile environment. The aim was to gain a deeper understanding of how team members' agile mindsets and DEQ impact agile environments and how they influence each other. To achieve this, an extensive analysis of team members' behaviour was conducted. To comprehend human behaviour, what individuals consider common sense must be understood. This understanding serves as a vital source of information for interpretivists seeking to gain insights into people's perspectives (Žukauskas et al. 2018; Du Plooy-Cilliers 2021). Interpretivists are transparent about both their own interpretations and those of the participants when exploring the values that guide their research (Klakegg 2015; Du Plooy-Cilliers 2021). Given the nature of this study, interpretivism was chosen as the philosophical stance, as it allows researchers to delve into the in-depth human experiences and perspectives (Melnikovas 2018; Du Plooy-Cilliers 2021).

3.2. Research Approach

Saunders et al. (2009) delineate two primary research approaches: deductive and inductive. The deductive approach commences with an existing theory, proceeds to formulate a question or hypothesis, and then collects data to either support or challenge that hypothesis (Melnikovas 2018; Walter 2018). Conversely, the inductive approach starts with observations and data collection, followed by description and analysis aimed at constructing a new theory (Saunders et al. 2009). Given the nature of this study, which required deriving new insights from participants, the inductive approach was adopted. The inductive approach is typically associated with qualitative research methods, whereas the deductive approach aligns with quantitative research methods (Sahay 2016).

Qualitative methods enable a deep exploration of participants' statements, experiences, and perspectives (Walter 2018). Goundar (2019) explains how quantitative research can be useful for measuring awareness and forecasting future needs. However, as cautioned by Lakshman et al. (2000), quantifying human behaviour can be challenging. Understanding the human perspective often requires qualitative methods, such as external observation or open-ended data collection. In this study, the researchers aimed to gain a comprehensive understanding of how agile team members engage within their teams, which is not easily quantifiable. Hence, the qualitative research method was chosen to facilitate in-depth insights. Successful studies that also employed qualitative strategy include "On the agile mindset of an effective team—an industrial opinion survey" by Miler and Gaida (2019) and "Exploring the impact of emotional intelligence training in the workplace" by Jansen van Rensburg (2018).

3.3. Research Strategy

The survey strategy was chosen for this study because it provides a comprehensive view of phenomena (Kelley et al. 2003). Surveys can be employed in both quantitative and qualitative research and can take various forms, such as questionnaires or interviews. The interview strategy was selected to encourage in-depth insights for this qualitative study (Kabir 2016). Interviews can be structured, unstructured, or semi-structured, with semi-structured interviews being beneficial for this study because they allow the researcher to get in-depth information from the participants (Kabir 2016; Bezuidenhout and Strydom 2021).

The semi-structure interview was divided into two main sections: Section A was focused on collecting demographic information about the participants, encompassing details about their roles, work experience, and industry affiliation, as detailed in Table 2. Section B featured questions designed to address the research questions derived from existing literature. The primary objectives of the interview questions were to investigate the presence and application of an agile mindset among participants in a team context and to gain insights into the participants' DEQ skills and how they applied them in team settings. The primary aim was to ascertain the potential relationship between participants' agile mindset and their emotional intelligence in an agile environment from a digital perspective.

Participant ID	Title	Industry	Total Working Experience in IT (Years)	Total Agile Experience (Years)	Total Interview Duration
Pt_01	Software Test Engineer	Banking	12	10	50 min
Pt_02	Software development engineer in Test	Online Gaming	12	5	1:05
Pt_03	Senior Quality Engineer	Retail	7	3	1:00
Pt_04	Software Quality Engineer	Banking	15	7	1:10
Pt_05	Software development engineer in Test	Banking	10	7	20 min 30 min (50 min)
Pt_06	Developer	Banking	5	5	50 min
Pt_07	Cybersecurity system, data and business analyst	Banking	2	2	35 min
Pt_08	Feature Analyst	Banking	15	4	50 min
Pt_09	Senior Data Engineer	IT Consulting	12	4	35 min
Pt_10	Senior Developer	IT	12	4.5	50 min
Pt_11	Senior Data Scientist	Finance	3	5 months	55 min
Pt_12	Business Analyst	Telecommunication	9	7	55 min
Pt_13	System Analyst	Banking	15	6	40 min
Pt_14	Test Analyst Specialist	Stock market	14	9	50 min
Pt_15	Feature Analyst	Banking	15	7	50 min

Table 2. Overview of the study's participants.

3.4. Sampling

The objective of this study was to achieve a deeper understanding of how team members' agile mindsets and DEQ influence agile environments and interact with each other. As such, the study focused on IS professionals actively involved in agile projects. The unit of analysis for this paper comprised team members engaged in agile projects, those in the process of transitioning to agile projects, and those presently working on hybrid projects (a combination of agile and waterfall). The primary emphasis was on team members rather than team leaders since team members actively contribute to project execution. Furthermore, the study did not limit itself to a specific industry.

Non-probability sampling is commonly employed in qualitative research, where the goal is not to validate theories about a broad population but to gain fundamental insights into a relatively unexplored subset of that population (Mujere 2016; Etikan and Bala 2017).

Purposive sampling selects samples based on characteristics of the population that are most relevant to the study. In essence, researchers choose participants who meet specific criteria aligned with the study's objectives (Daniel 2012). Purposive sampling was utilised in this study to select team members involved in agile projects, those in the transition to agile projects, and those in hybrid project settings. Team members were targeted as their perspective was neglected in previous studies (Saputra 2023). Furthermore, agile environments are reinforced by the soft skills embedded in applying agile processes and practices. While this paper only has jurisdiction to explore the potential relationship between an agile mindset and DEQ in an agile environment, a variance of agile environments and contexts was explored to gather different views.

In qualitative research, the sample size is determined by data saturation, the point at which no further knowledge or understanding can be gained (Daniel 2012). To ensure diversity in data collection and avoid premature saturation that may occur from collecting data within the same field, the researchers approached participants from different organisations and agile environments. Although similarities in responses began to emerge around the eleventh interview, additional interviews were conducted to strengthen the findings. Ultimately, a total of fifteen interviews were conducted, determined by data saturation.

3.5. Data Analysis and Rigour

To ensure credibility, the researchers employed a thematic analysis framework. Figure 2 illustrates the thematic analysis framework employed for this study.



Figure 2. Braun and Clarke six-phase framework for Thematic Analysis (Braun and Clarke 2006; Maguire and Delahunt 2017; Nowell et al. 2017).

Initial transcriptions were created using Otter.ai. To ensure that the transcribed text was accurate, the researchers went through all the text and validated it against the recordings. The transcribed data was analysed using Atlas.ti 22. Once data was uploaded in Atlas.ti, the researchers generated initial codes by going through each line of the interview. Coding permits the researchers to concentrate on and simplify particular aspects of the data (Nowell et al. 2017). Initial coding generation focused on what the interviewees said directly, and the next phase focused on refining codes to create consistency, as this was a precursor to identifying

patterns and themes (Braun and Clarke 2006). The researchers subsequently went through the codes repeatedly to identify patterns, which resulted in potential themes. A challenge when identifying patterns is the reality of interviewees confusing terms and concepts. To mitigate this, the researchers reflected on the transcriptions to ensure context and relevance during the analysis process. The researchers created the code groups and linked the line-by-line codes to them. The code group was further reviewed, and the responses were grouped based on their patterns, which resulted in the sub-themes. These sub-themes then culminated into a theme. The researchers re-evaluated the themes to ensure that they were consistent with the research questions. See Appendix A for the coding process that was followed.

4. Analysis and Findings

The exploratory nature of this paper centres on the potential relationship between participants' agile mindset and their emotional intelligence in an agile environment from a digital perspective. The initial analysis and findings are presented in Appendix B as it presents the code groups mapped to the respective participants.

4.1. Agile Mindset Characteristics

An agile mindset can be defined as "a mindset based on values and principles of the Agile Manifesto, which includes trust, responsibility and ownership, continuous improvement and an openness to learn, as well as an ability to adapt and grow" (Mordi and Schoop 2020, p. 9). Table 3 highlights the findings of agile mindset characteristics that cover the research question of "What are agile mindset characteristics required to successfully implement agile?"

 Table 3. Agile mindset characteristics.

	Agile Mindset Characteristics
Ad	apting to change
• • •	Change is an obligation Change is inevitable but not easy Open-mind enables easy adaptation Adapt with sufficient information Welcomes change gracefully
Lea	arning new skill initiative
• • •	Online videos Organisational learning portal Line manager engagement Learn through working Organisation's intranet
Ma	naging new skills challenges
• • •	Try different methods, then seek help Try a foundational level of the course Work at own pace Upskilling not challenging
Ha	ndling Project Failure
•	Takes failure personal Accept failure gracefully
Im	proving next iteration (continuous improvement)
•	Learn from mistakes Time management Improve by measuring incidents
Res	sponding to constructive criticism
•	Accept criticism based on the tone and attitude Accepts constructive criticism

4.1.1. Adapting to Change

Awareness of change is apparent, although it does not change the fact that some find it difficult. Consequently, each individual responds to change in a unique way, but in the end, they all find ways to adapt. For instance, some individuals find change to be an obligation and that they adapt because they have to; "*I think I don't manage* per se, *I just do what needs to be done*", said Pt_01. Furthermore, some understand that change is inevitable, but it is not easy to welcome it; as Pt_02 stated, "*I think it's just going with the flow and it's not always easy. Honestly, speaking, it's not always easy, but it's just understanding that change is a constant thing.*" Others, such as Pt_15, credit their open mind to easily adapting to change: "*So as an open minded person it is not difficult for me to adapt to change.*" Moreover, others welcome change provided that they have sufficient information about it: "*I welcome change, so long as I know what it is that I need to do(sic)*", said Pt_11. Lastly, the findings demonstrate that the majority of the individuals have no difficulties in adapting to change, and they welcome it gracefully. The individuals include Pt_10, who stated: "*I take change gracefully, but at my own pace as well.*"

4.1.2. Learning New Skills Initiatives

Individuals take the initiatives to acquire new skills. Each individual may use a different learning platform, but they all make an effort to acquire knowledge. Some individuals like Pt_04 use platforms like online videos to acquire new skills: "I do a lot of my research on Google and I find stuff on YouTube as well. I literally look for growth everywhere". Some use their organisation's learning portals or even their intranet to search for the desired skill and learn from it: "So if you need a new skill, they gave us a platform to apply for whatever training or whatever skill you need to upskill yourself with", said Pt_13. Moreover, some, like Pt_09, engage with their line managers who will advise them on the next step to take: "I will go to my manager and say, look, these are the skills that I want to acquire, can the company support these?" While others, find it easy to learn by applying what they have learnt through practice: "My preference is learning on the job. That works best for me because you read books, if you don't apply it, that knowledge goes away" stated Pt_12.

4.1.3. Managing New Skills Challenges

Upskilling is paramount, given the fast pace and changing nature of agile projects. Thus, individuals find ways to overcome the upskilling challenges they encounter. The approaches include trying different methods to deal with the challenge first before asking for help from someone with expertise in the subject matter: "*if I come across the challenges, I'll Google it first, I am not that person who just run to the person and ask for assistance without trying*...", said Pt_15. Some individuals, including Pt_06, work at their own pace: "*I go at my own pace, no pressure, maybe put extra hours after work or before work, on weekend.*" The other findings demonstrate that attempting a foundational level of the course first will be helpful as it will provide the basics: "*if I find that the concept I bought is high level on this particular course, I search for a course that comes with the teaching fundamentals, and then I can go back to that other one as soon as I understand the fundamentals.*" said Pt_04. The findings also show that some individuals do not find the upskilling challenges to be frustrating: "*I don't see it as a frustration because eventually, I want to get out of the rat race*", said Pt_01.

4.1.4. Handling Project Failure

Responding to failure has a profound psychological impact on an individual. Some individuals accept project failure gracefully and have no emotional attachment to it: *"if it didn't go well, I'm not saying it doesn't impact me, but I'm not emotional about it"*, said Pt_14. While others struggle with failure and find it hard to process, they still take it as an opportunity to learn from their mistakes. Regardless of how they feel about it, they all view failure as an opportunity to learn from their mistakes and avoid repetition. For instance, Pt_05 stated, *"it is painful, just like studying hard for an exam and then you fail, you obviously*

don't take it well. But to be a better person, I have to improve where I failed, check what made it fail and improve."

4.1.5. Improving Next Iteration (Continuous Improvement)

In many cases, individuals seek continuous improvement by identifying the mistakes and lessons learnt and applying them to improve. In terms of improving the next iteration, agile ceremonies such as retrospectives are advantageous as they allow the team members to identify their mistakes and what can be performed to improve on those: "We typically have retrospectives where we just have a light discussion. It doesn't happen all the time, because sometimes the sprint goes well, but where we feel that there is things that we need to discuss, we generally discuss it", stated Pt_09. Time management is the other findings from individuals, including Pt_07: "I think planning helps. So, it's just to have view of what's coming up in the next iteration, and then to plan time to work on those thing." The findings also demonstrate that in some environments, iterations are not used, and instead, the team relies on product releases. In such cases, improvement can be made by measuring the incidents that occurred in production and working on lessening them for the next product release. "After an iteration when you deploy to production you might find that on Monday, you get five incidents. That was not as successful release. Because if you had so many issues, sometimes you might find that it causes downtime to return to business", stated Pt_13.

4.1.6. Responding to Constructive Criticism

Individuals in agile teams accept constructive criticism, although to some, like Pt_05, it is dependent on the tone and attitude of the delivery: "I don't take it well—it depends on the attitude of the person bringing the feedback". Some individuals, including Pt_11, do not take it personally but accept it however it comes: "As an individual, regardless of I did something, well, I always welcome criticism, and whether it's negative or positive." The findings also demonstrate that the individuals challenge the feedback if they feel that it is incorrect, but they still maintain respect when they do. For instance, Pt_12 believed that even if they and the other party disagreed, they had to understand each other's perspectives: "I don't think it's more of a fight word. It's a, if I understand where you're coming from, I can tell you, where I'm coming from. And if you give yourself the opportunity to understand that too then we at level places." This implies that with the right attitude, team members can have a healthy debate voicing their different opinions.

4.2. DEQ Characteristics

As previously discussed, DEQ refers to the capability to perceive, navigate and express emotions in digital intrapersonal and interpersonal interactions (DQ Institute 2018), and its characteristics are depicted in Table 4. The table highlights the findings of the DEQ characteristics that cover the research question of *"What are the DEQ characteristics required to successfully implement agile?"*

4.2.1. Digital Communication Challenges

As agile environments move to digital tools and channels, it is imperative to explore the emergence of communication challenges from using digital tools and channels. Individuals use communication tools such as Microsoft Teams, Outlook, JIRA, Google Meet, Slack and WhatsApp to communicate. However, findings show the dissatisfaction with communication among the team members due to lack of transparency: *"I guess as much as we might think it's easy, it is one of those where sending a message on teams then waiting for a response at times, they don't even reply at all, you can see them online"* stated Pt_02. Another finding from the public sector individual is the collaboration tools' misuse, where they are still paper-based despite having the collaboration tools in place: *"I wouldn't say the tools are not working because we haven't even really explored them much, we are just paper based."* Language barriers are another challenge, particularly for those that have team members in different countries; as Pt_14 stated: *"It is a struggle. Well, because of the language barrier, most of them are* not fluent in English." Moreover, network issues also seem to be an obstacle experienced by individuals, including Pt_06: "I don't work close with the member in India. However, sometimes the connection is an issue." In contrast, team maturity has a positive impact on the success of the team's collaboration and communication. For instance, Pt_13 attributed their team maturity to their communication effectiveness: "I think it is the maturity of the team. It was the culture of the team, that we started when we were at the office. So when we had to work remotely, we had already adapted to the culture."

Table 4. DEQ Characteristics.

	DEQ Characteristics
Imp	proving communication
•	Mediator usage
•	Remote-working mindset
•	Transparency
•	Adequate tools usage
•	Co-location
Cor	nmunication preference
•	Online communication
•	Physical interaction
•	Physical interaction for some ceremonies
•	No preference
Rea	sons for showing support (Empathy)
•	Team culture
•	Empowerment
•	Teamwork that facilitates success
Cor	ıflict management
•	Do not interfere
•	Let the discussion run
•	Mediate the discussion
•	Comment with adequate information
•	Set a separate meeting
•	Take it offline
Res	ponding to customer changes
•	Communication and transparency
•	Present alternatives
•	Prioritise and adapt
•	Manager's decision
•	Minimal change pressure
Ma	naging customer changes
•	Overtime
•	Provide customers with adequate information
-	Planning

- Project manager responsibility
- Nothing can be done

4.2.2. Improving Communication

Each organisation faces distinct obstacles. Consequently, the proposed improvements are dependent on each environment. For instance, a language barrier challenge can be resolved by a mediator who understands both parties' languages: "Well, we had to come to a compromise. So among the team, there's, I think about two of them who are fluent in English. We would pose a question to one of the guys but the other one will answer" stated Pt_14. As agile emphasises collaboration and communication, it is essential to adopt a remote-working mindset to enhance the communication and collaboration in the team: "I think people's

mindset more than anything needs to change. So it's them being aware of the fact that we're not in the same building, and we need to keep the communication going" as stated by Pt_02. An additional finding is that individuals should be transparent, as stated by Pt_15: "we try to emphasise this to say, communicate where you are going. Like now around two I have to go and pick up my kids... if I join the meeting, I'm driving, I'm online". Pt_10 stated that it would be beneficial if they started using the tools that they have instead of relying on paper "We need something to track our stuff. In terms of how we can track our tasks and whatnot, there could be improvements we could use". The study findings also demonstrate that being co-located also improves communication. For instance, Pt_05 stated: "You can't have that strong bond relationship with people who you have never seen, but just hear their voices. It's easy to communicate with people when you're able to see them physically than digitally."

4.2.3. Communication Preference

The findings demonstrate distinct communication preferences among the agile team members. For instance, some prefer online communication because of its advantages: "*I* prefer digitally because it also works for us with the tool that we use, whereby we can record the session, and then wherever you missed, you can just go replay the whole meeting", stated Pt_06. Others prefer physical interactions: "Physical communication, where you are co-located, and you're able to be in one place is much easier", said Pt_08. The findings also demonstrate that the hybrid approach works, as other interactive ceremonies, such as planning or retrospective, are better attended in one room. For instance, Pt_12 stated: "It depends on what we're doing. So, if we were doing something like a grooming session, I'd prefer to be in the same room so I can look people in the eye gauge their feelings about stuff. ... If we're doing a retro I think it's okay to be remote and for everyone to be in their safe space." Other individuals have no preference and work with what is given: "for me I think it doesn't matter. As long as we talk, we understand each other, we reach a consensus on what we are discussing. It doesn't matter whether we see each other in person or not" said Pt_01.

4.2.4. Reasons for Showing Support

Everyone was willing to show support to their fellow members for various reasons. The findings demonstrate that showing empathy to fellow team members has a positive impact on the team's success. For instance, showing support to the struggling team members will build a favourable team culture that provides the team with a safe space: *"Because I can relate to how they feel as I've been under pressure before. And in that situation, I would want somebody to offer me a helping hand as well."*, said Pt_07. Additionally, empathy enables empowerment to the team: *"it is somehow my way of giving back to the next fellow colleague or a developer as myself, to empower them as well"*, said Pt_10. Ultimately, empathy creates teamwork that facilitates team success, as Pt_02 stated: *"it's for the team's benefit. I feel we are all part of a team. I always say if one member of a team doesn't make it, it means we all didn't make it."* In essence, empathy benefits the entire team.

4.2.5. Managing Conflict

It is apparent that diverse teammates can still work well together despite their differences. While some individuals are adamantly opposed to conflict resolution and do not interfere with maintaining peace, such as Pt_06: "well personally, I try by all means to avoid conflict. Avoiding conflict is the best way to actually get along with everyone". Others attempt various conflict resolution strategies so that the team can reach a consensus. Conflict resolutions such as letting the discussion run: "It depends. so like, for instance, if we have two developers arguing about how to implement a solution. As long as they are respectful the arguments can happen. I don't see it as an argument, I see it as a debate" as stated by Pt_12. Some, including Pt_14, mediate the discussion to find common grounds: " I will try to mediate and seek common grounds. And just try and see how we can resolve it". Additionally, interfering with adequate information is another finding: "if I have knowledge about whatever they speaking about, I will add my input, without taking sides, and then maybe suggest that each person put down, like a list of facts around why they think their argument is right", said Pt_07. The findings also demonstrate that setting up a separate meeting to discuss the matter is essential because some disagreements are vital to the project: "I advice that we set another meeting to go through that in detail. Let's focus on getting what we want to get done", said Pt_03. In case the conflict occurs during a meeting, suggesting that the parties at hand take the matter offline is essential, particularly if it does not benefit the meeting's scope: I'll probably suggest that they take it offline if it's something they need to take offline", stated by Pt_01.

4.2.6. Responding to Customer Change (Customer Collaboration)

Agile projects are often beset with changes, and team members explore multiple ways to respond to the changes that customers frequently bring. The methods include being transparent and openly communicating with the customers to manage their expectations. For instance, Pt_12 stated that alerting the customers about the impact that their change will bring is important: "You got to absolutely keep them in the loop. You got to make sure that they know the impact of their decisions, such as why does it take so long to do stuff". Additionally, if the changes are not feasible, the team can present the alternatives with the more feasible changes: "I learn about what possible options are there for the customer, to do that change. Once you understand that, that can also be possible, you adapt yourself to all those other possible scenarios that they might change their minds on", stated Pt_06. The other finding is to prioritise the changes and begin with those who have high priorities: "The first thing that I always do is to understand the change that they require, and then how urgent it is and then that's how I can prioritise that new change", said Pt_03. The findings also show that the leadership team can make the final decisions on the managing the changes: "They can be very frustrating, especially because we don't have a direct mechanism to take in the changes. Its in terms of whoever's available, we'll be able to be handed over whichever task... It is at a manager's discretion", as stated by Pt_10. Managing the customers' change depends on the system, as some, including Pt_14, do not have the pressure of the constant changes due to working on the legacy system: "Well, the system I'm testing is the legacy system, we're basically maintaining it. It's under maintenance, we hardly change rules."

4.2.7. Managing Customer Changes

Responding to customer changes requires various management strategies to manage the constant changes that the customers bring. For instance, working overtime is one finding of dealing with the changes that came late into the iteration: "I haven't rejected a requirement, what I have done was to put extra hours to get things done", said Pt_03. However, that is not always ideal; providing the customers with adequate information about their system's capabilities will help the customers understand better and know which of their requirements can be accommodated: "I think that we can do everything that we can do to educate the stakeholders on everything that happens in our world... And then that could prevent misunderstandings later down the line," as stated by Pt_07. In other instances, some changes are necessary; therefore, planning well in advance to prepare for unforeseen changes is important; otherwise, nothing can be done but to accommodate those changes: "it's the lack of planning that's pushing the changes... So if we introduce in Agile, that pre planning has to be the foundation of every sprint, that will drastically help success rates of agile across the board", stated Pt_09. The findings also determine that the changes cannot be avoided and should be welcomed: "Things change, you know. we should allow business to change the requirement, that is what Agile is all about..." as stated by Pt_08. The other findings also demonstrate that managers can be involved in managing the changes, as stated by Pt_11: "We'll have a discussion with the project manager to say this is the change that came up. She knows what my capacity is. She knows the tickets that I need to do. So she'll be the one to say, No, it's fine. I'll push back or no, we'll do it, it's fine". Communication remains the significant solution in managing customer changes. Ultimately, customer satisfaction is key in an agile environment.

5. Discussions and Implications

The findings, discussion and implications are framed around the analysis presented in Appendix B. The caveat is that this research explores the potential relationship between an agile mindset and DEQ in agile environments, implying that participant bias and opinions inherently influence results. That said, the value of the results is that they provide direction and new insights regarding the neglected soft dimension of team members operating in agile environments. Appendix B showcases an overview of the insights by mapping the potential relationships through the eyes of the participants.

5.1. Agile mindset Characteristics Discussion

5.1.1. Adapting to Change

According to Popova (2014), Rising (2016), Miler and Gaida (2019), individuals who possess an agile mindset are open to change, and they welcome and embrace challenges. In contrast, individuals who possess a fixed mindset are strongly resistant to change, and when faced with it, they easily give up (Rising 2016; Dweck 2017). The findings showed that all the participants understood and accepted that change was inevitable and they had to adapt. However, some found change challenging. Admitting to finding change difficult does not suggest that an individual has a fixed mindset. It shows self-awareness, which is a crucial quality of an emotionally intelligent individual. Self-aware individuals are conscious of their feelings, attitudes and thoughts (Gardner 2003; Sutton et al. 2015; Cherry and Susman 2021). According to Rochat (2003) and Rasheed et al. (2019), self-awareness is an evolving process of self-discovery that never reaches saturation, which is crucial in an agile environment as agile accommodates change (Agile Manifesto 2001; Koi-Akrofi et al. 2019).

Lack of information or knowledge causes project failure, according to studies (Tanner and Von Willingh 2014). Therefore, requesting adequate information before adapting to change will reduce the likelihood of blindly committing to a change, which can lead to project failure. Sometimes, change is needed, but it is important to understand the benefits before accepting it. Considering the benefits and adapting to change is easier with an open mind. Open-mindedness helped other participants adapt to change. Miler and Gaida (2019) state that possessing an agile mindset enables being open to change, which suggests that the said participants have an agile mindset. It is normal to find change challenging; however, it is essential to maintain an open mind and be able to adapt.

5.1.2. Learning New Skills Initiatives

Studies show that having an agile mindset, which Dweck (2017) also refers to as the growth mindset, can help one to progress (Ibarra et al. 2018). Agile mindset individuals always seek continuous improvement in learning and also embrace challenges (Sidky 2010; Dweck 2017; Anderson 2018; Beatson et al. 2019; Pusenius 2019). All the participants took the initiatives to learn a new skill and did not wait for their organisations to recommend upskilling. They understood how easy it was to access information as they all used different platforms to learn, with the majority of them preferring to learn through online videos. These findings support the studies indicating that individuals with an agile mindset seek to continuously learn (Sidky 2010; Dweck 2017; Jordan et al. 2017). Learning can be different for each individual. Some may find it easy to watch online videos, while others prefer learning on the job, i.e., applying what they have learnt to their projects. Others combine different ways of learning.

5.1.3. Managing New Skills Challenges

Studies show that individuals with an agile mindset are motivated and portray a positive attitude towards learning even when faced with challenges (Sidky 2010; Miler and Gaida 2019). The majority of the participants exhaust all the methods to comprehend the challenges they faced before asking for assistance. They were not afraid to ask for help, which indicates how well they collaborated with their team and their willingness to ask for assistance when necessary. It is advantageous to learn at one's own pace without

rushing, as challenges will be less frustrating because there is no deadline. Ultimately, everyone found ways to manage their challenges and ensured that they learnt the required skills. This corroborates studies that state that agile mindset individuals have a goal to continuously learn and not to be perfect (Sidky 2010; Dweck 2017; Jordan et al. 2017) and that they love challenges and embrace them as they see opportunities to learn more (Sidky 2010; Dweck 2017; Anderson 2018; Beatson et al. 2019; Pusenius 2019).

5.1.4. Handling Project Failure

Studies also state that agile mindset individuals always seek continuous improvement and do not fear failure (Sidky 2010; Miler and Gaida 2019). According to Pusenius (2019), fixed mindset individuals fear failure because they believe it defines them, and they are more likely to choose tasks that are compatible with their current abilities (Ibarra et al. 2018). In contrast, agile mindset individuals gain confidence through these failures, knowing that they are improving and gaining more knowledge (Rising 2016; Schroder et al. 2019). These studies suggest that individuals with an agile mindset are fearless when it comes to failure and are always ready for it. However, the study findings depict a different perspective of failure.

Most of the participants did not take failure well, especially after putting in effort at work. However, the findings show that they did not lean towards the tasks that were compatible with their current abilities since they always took the initiative to learn. The participants were always up for new knowledge, but they were not immune to how failure made them feel. Some participants did not take it personally, and, in line with the literature, they took it as an opportunity to learn. While most study participants exhibited an agile mindset, they disliked failure. After exerting so much effort in their work, they took failure personally. However, they identified the underlying causes of failure and then determined better ways to improve. Regardless of how they felt about it, they continuously learned and improved, which corroborates Miler and Gaida's study (Miler and Gaida 2019) that continuous improvement is an element of an agile mindset.

5.1.5. Improving Next Iteration (Continuous Improvement)

The findings demonstrated that the participants learned from their previous iterations mistakes, just as they did when a project failed. The vast majority of participants used retrospective ceremonies to improve their iterations. Retrospective ceremonies enabled them to express their concerns and suggest ways to improve them (Ozkan et al. 2020). Not only that, but the ceremonies allowed them to recognise what they did well so that they could keep doing it in the future. Other participants improved their time management for the next iteration. Inadequate planning can lead to project failure due to unforeseen circumstances (Chow and Cao 2008; Stankovic et al. 2013). Similarly, ineffective planning or time management can lead to unsuccessful iterations.

Continuous improvement is agnostic of the agile method and practice. Some agile environments use sprints, while others use product releases. Similarly, agile environments in the same industry could use the same practice (e.g., Kanban) and execute it differently. Regardless of method and practice, incident tracking and lessons learned are pivotal to committing to continuous improvement.

5.1.6. Responding to Constructive Criticism

In addition to learning from mistakes, feedback is another method of learning and improvement. Growth-mindset individuals seek balanced feedback to improve (Dweck 2006; Miler and Gaida 2019). Criticism response distinguishes fixed and growth mindsets (Rising 2016; Dweck 2017). Fixed mindset individuals express negative emotions and become defensive when their beliefs are challenged, while growth mindset individuals show positive emotions like curiosity and pay attention when challenged (Fredrickson 2013; Dweck 2017).

All participants accepted constructive criticism as a learning opportunity, although some accepted it based on the tone of its delivery. Expressions of emotion in response to criticism are not necessarily indicative of an individual's mindset. What they do with the feedback defines their mindset. A key requirement is that feedback be delivered with respect. Emotional intelligence enables a reflective and calm response to impolite criticism. This implies that, with the right attitude, team members can have a healthy debate in which they express their diverse opinions. Respect will enable transparency, which will enhance team members' trust and communication. Ultimately, DEQ and agile mindset skills will enable team members to share and receive information with openness and trust (Mohamad and Jais 2016; Miler and Gaida 2019).

5.2. DEQ Characteristics Discussion

5.2.1. Improving Communication

Each organisation faces distinct obstacles, such as lack of transparency, inappropriate usage of collaboration tools, language barriers and connectivity issues. Consequently, the proposed improvements are dependent on each environment, such as using a mediator who understood both languages for language barrier issues. This solution was the result of effective teamwork and collaboration, confirming the findings of Hamdani and Butt (2018) and Mikhieieva and Stephan (2020) that effective communication encourages team collaboration which is crucial in an agile environment. Other recommendations include transparency from team members to improve team communication and collaboration. The suggestion confirms that collaboration and transparency are encouraged in an agile environment, as demonstrated by studies such as by Hutchison (2014) and Betta and Boronina (2018). According to the findings, a lack of transparency among team members hinders the efficiency of team collaboration. Transparency influences the trust, communication and collaboration and collaboration and collaboration and transparent with one another, a trusting environment would be established, which would ultimately result in enhanced communication and collaboration.

Team members must recognise that working remotely differs from working in the same location and that certain behaviours must change accordingly. Working remotely requires a mindset change and adapting to digital communication. Digital conversations lack numerous emotional signs and indications encountered face-to-face, leading to impersonal interactions (Walther 2011). The challenge is to balance remote and contact sessions as interactive ceremonies, such as retrospectives, sprint planning and backlog grooming, were better attended in the same location. While remote ceremonies can work, a participant's digital fluency must be effective if they are to collaborate effectively online. Culture, behaviour and attitude underpin effective digital communication and collaboration in a remote agile environment.

5.2.2. Communication Preferences

Discussing communication preferences supports balancing remote and contact interactions. For instance, some prefer to be co-located in one place for all ceremonies, while others find that only interactive ceremonies, such as planning or retrospectives, are better attended in one room than virtually. This is an indication of the lack of effective interactions in the digital platform that can be encountered while interacting in one room. These findings corroborate Walther's (2011) view that digital conversations lack numerous emotional signs and indications encountered face-to-face, leading to impersonal interactions. However, there are benefits in digital interactions as the digital tools provide features that allow individuals to revisit their previous sessions for references when necessary. This leads to other findings that show that other participants prefer online communication because of its advantages, such as recording the sessions that they can replay when necessary. Team maturity and a remote-work mindset also play an important role in communicating effectively on digital platforms.

5.2.3. Reasons for Showing Support (Empathy)

According to Fox and Rainie (2014), remote working has changed the communication and collaboration patterns of agile team members, as well as the display of empathy in digital interactions. Being digitally empathetic will broaden the existing understanding of empathy phenomena in the digital space (Friesem 2016). Interestingly, all of the participants were sympathetic to their team members who were having difficulty with their work. The majority of participants stated that they provided support and assistance to their team members with their work, especially when they had the capacity to do so. Only one participant stated that they had never been in a situation where their team members needed help. However, if they ever found themselves in a situation where a teammate is struggling, they would want to help but would be unsure how because they lacked experience. This finding indicates that the participant had compassionate empathy and desired to help others (Ekman 2004; Malouff and Van Berkhout 2016).

The findings indicate that the participants understood that teamwork and collaboration are essential for team success. If one team member struggles, the entire team suffers. They showed their team members support or empathy for a variety of reasons that benefited the team. One reason was to foster a supportive team culture and to provide a safe environment for all team members to be open and transparent about their difficulties. Otherwise, their struggles could be detrimental to the team's productivity. Showing empathy to team members will also empower them. Additionally, demonstrating empathy will foster trust and psychological safety (Pichler 2020). It will instil self-confidence in the stressed team members, and they will not be afraid to ask for assistance when necessary. Consequently, the stressed team member will commit to working harder and improving team performance (Engle and Nehrt 2011; Dierdorff and Rubin 2015). Creating a safe culture will reduce the likelihood of an individual leaving a job because they feel undervalued. Being supportive and empathetic will contribute to the success of the team. Ultimately, working as a team entails having one goal to achieve. A successful team requires unity, support and empathy.

5.2.4. Conflict Management

Due to the nature of agile projects, conflicts are unavoidable, and therefore, a solid conflict resolution process should be in place (Tshabalala 2018; Koi-Akrofi et al. 2019; Khoza and Marnewick 2021). These findings demonstrate that diverse team members can still work together effectively despite their differences. While some participants attempted various conflict resolution strategies to help the team reach a consensus, others were adamantly opposed to conflict resolution. Some participants avoided conflicts for the sake of team harmony, but if an argument escalated and no longer served the team's interest, they would request that the parties take it offline. Respect appeared to be of paramount importance to the participants.

Moreover, the findings indicate that the timing of the conflicts is crucial. If the conflict does not involve all team members present, it is best to address it offline. However, if the timing is not optimal and all the team members are affected, it is best to schedule a separate session where everyone can constructively discuss the matters at hand. Prior to resolving the conflicts, it is essential to have sufficient information. The most effective way to achieve this is to mediate the conversation. Giving each individual the opportunity to express their views and gaining an understanding of their perspectives will aid in managing their behaviour and emotions. Regardless of the nature of their relationship, it is essential for an individual to consider the emotions and behaviours of others, as this will make it easier to manage and resolve conflicts amicably (Bradberry and Greaves 2009; Engle and Nehrt 2011; Mohamad and Jais 2016; Powell and Roberts 2017; Carden et al. 2022). It is acceptable to disagree with one another as long as there is mutual respect.

5.2.5. Managing Customer Changes

The Agile Manifesto (2001) emphasises the significance of engaging with customers. Lack of customer presence and interaction contributes to agile project failure (Chow and

Cao 2008; Vijayasarathy and Turk 2008; Stankovic et al. 2013; Hamdani and Butt 2018). Therefore, it is essential to involve and collaborate with customers throughout the duration of the project. However, customer changes can be overwhelming, and not all the team members are able to adapt to them without difficulty. According to Korkala et al. (2006), higher defect rates are linked to fewer customer communications.

The findings indicate that communication and transparency are important when responding to customer changes. Most of the participants stated that they did not accept the changes as is, but they were open with their customers and informed them of the repercussions. It is essential that when responding to customer changes, they comprehend the impact their changes will have on the project. The changes may delay the delivery of the project or be difficult to implement. Therefore, it is essential to have an adequate plan in place and to educate customers on the system's capabilities. This will reduce the constant changes that are not feasible. Responding to customer changes also requires the team to offer other solutions to the customers.

According to Strode et al. (2022), agile methods positively influence team effectiveness through psychological safety, transparency, communication and contribution to team wellbeing, and this study's findings attribute to this view. The challenge is to facilitate this through digital means and thus requires awareness of how DEQ and agile are related.

6. Recommendations and Contribution

6.1. The Reciprocal Influence between Agile Mindset and DEQ

This paper argues that an agile mindset and DEQ should not be isolated as they are intrinsically linked. The infusion of an agile mindset and DEQ is realised through emergent constructs and philosophical ideals: psychological empowerment, communication and collaboration, and respect. This was achieved by interpreting the findings in Tables 3 and 4. The emergent constructs and philosophical ideals are discussed as they illuminate the value of the research.

6.1.1. Psychological Empowerment

Psychological empowerment, a critical psychological factor related to inner task motivation, significantly influences employee attitudes and performance (Hill et al. 2014). Stander and Rothmann (2009) argue that it is shaped by an individual's evolving job perceptions rather than immutable personality traits. Psychological empowerment leads to proactive behaviours like adaptability, resilience, and persistence (Muduli 2017), with self-evaluations and self-esteem playing vital roles (Gong et al. 2020).

Job satisfaction is also emergent from psychological empowerment, particularly when individuals are open to new approaches (Eilers et al. 2020). In the context of agile environments, managing failure is crucial. An agile mindset sees failure as a learning opportunity (Moser et al. 2011), promoting confidence and knowledge. However, it's essential to acknowledge negative emotions without toxic positivity, which can hinder empathy (Dajani et al. 2021). Balancing and accepting all feelings, including fear of failure, is vital for selfawareness and learning (Dajani et al. 2021). Conversely, toxic positivity leads to emotional suppression and mental health issues (Upadhyay et al. 2022). Prioritising mental well-being through activities like exercise and spending time with loved ones is essential for agile team members.

Fostering self-determination makes individuals more adaptable, creative, and proactive (Jordan et al. 2017). Agile team members exhibit self-motivation, learn from mistakes, and maintain a positive attitude towards learning, enhancing adaptability, job satisfaction and performance (Ahl 2021).

6.1.2. Communication and Collaboration

The Agile Manifesto (2001) emphasises collaboration and communication, with agile methodologies enhancing team interaction (McCormick 2012). Promoting healthy relationships (Eriksen 2009; Dierdorff and Rubin 2015; Eurich 2018) is vital in agile environments

(Tam et al. 2020). Effective remote communication demands a digital mindset, and adopting remote work practices enables online agile ceremonies. Furthermore, transparency in and outside the team builds trust, improving collaboration; its absence hampers teamwork. Collaboration's impact on knowledge sharing is significant. It reduces reliance on key individuals and prevents project delays. Synchronisation facilitates transparency, enhances productivity and empowers team members—knowledge sharing fosters learning and confidence, enabling empowered decision-making (Hoda and Murugesan 2016). The Agile Manifesto advocates customer involvement to prevent unclear requirements and defects (Korkala et al. 2006). Customer collaboration reduces defects, builds trust, and enhances satisfaction through transparency. Collaboration relies on mutual respect and trust (Gil 2015).

6.1.3. Respect

Park (2019) and Tai (2020) highlight the importance of new digital skills alongside enduring moral values like respect, compassion, and kindness, distinguishing humans from machines. In agile teams, respect is pivotal in fostering effective collaboration among diverse members.

Agile teams and environments rely on robust collaboration and communication, necessitating healthy relationships. Respect enhances communication and conflict resolution by facilitating adept relationship management, which involves recognising and managing emotions (Bradberry and Greaves 2009). Those skilled in relationship management in the digital realm will have an added advantage in handling conflicts and providing constructive feedback with empathy while instilling confidence (Engle and Nehrt 2011).

Fostering empathy allows individuals to understand others' emotional well-being and offer assistance, irrespective of agreement or personal preferences (Pichler 2020). Demonstrating empathy through digital tools and channels builds trust and psychological safety (Pichler 2020). These moral values underpin agile team success by promoting effective collaboration, communication, conflict resolution, and a positive team culture, encouraging openness and transparency about challenges.

6.2. Theoretical Recommendations and Contributions

Possessing an agile mindset and DEQ in an agile environment can result in a variety of advantages, including improved virtual collaboration, faster adaptation to new technologies, better management of digital distractions, enhanced customer focus in digital channels, and improved data literacy.

Improved virtual collaboration by emphasising teamwork and collaboration with an agile mindset. In an agile environment that includes remote work, DEQ can assist individuals in navigating the challenges of virtual collaboration, such as misunderstandings resulting from a lack of face-to-face communication and a sense of isolation from team members. These characteristics can contribute to a more cohesive and productive team dynamic. An agile mindset and DEQ intelligence can assist individuals in quickly adapting to new technologies and tools, as well as effectively collaborating with team members to leverage these tools for improved productivity and communication. Individuals who have an agile mindset and DEQ are better equipped to deal with ambiguity and uncertainty. In an increasingly digital work environment, DEQ can assist individuals in effectively managing digital distractions and prioritizing tasks while remaining focused and engaged.

DEQ can assist individuals in understanding and responding to customer needs and preferences in digital channels such as collaboration tools or email, which are becoming increasingly important in agile work environments. Additionally, an agile mindset emphasises the value of continuous learning and improvement, and DEQ enables individuals to make more informed decisions by considering the perspectives and emotions of others. DEQ can help individuals better understand and interpret data, allowing them to make better decisions and make continuous improvements based on digital feedback. These characteristics can help individuals and teams be more effective and successful in an agile work environment that incorporates digital technologies and channels.

6.3. Practical Recommendations and Contributions

Organisations can foster an agile and emotionally intelligent culture in the digital era by implementing these characteristics and equipping employees with the necessary resources to thrive in digital environments, collaborate effectively, and exhibit resilience in the face of digital transformations. It is recommended that organisations cultivate a culture that prioritises trust, collaboration, empowerment, and continuous learning. This approach involves top management setting the tone and modelling the desired behaviours. In their interactions with team members, leaders can model self-awareness, empathy and effective communication. However, leaders must first receive the appropriate training and support to help them develop these skills and ensure that they possess the right values and behaviours to promote DEQ and an agile mindset in an agile environment.

Employees can also be provided with educational materials, such as training programs or seminars that explain self-awareness, empathy, effective communication, and emotional management in a fast-paced and collaborative environment. They should be encouraged to include emotional intelligence exercises and discussions in their retrospective ceremonies by reflecting on their emotions, experiences, and interactions during the iterations and identifying growth and development opportunities. This can help establish a safe environment for open and honest communication within the team, thereby enhancing emotional intelligence. In virtual collaborations, encouraging team members to consider the emotions and perspectives of others can also cultivate digital empathy. This can be accomplished via digital communication channels by promoting active listening, clarifying assumptions, and attempting to comprehend diverse points of view. It is crucial to emphasise the significance of precise, concise, and respectful communication in online discussions and virtual meetings.

Lastly, organisations can cultivate a psychologically safe environment in which employees are comfortable expressing their opinions, ideas, and emotions without fear of being judged or punished. Psychological safety allows for open communication, trust, and the development of emotional intelligence within a team. In addition, it is essential to encourage employees to maintain a healthy work–life balance by establishing clear boundaries for digital usage, encouraging breaks from digital devices, and encouraging offline activities. Organisations should provide resources for stress management, mindfulness, and digital detoxing to promote mental and emotional well-being.

6.4. Limitations and Future Research

This study only focused on the team members and did not include the leadership team. Future studies could investigate the leadership team's mindset and determine if the agile team members and agile leadership teams are distinct. Additionally, this study had limited participants from the public sector, even though there were visible distinctions between the two sectors. Future studies could examine the public sector to determine if the results are mutually exclusive. The emergent constructs are conceptual, and future research can explore using the constructs to measure the cross-section of an agile mindset and DEQ to assemble productive self-organising teams that operate in agile environments. The research did not employ or map the findings to theory to create practical implementation guidelines, as it was out of the scope of this study. Future research can embed a theoretical perspective, such as socio-materiality or affordance-actualisation theory, to develop practical guidelines for project teams in agile environments. The study was also limited to South African participants. Although the participants stated that they interacted with their colleagues outside South Africa, it does not guarantee that they all had the same experiences and perspectives. Future studies could investigate developed and developing national views of the agile mindset and DEQ.

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Appendix A. Coding Process

The first step was to create notes to become familiar with data. Then-line-by-line coding was performed as shown below.



The codes were grouped based on the research questions, as an example below.

	Testing - ATLAS.ti - Unlicensed			Manage Code					- 0 ×		
File Home Search	& Code Analyze Import 8	k Export Tools He	Codes	Search & Filter	Tools \	liew					🧧 Feedback & Help 🗸 🗸
New Folder •	New Group	Rename Delete	mment hart Code Group Manager Manage	 ↔ Change Color • → Merge Codes ↔ Split • 	Show in Network	Word Word Concept Nord List Explore & Ar	ts Opinion Mining Report E	Excel Export			
Explore - ×	D 12: Pt 12 - Transcription	Code Manager 🐨 🔾									
Search Q	Search Code Groups	Q	Search Entities								Q
🖶 Testing	Code Groups		Show codes in	group Communicatio	n or mode of	working preference					×
⊿ Documents (15)	Adapting to change	(93)	Name						Groundad	Donei	Groups
D 1: Pt 1 - Trans	Appreciated aspects of teams	work (61)		coromonios works ho	et digitally bas	auso wo can always r	ofor back to the record	lings	Groundeu	Densi	Communication or mode of
D 2: Pt 2 - Tran:	Communication or mode of w	vorking preference (101)	 Agrie Agrie 	ceremonies works be	ot have stand u	ause we can aiways re	k to my manager who	is not part of the project Lam w			[Communication or mode of
D 3: Pt 3 - Tran:	Confidence in decision making	g at the new organi (23)		project team, we do n	or have stand u	roach consonsus, com	munication online or	not part of the project rain w			[Communication or mode of
D 4: Pt 4 - Trans	Operation Making Confidence	(80)		ng as we understand e	notely a nerso	n have that anonymo	us feeling to share the	ir feelings freely		0	[Communication or mode of
P 🖸 D 5: Pt 5 - Tran:	Digital communication tools	(12)	0 🛆 Refor	e the PI planning each	member close	all their complete ta	asks and pull the new o	ones from backlog		0	[Communication or mode of
P 😑 D 6: Pt 6 - Tran:	Oigital tool to track projects	(12)		municating face to fac	e allows one to	read neonle easier	and pair the new t	Shes norm backlog	1	0	[Communication or mode of
P D 7: Pt 7 - Iran	Oisagrees with feedback or control	onstructive criticism (22)	○ ♦ comn	nunication could be b	etter in person	read people casier			1	0	[Communication or mode of
D 0: Pt 0 - Trans	Oisliked aspects of a team	(52)	○ ◇ Comr	nunication is easier fa	ce to face than	online			1	0	[Communication or mode o
D 10: Pt 10 - Tr.	Effectiveness of digital tools	(114)	(114) Communication is effective in our team if you cannot reach a person you can text them							[Communication or mode o	
D 11: Pt 11 - Tr	Having different views/ideas v	taving different views/ideas with teammates (128) O Communication will be better face to face									
D 12: Pt 12 - Tr	Improving effectiveness of dig	mproving effectiveness of digital tools (12) O COUD brunch changes where even one is stattered even where							[Communication or mode o		
D 13: Pt 13 - Tr.	Improving geographically-dis	persed team's com (7)	O Igita	al communication wor	ks for me. since	I dont have F2F expe	erience		1	- 0	[Communication or mode o
Þ 📄 D 14: Pt 14 - Tr	Improving iteration	(58)	O Sech	member of the team	will have indivi	dual pre-planning be	fore sprint starts		• 1	0	[Communication or mode of
D 15: Pt 15 - Tr	Knowledge sharing	(97)	O O Even	though we are encour	aged to raise is	ssues, at the end we a	re told of limited time	e issues		- 0	[Communication or mode o
Codes (1830)	Learning a new skill	(69)	O O Every	member gets a chang	e to participat	e and then all vote			1	- 0	[Communication or mode o
P Memos (0)	Manage conflict	(80)	O I F2F al	llows to read people's	body languag	e which enhances cor	mmunication			- 0	[Communication or mode o' -
Networks (4)	Manage customer changes	(138)	<		,,						+
Document Groups	Managing challenges of learn	ing a new skill (45)									Diagram Preview Comment
Code Groups (30)	Managing communication wit	th geographically d (98)	Connels								
Mama Crauns (0)	Managing constructive criticis	m/ Feedback (144)	Search								Q
Comment:	Managing project failure	(121)									
	Managing relationships	(2)									
	My motivations	(13)					Select a code or fold	er to show its preview			
Click to edit comment	Preference of learning or upsk	cilling (29)									
	Remote working and communication	nication challenges (11)									
	Self-awareness	(12)									
	Stay focused or empowered	(59)									
1930 sedes 101 filts	red coder										

From the groups, the themes were identified based on the patterns recognised. The example below depicts an example of how some responses were reviewed down to the themes. The table shows the responses to the research question, *"How do you prefer to communicate during agile ceremonies?"*

Responses	Themes	Refined Themes
"Physical communication, where you are co-	Co-located communication	Physical Interaction
located, and you're able to be in one place is	Productive online but prefer remote	
much easier." "I am productive when working	communication	
remotely, however, I still prefer physical	Remote causes feedback delays	
communication. There's always delays when	-	
it comes to feedback when people are not co		
located."		
"I feel like remotely and Teams to me is	Remote and MS Teams is working	Online communication
working than the physical world. I started for	Have only experience of remote	
three years, and I've been working remotely.	working in a team	
To me, I think it's probably beneficial."	Remote is beneficial	
"I think Teams is very effective. And the reason	MS Teams is effective	Online communication
why is with our team, what we do, when we	Able to communicate on MS Teams	
have, let's say, PI planning, the scrum master	Physical interactions would be	
sends a message on the group and says guys, PI	chaotic	
planning is tomorrow, please get your tickets	Plannings would be effective online	
ready. So that we can hit the ground running."	Planning would take longer in	
"I personally think that it would even be	person	
chaotic if we are at the office. I think teams is		
effective you are online, everybody knows for		
that time, we know, we are putting in the time		
we discuss if there are things that we need to		
discuss that are not clear, we can have		
individual calls before the scrum meeting, or		
the PI planning. And then by the time we come		
in there, you know everything is sorted. Rather		
than if we're in person, it will take longer,		
because if we had to discuss on the day, you		
know, we have to take the time."		

Appendix B. Overview of Coding Groups

		🗎 1 Pt 1	🖹 2 Pt 2	🗎 3 Pt 3	🗎 4 Pt 4	🗎 5 Pt 5	🗎 6 Pt 6	📄 7 Pt 7	🗎 8 Pt 8	🗎 9 Pt 9	🖹 10 Pt 10	🗎 🗎 11 Pt 11	🗎 12 Pt 12	🗎 13 Pt 13	🗎 14 Pt 14	🗎 15 Pt 15	Totals
		102	148	113	146	19 86	③ 119	112	129	① 137	111	180	184	147	175	174	
♦ Adapting to change		4				2									17	7	101
Appreciated aspects of teamwork		2	11			2	2	4		2	2	6				3	70
Communication or mode of working preference		5 4			18	2					2	6				4	105
$\langle\!\!\!\langle$ Confidence in decision making at the new organization	🔷 23 🔞 27	1	2		2	1		3	2		3	3		2	2	4	27
🚫 Decision Making Confidence	♦ 80 💿 89	3										15				5	89
🚫 Digital communication tools	♦ 12 ⑨ 44	3	1					2	1	3		2	4		2	4	44
🚫 Digital tool to track projects	🔷 12 😕 30	2	2	1		2		2	2	1	2	2	2	2	3	3	30
Oisagrees with feedback or constructive criticism	🔷 22 😕 24			2			2	2	3	2	1	3	2		1	4	24
Oisliked aspects of a team	♦ 52 ⑨ 54	2	6			1		2			1	7				8	54
Effectiveness of digital tools		1 6	14			2								3	3	9	124
♦ Having different views/ideas with teammates		6 3	5											19	16	8	136
Improving effectiveness of digital tools			2		1	3					3		3		1	1	14
Improving geographically-dispersed team's communication			1		5			1								1	8
♦ Improving iteration	♦ 58 ⑨ 64	2	4			2					2	5				4	64
🚫 Knowledge sharing		4													14	13	111
🚫 Learning a new skill		9	1	2				3	2	5						9	70
🔇 Manage conflict	♦ 80 😕 82	5				1	2	6								7	82
🔇 Manage customer changes		9 13	14	2						14				19	5	8	149
Nanaging challenges of learning a new skill	♦ 45 ④ 45	1	3				1	2	3			3		2	4	6	45
Nanaging communication with geographically dispersed team		5 7			16	4	2	5								10	106
🚫 Managing constructive criticism/ Feedback		3 7			2	9						19	24	12		8	153
🔇 Managing project failure		6 4										17	19			8	126
🔇 Managing relationships	♦ 2 9 2					1								1			2
≪ My motivations		1	2					2		1	2	1			2	2	13
Preference of learning or upskilling	♦ 29 😕 40	2	4	6	6	2	2	2	4	1	1	3	3	1	2	1	40
Remote working and communication challenges			1		3		1		1				1		3	1	11
Self-awareness				2								10					12
℅ Stay focused or empowered	♦ 59 😕 59	1	4	7	2	2	1	4	5	4	4	7	5	4	1	8	59
🚫 Team Collaboration	♦ 16 9 21	1		2		1	1		1	3	1		2	1		2	21
🚫 Team support - Empathy		5 5	5	4		3	8	7	3	5	8	11	5	9	6	21	105
Totals		92	146	108	141	81	117	105	124	134	107	180	180	142	169	169	1995

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