Observing Emotional Intelligence through Behaviours: Does team members' cultural background play a part?

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ABSTRACT
In an increasingly globalized world, the Agile way of working is becoming more and more popular to tackle the issues of fast-changing environments. Agile teams are also more multicultural than ever before. In these multicultural teams, emotions can be displayed and interpreted differently due to cultural differences among team members, and thus may affect team dynamics. Therefore, team members may highly benefit from Emotional Intelligence (EI), which is the ability to understand and manage one's own and others' emotions. Consequently, we explore whether EI behaviours differ between members of mono- and multicultural teams, and their Product Owners (POs), taking a specific look at two Agile meeting types, namely the sprint planning and retrospective meetings. EI is studied through video observations and a verbal behaviour codebook, to address a recurring problem in EI research: measurement issues. Hence, through a mixed-method research design, integrating qualitative and quantitative methods, 5 mono- and 5 multicultural teams were selected, for a total of 26 and 29 individuals per team respectively. The results of this study show that members of mono- and multicultural teams do not differ significantly from one another in terms of displayed EI, showing that EI moments do not occur more in one team type or the other. However, whilst POs do not display more EI in mono- or multicultural team meetings, they do have a higher observed EI frequency and duration than regular members. Furthermore, considering the Sprint Planning and Sprint Retrospective, there was no significant difference either, telling us that EI moments do not occur more in one meeting type than the other. We have extended current knowledge by exploring observed EI in Agile settings through innovative verbal behaviours. Yet, this study demands future research through, for instance, a larger sample size and behaviour set. In terms of practical implications, we recommend EI training for all Agile team members, as it has found that conflict can be a main cause for EI occurring less in meetings. We have also lined out specific recommendations for members and POs of mono- and multicultural teams; reducing moments of conflict and reducing cultural differences' impacts, respectively.

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1. Introduction

More and more commonly in the business world, issues posed by rapidly changing environments are chosen to be tackled through Agile methodologies (Serrador & Pinto, 2015). In Agile, self-managing teams operate, wherein the team itself decides how to plan and perform the task at hand (Hoda et al., 2010; Moe et al., 2010). Making teams self-managing has been shown to improve team effectiveness and improve decision making speed (Hoda et al., 2010), as well as making the team more responsive to disruptions and changes (Serrador & Pinto, 2015), however also brings its challenges, since it does not have a formal leader. These teams can however have Product Owners (POs), who are the 'symbolic' leaders of such a team.

Due to the increased phenomenon of globalization that pulls together people from different countries, teams are also becoming more and more culturally diverse. The swift responses promoted by agile allow teams to tackle those potential, emergent issues where different cultural backgrounds meet (Cheng et al., 2012). Cultural differences, in teams and beyond, bring both advantages and disadvantages. Varying cultures offer various perspectives and have a wider information network (Cheng et al., 2012; Stahl et al., 2009). However, team members are more often drawn to members of their own culture, making it a challenge to connect individuals in multicultural teams (Stahl et al., 2009). Furthermore, due to the potential lack of shared mental models between cultures, conflict can occur more often and more severely in multicultural teams (Polzer et al., 2002) and this might be related to how different cultures communicate and perceive emotions in meetings.

Indeed, the literature underlines that emotions are displayed differently and with varying intensity across cultures (Ekermans, 2009; Moon, 2010). Consequently, emotions are also interpreted differently by people who, in turn, need to be able to understand and act accordingly. The ability to understand and manage one's and others' emotions is called Emotional Intelligence (EI).

In an Agile context, where shared and autonomous decision making is pivotal, EI becomes a powerful ability that helps strengthen social interactions and relationships (Salovey & Mayer, 1990). Emotionally intelligent team members are argued to be able to respond to the rapidly changing environments through flexibility and adaptability to change, as well as collective problem solving (Soltani et al., 2018). EI also has a strong role in helping coordinate culturally diverse teams since it aids to manage people issues and those issues caused by cultural differences (Moon, 2010).

However, the literature on the relations between EI and cultural background can potentially be expanded upon (Ekermans, 2009; Moon, 2010; Stahl et al., 2009). For instance, one recurring problem in research on EI is the fact that it is hard to measure, causing continued measurement issues and inconsistent results (Rajah et al., 2011). Self-reporting, the most popular method to attempt to measure EI in subjects, is rather flawed in that people overestimate themselves and their self-awareness and social ability (Dasborough et al., 2021). Dasborough et al. (2021) state that measuring *actual ability* is a better way of doing things. One way that has not been utilized to measure observed EI is through coded verbal behaviours.

Verbal behaviours have most often been studied to explore leadership behaviours (Hoogeboom et al., 2021; Yukl, 2012; Yukl et al., 2002; Yukl et al., 2019). One frequent dichotomy of leadership behaviour consists of relations- and task-oriented behaviour (Hoogeboom et al., 2021; Yukl et al., 2002), even though change-oriented and external behaviours can be added to the classification (Yukl, 2012; Yukl et al., 2002). In this thesis, verbal behaviours are considered to innovatively *observe* EI, thus addressing the measurement issues raised by previous research.

1.1 Research Objectives and Question

Therefore, this thesis aims to address the following research question:

How do team members' and product owner's observed emotional intelligence differ between monocultural and multicultural agile teams?

1.2. Academic and Practical Relevance

1.2.1. Academic and Practical Relevance

By answering the above research question, this thesis expands on the literature in two aspects. First and foremost, we address the recurring measurement issues (Dasborough et al., 2021; Rajah et al., 2011) in EI research by introducing an innovative measurement of EI: *observed* emotional intelligence through coded *verbal behaviours.* Second, our knowledge of emotions and the relation with cultural background can be expanded upon. We know that emotions are expressed and interpreted differently across cultures (Ekermans, 2009; Moon, 2010), but it is still unclear how emotional intelligence is manifested in different cultural backgrounds.

This thesis and its results can have potential use for managers setting up Agile teams, especially those that are multi-cultural and in which difficulties in communications and high-levels of misunderstanding may occur the most. Managers can thus become not only more aware of the positive benefits and impact of EI on team dynamics, but also of some of the behavioural differences between mono- and multi-cultural teams. By showing such differences and how EI can play a crucial part in smoothening them, this thesis can help managers to make the selection of team members for higher functions based more on this soft skill rather than the traditional IQ.

1.3. Structure of the Thesis

The remaining part of the thesis is structured as follows: Firstly, an overview of the literature is provided, containing what we know about Agile and the Scrum methodology, followed by Culture Differences and Emotions, and their mutual influences. Lastly, verbal behaviours are discussed. Thereafter, the methodology is explained, where we state what kind of research we we have done and how, plus an overview of how this data was collected and the instruments we have used to conduct this research. The results of our research are then provided, demonstrating and subsequently discussing our findings, after which we can draw our conclusions.

2. THEORETICAL BACKGROUND

2.1 Agile and Scrum Teams

Agile methods are becoming more and more common, because they address the challenges of rapidly changing environments (Serrador & Pinto, 2015). Agile uses less planning and takes a more flexible approach. However, it is argued that a successful project *does* still require planning to an extent, and in Agile is most often done across the development cycle rather than upfront; this is because Agile is about adapting to *deviations* in the plan, and the plan must be adapted along the way (Serrador & Pinto, 2015). This is why in the Agile way of working three meetings are usually held and comprise one Sprint; the *Sprint Planning*, during which the team plans the work they will do, the *Sprint Review*, where the team looks at what has, and has not, been done during a sprint, and the *Sprint Retrospective*, which looks at how various issues went during the sprint, the major items that went well, and creates a plan for improvement for the Scrum team (Schwaber & Sutherland, 2017).

Together with the development cycle, there are other important elements to tackle rapid change, such as *customer collaboration*, which allows project requirements to be established and helps gain insight into customers' desires (Serrador & Pinto, 2015). Further, information flow is faster and cheaper, and decisions can be reached quicker. This is because people are placed closer, both physically and in terms of their relationships (Cockburn & Highsmith, 2001). Consequently, the traditional, rationalistic, plan-driven approach to business is challenged by Agile. The Agile philosophy focuses on change, complexity and adaptability, as opposed to predictability and control. Flexibility and responsiveness are replacing optimization as the organization's main goal (Moe et al., 2010). In the emergence of Agile, organizations recognize the importance of human capital more and more, and power hierarchies are flattened (Moe et al., 2010)

In such flat organizations implementing Agile, teams play a crucial part. Among the different methodologies through which Agile can be implemented, Scrum is the most commonly used one and focuses on teams (Cervone, 2011). Schwaber & Sutherland (2017 p. 6) set out a guide for Scrum Teams, according to which "*The Scrum Team* consists of [individual members and] a Product Owner, the Development Team, and a Scrum Master". The Product Owner has a particular role since, albeit not an official and formal leader, he/she is responsible not only for maximizing the value of the product resulting from work of the Development Team, but also for the planning and implementations of meetings (Schwaber & Sutherland, 2017).

Because of the absence of an official leader, these teams operate with more autonomy compared to more "traditional" teams and are defined as *self-managing teams*. A self-managed team is formed from individuals with varying and diverse skillsets and knowledge (Hoda et al., 2013). These teams are given the freedom to plan and perform tasks and further responsibilities to work towards common objectives (Magpili & Pazos, 2017). Hence, Agile teams are self-managing, *autonomous* (meaning that they work independently without any out- or in-side influence from leaders, and all members have power in decision making) and multidisciplinary (Hoda et al., 2013; Moe et al., 2010).

2.2 Mono- and multi-cultural Teams

Since the pace of globalization has been accelerating, teams are not only diverse in composition (i.e., multidisciplinary), but also more and more different in terms of cultural background (Cheng et al., 2012). Cheng et al. (2012) stress that within the global, multi-cultural environment, teams should be "less hierarchical and more self-directing", because this environment constantly demands agile responses to unpredictable, emerging problems. (Cheng et al., 2012, p. 389). Yet, in their paper, the authors also found advantages and challenges of the multi-cultural team as well as some differences between mono- and multicultural teams. Similarly, Stahl et al. (2009) conducted a meta-analysis on culture, and its effect on teams, in which they concluded "cultural diversity in teams can be both an asset and a liability" (Stahl et al., 2009, p. 16).

Indeed, cultural diversity is argued to bring a number of advantages, such as more diverse ideas and points of view, which can enhance a team's creativity in problem solution. (Cheng et al., 2012, p. 390). Diversity can also lead to a broader variety of contributions to teams in terms of wider networks as well as more internationally-varied range of information and perspectives, thus allowing for improved problem-solving, innovation and adaptability (Stahl et al., 2009).

However, there are also a handful of challenges that can come up. One of the main challenges is intra-team coordination (Stahl et al., 2009). In traditional teams, this coordination can be achieved through effective leadership. However, when there is no formal leader, like in self-managing teams, problems may arise. In mono-cultural teams, this coordination can easily come from shared cultural norms and practices even without formal leadership, leading to more aligned behaviour. (Cheng et

al., 2012, p. 390). Yet, this is difficult in multi-cultural self-managed teams.

Furthermore, because of the differences in values, cultural differences can cause members to be hesitant to share ideas with members that are not of the same background. (Cheng et al., 2012, p. 390). Similarly, Stahl et al. (2009) noted that people are attracted to working with those who carry similar values, beliefs and attitudes; people also have a tendency to categorize themselves into groups, and others as part of their group or part of others (in which case they are outsiders). Hence, favouritism may play a role since people are likely to prefer those within their own groups. These two influences are said to have a potentially negative effect on teams, as they may make social processes more difficult (Stahl et al., 2009, p. 2). Lastly, Polzer et al. (2002) found that in multicultural teams interpersonal conflicts can be enhanced because of a difference in norms and values between cultural backgrounds, and this might be related to how different cultures share and perceive emotions in meetings. This may have a negative effect on team effectiveness, coordination and congruence (Cheng et al., 2012, p. 390).

Emotions are indeed manifested differently across cultures (Ekermans, 2009; Moon, 2010). Cultural orientation is found to have a measurable impact on emotional expressions and self-perception (self-awareness). People from different cultural backgrounds may have different perceptions of others, too (Moon, 2010). Therefore, emotions are also interpreted and deciphered differently by people who thus need to understand and behave accordingly. The ability to understand and manage one's and others' emotions is EI.

2.3 Emotional Intelligence

EI is a rather complex concept to define and there are different ways through which it can be conceptualized. For instance, some scholars see EI as a trait and defined it as "a set of interrelated skills concerning the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (Wong & Law, 2002, p. 246). Salovey and Mayer (1990), on the contrary, conceptualized EI as an ability composed of four distinct dimensions: *self-awareness*, the ability to understand one's own emotions, *social awareness*, the ability to understand others' emotions and recognize them, *self-management*, the ability to regulate one's own emotions and control and recover from them, and *relationship management*, using emotions to direct them towards something productive (Salovey & Mayer, 1990). Similarly, Goleman (2002) proposed four dimensions of EI: self-awareness, self-management, social awareness and relationship management. Hence, many definitions exist, each one stressing different aspects of EI.

Yet, regardless of these many different definitions, EI has been generally studied as a factor which can provide positive influence on a variety of different factors. A number of scholars have demonstrated the positive effect of high EI on individual and organizational performance (Bar-On, 2000; Goleman, 1998; Wong & Law, 2002). Others demonstrate that IQ is not as good of a predictor of job performance (Hunter & Hunter, 1984), hence the importance of EI in the workspace becomes more relevant. Further, determining who will be a 'star performer' will be much better predicted by EI than IQ (Goleman, 1998); consequently, organizations should prefer to recruit someone with a higher EI. Indeed, EI can play a crucial role in jobs that require 'people skills', as someone recognizing emotions in others can help get those back on track, and those good at relationship management can use their EI to increase their and others' performance (Salovey & Mayer, 1990). In a similar vein, social awareness and self-management become important when social interaction is involved. As a result, EI is a strongly beneficial factor in leaders, as leadership takes place in a social context (Wong & Law, 2002).

In line with this, EI may also play a role in solving cross-cultural differences, as a major difference is caused by cultural background in the way people display, perceive and regulate emotions, and the strength of them. Interpreting other cultures' emotions well can aid in solving problems caused by teams being multi-cultural (Moon, 2010). If this is done, cultural diversity becomes a strong benefit. For instance, in an Agile context, EI can decrease negative emotions and increase positive ones (Moon, 2010; Soltani et al., 2018). It also affects different processes, like decision-making, involvement and various improvements in product development performance (Soltani et al., 2018).

2.3.1. EI and Measurement Issues

Even though studies have shown that EI can have beneficial impacts on such factors as work and leadership performance, people management, and various contexts like multi-cultural teams and Agile teams, research has also pointed out that difficulties and inconsistency related to EI measurement exist (Dasborough et al., 2021). Specifically, Dasborough et al. (2021) criticized the fact that self-reporting as a method is not always reliable since the relationship between self-reported and *actual abilities* "is more modest than most people think, because individuals are often unaware of their actual capacities" (Dasborough et al., 2021, p. 4). Consequently, "research in the area of emotional intelligence is riddled with measurement issues" (Rajah et al., 2011, p. 1111). To address these measurement issues, this research makes use of *verbal behaviours* to come closer to the by Dasborough et al. (2021) mentioned *actual ability* than *self-reporting of ability* could. With these verbal behaviours we conceptualise and measure *Observed Emotional Intelligence*.

2.4 Verbal Behaviours

Yukl et al. (2002) discuss the division of leadership behaviours into task- and relations-oriented behaviour, and argue for a third category: change-oriented behaviour. By *task behaviour* they defined those behaviours that include high efficiency in the use of resources and personnel, and high reliability of operations, products, and services. On the contrary, *relations behaviours* include strong commitment to the unit and its mission, and a high level of mutual trust and cooperation among members. The primary objectives of *change behaviour* include major innovative improvements (in processes, products, or services), and adaptation to external changes. (Yukl et al., 2002, p. 17). They also present some criteria for the behaviours to be included, such as that "Each behaviour must be directly observable" (Yukl et al., 2002, p. 17) which means that they studied *observed verbal behaviours*.

In Yukl (2012) this taxonomy was updated, including a small handful of changes to the task- and relationship-oriented behaviours and a new category, *external behaviour;* external behaviours, like networking, external monitoring and representing, are used to facilitate performance. Through these behaviours, leaders provide information, resources and assistance (Yukl, 2012, p. 74). Hoogeboom et al. (2021) also relied on Yukl's taxonomies and made the distinction between task- and relations-oriented behaviours. More specifically, they defined relations-oriented behaviours "as showing concern for followers' (individual) needs, providing support and showing appreciation" and noted that "the sharing of personal information often directly contributes to the quality of the (socioemotional sides of) work relations" (Hoogeboom et al., 2021, p. 4). Since this paper is based on the Wilderom (2021) codebook, which was developed based on Yukl (2002; 2012), thus, the three papers are interlinked and all contribute to this thesis.

Given that EI also underlined the ability of people to recognize and manage emotions in other people, which contributes to performance gains and problem solving, it can be suggested that EI could be manifested mostly through the relationship-oriented behaviours initially theorized by Yukl (2002) and then recently studied by Hoogeboom et al. (2021), since relations-oriented behaviours underline the socio-emotional nature of human behaviours (Behrendt et al., 2017; Hoogeboom et al., 2021). Thus, we believe they could well grasp the intrinsic nature of EI.

In Yukl (2012)'s taxonomy, *'Relations-oriented behaviour'* is divided into 4 categories: *Supporting, Developing, Recognizing* and *Empowering* (Yukl, 2012, p. 68). Each of these are defined, and it is explained how leaders can use these behaviours, as follows:

2.4.1. Relations-Oriented Behaviours Taxonomy

Supporting means showing a supportive attitude, concern, encouragement or listening, building cooperative relations and helping people deal with stress (Yukl, 2012).

Developing includes those actions that aim to increase skill and confidence in members and aid career progression. Examples include providing advice, providing training opportunities, coaching and practice sessions, providing opportunities to implement new skills, as well as making other members instruct one another. (Yukl, 2012).

Recognizing means using praise and recognition to show appreciation for strong performance, achievements and contributions. It can be done through an award in a ceremony, a more tangible award like salary increase or bonus, or verbally, though should not be done too excessively (Yukl, 2012).

Empowering is done through giving more autonomy and influence over work decisions. Two forms are *consultation*, asking others for ideas and suggestions to help a decision process, and *delegation*, giving an individual or the group the authority over a decision (Yukl, 2012).

In the methodology section we selected, with help from the above literature, our own verbal behaviours from a verbal codebook (Wilderom's, 2021), built on Yukl's (2002; 2012) taxonomies. We have made the decision to include or exclude a behaviour based on the literature on EI and verbal behaviours.

3. METHODOLOGY

3.1 Research Design

This research uses a mixed-method approach, meaning that it integrates qualitative and quantitative data to enhance the validity of the research findings. Indeed, qualitative and quantitative research methods can complement each other building upon their respective strengths whilst minimizing their weaknesses (Fetters et al., 2013).

The qualitative part of this thesis relies on an inductive approach to detect moments of EI from video observations, which we then compare to our list of behaviours deductively derived from the theory.

After this, a quantitative analysis is also implemented with the aim of noting the frequency and durations of these behaviours and how they differ between mono- and multi-cultural teams.

3.2 Data Collection & Research Instrument

This research is based on data which was collected by the University of Twente's Organisational Behaviour, Change Management and Consultancy (OBCC) group in collaboration with a large financial service organization that recently implemented Agile. The dataset consists of video recordings, supplemented by transcripts, of Agile team meetings and a dataset with survey answers. The data was collected across two phases: in 2018 through 2020, and then in period 2021-2022 during the pandemic, in which all meetings were virtual. 15 teams with a total of 108 members partook in the data collection.

3.2.1. Survey Data for Demographics

The team members were surveyed, giving us a dataset with demographic information about the members. For our research purposes, we have used the data on the question: "Are you the product owner of this squad?" to determine accurately which member is the product owner in a squad, as well as the two questions posed on cultural background and native language, to give us an as to whether this team is mono- or multicultural.

Based on this, we decided on using the language spoken in the meetings to distinguish mono- and multicultural teams. All monocultural teams are Dutch in this research, and all teams with English-spoken meetings have members with varying cultural backgrounds.

A total of 10 teams were thus selected. These teams have a total of 78 members, of which 55 were found to display some form of EI behaviours. 26 of these members were part of monocultural teams and 29 members part of multicultural teams. Of these members we have data on 7 Product Owners, of which 3 are part of mono-cultural teams and 4 are in multi-cultural teams. Some of the data on POs were missing or a team simply did not have them, hence we could not use 5 POs of each.

3.2.2. Video Data

The *video data* consists of recordings of meetings held by Agile teams that participated. Each team's major three meetings were recorded during the sprint, and we analysed the Sprint Planning and Sprint Retrospective meetings, since, given their different intrinsic nature, they could provide the largest variance in terms of EI behaviours. The video recordings were coded by two independent coders in the Observer XT Software. In this software, behaviours are coded according to the OBCC group's verbal behaviours codebook Wilderom (2021).

3.2.3. Transcripts

There are also transcripts of the video meetings to aid in analysis. They supplement the video data, and they are useful to make sure the meetings are interpreted correctly, in order to more accurately observe what the members are saying as well as whether their behaviours are truly EI; the transcripts reduce potential for human error.

3.3. Emotionally Intelligent Behaviours

Although through the inductive coding we open up to the possibility of including more behaviours, EI behaviours are likely to be mostly connected with relations-oriented behaviour. Below these behaviours linked to Yukl's (2012) taxonomy are explained.

Observed Emotional Intelligence – Behaviours Taxonomy

3.3.2a. Supporting

Agreeing; General agreeing of one member with another's statement. "Yes, that's how I see it too/That's a good suggestion/idea"

Giving positive attention/Showing personal interest; Member shows an interest in another's personal life.

Showing Positive Interest/Being Friendly; General sympathy and acts of kindness/friendliness.

Sharing Personal Information; "My weekend was great/My mother is doing better now".

Humour; Genuine laughing, as well as a member making a joke/humourizing a situation.

3.3.2b. Developing

Giving negative feedback – constructive/friendly; negative feedback brought in a constructive/friendly way, telling someone in a friendly way what can be improved.

Professional challenging/Stimulating teamwork; Usually a leadership behaviour, it challenges team members to collaborate to find a better solution together.

3.3.2c. Recognizing

Giving positive feedback; Thanking or appraising performance, directly or indirectly.

3.3.2d. Empowering

Governing/delegating; Delegating, trusting someone with a task. "Regarding the project, I want you to.../Will you put that on your to-do list?"

Professional Challenging/Asking for ideas; Asking for ideas. In an EI sense, this is giving members opportunities to contribute their thoughts. "How can we best tackle this problem/Why don't we try it like this?"

3.4 Data Analysis

3.4.1. Qualitative Analysis

Thematic Analysis was undertaken to identify, analyse and report EI patterns, known as themes (Braun & Clarke, 2006), with aid from the transcripts for accuracy. The EI theme was explored in members and product owners. Hence, first, an inductive approach was taken. Moments of EI behaviour were interpreted while analysing the video data. Second, once the EI moments were identified, the corresponding coded behaviours were noted and reported in a table to compare the inductive results with the behaviours deductively identified from the literature to see whether they aligned. This table is included in the Appendix as Table 8.

3.4.2. Quantitative Analysis

Content Analysis was used to count the frequency of the displayed EI behaviours per actor (i.e., team members and the product owner). Given the different length of each meeting, the standardised frequency of behaviours was used. Furthermore, we analysed the duration of every instance of EI behaviour and, similarly, then standardized them all into a dataset with which we performed inference testing, to see whether mono- and multi-cultural team members truly differ in their EI.

We tested normality for our data. Two Shapiro-Wilk tests for durations returned a significant difference from normality, $W = 0.741$, $df = 12$, $p = 0.002$ and $W = 0.748$, $df = 12$, $p = 0.003$, for sprint retro meetings and averaged durations respectively. However the sprint planning meetings did not return significant deviation

from normality, W = 0.864, df = 12, p = 0.054. Frequencies were tested thereafter, and all reported a significant deviation from normality, W = 0.789, df = 12, p = 0.007; W = 0.743, df = 12, p = 0.002; and W = 0.819, df = 12, p = 0.015, for sprint planning, sprint retro and the averages of the two, respectively.

Hence, we used non-parametric tests for all the data. Our independent sample test of choice was the Mann-Whitney U-test, testing whether members between mono- and multicultural teams differ in observed EI, as well as whether the POs differ from regular members, in general and in mono- and multicultural teams, as well as whether they differ from each other between mono- and multicultural teams. The Wilcoxon Signed Rank was also used, to test the differences between the two meeting types. Since the meeting types are related samples, the Wilcoxon test is our test of choice.

4. RESULTS

4.1. Qualitative Analysis

In our qualitative interpretation of the video observations, we identified 186 EI moments, divided into 16 different types of behaviours, for a total, standardized (so to 'align' meeting durations across teams), frequency of 218.51 and duration of 669.21 seconds. Table 1 illustrates this data for the behaviours.

4.1.1. The Behaviours

Aside from table 1, the Appendix items Table 3 through Table 6 display further data, more specifically: Table 3, is similar to Table 1 but is split across the two meetings. In Table 4, 5 and 6, the frequencies, averages and total durations respectively are displayed, split across the two meeting and team types. Table 2 below, built on aforementioned Tables 4 and 6, displays the total frequencies and durations of the behaviours for both mono- and multicultural teams to give a pre-emptive look into the data before our tests.

Also included in the Appendix is Table 8, which lists all the behaviours and states whether they occurred in our deductive and/or inductive analyses.

First, some behaviours that conformed to our initial expectations and deductive list, and a handful that did *not* live up to expectation.

Humour stands firmly at the top of the table. Humour is a versatile behaviour and can be used as a way to ease a situation and lessen tension, downplay a mistake, or as a general way of bonding with other members, to name a few. Humour for whatever reason occurred much more often in multi-cultural teams.

Positive Feedback has proven itself a way for emotionally intelligent persons to ensure their fellow members feel appreciated (*recognized*) and welcomed in their team. Appreciating someone's contribution makes them feel much better about themselves and in the team context.

Table 1. Frequency of behaviours linked to EI moments.

Behaviours	FreqT	Avg	TD
Humour	92.99	3.08	286.14
Positive Feedback	34.46	2.74	94.50
Giving Positive Attention/Being Friendly	15.01	2.52	37.78
Professional Challenging/Stimulating Teamwork	13.67	2.24	30.59
Giving Direction/Own Opinion	7.49	4.27	31.96
Giving Positive Attention/Personal Interest	9.91	1.96	19.47
Informing with Facts	9.83	3.36	33.05
Negative Feedback (Constructive)	5.84	3.99	23.28
Shaping the Discussion	5.50	5.64	31.01
Agreeing	7.54	2.44	18.41
Defending Own Position	5.80	3.95	22.89
Professional Challenging/Asking for ideas	4.14	5.35	22.15
Sharing Personal information	3.36	3.34	11.21
Other/null Other/null	2.31	1.50	3.47
Giving Direction/Long Term	0.66	5.00	3.30
TOTAL	218.51	-	669.21

Table 1: Data on the behaviours; from left to right the behaviour itself; FreqT, being the total standardized frequency of a behaviour; Avg, being the average duration of a behaviour; TotalD, being the total (standardized) duration in which a behaviour took place.

Being Friendly is not only a display of self-control, but also of good social awareness and relationship management, as this behaviour is a way to manage others' emotions. *Showing Personal Interest* similarly is a display of strong social awareness.

The data shows us that *Negative Feedback* was not often EI. Usually, the type of negative feedback was either a slight correction or straight up factually stating what was wrong. In one mono-cultural retrospective meeting, an extended period of tension arose after the negative feedback round started, and created a downward spiral of negativity and disagreement, even after initially being constructive/friendly negative feedback. It seemed easy to bring negative feedback in a destructive way.

Sharing Personal Information usually was not the EI behaviour in an exchange, rather when someone displays *personal interest* in another member.

Table 2. Total Durations and Frequencies for Mono- And multicultural teams

Behaviour	MND	MTD	MNF	MTF
Humour	105.34	180.8	37.49	55.50
Positive Feedback	62.46	32.04	20.74	13.72
Giving Positive Attention/Being Friendly	21.04	16.74	10.04	4.97
Professional Challenging/Stimulating Teamwork	18.25	12.34	7.55	6.12
Giving Direction/Own Opinion	21.22	10.74	5.04	2.45
Giving Positive Attention/Personal Interest	13.33	6.14	6.60	3.31
Informing with Facts	15.52	17.53	5.15	4.68
Negative Feedback (Constructive)	15.86	7.42	3.71	2.13
Shaping the Discussion	7.95	23.06	1.04	4.46
Agreeing	14.41	4.00	4.11	3.43
Defending Own Position	6.75	16.14	2.31	3.49
Professional Challenging/Asking for ideas	0.00	22.15	0.00	4.14
Sharing Personal information	0.00	11.21	0.00	3.36
Other/null	3.47	0.00	2.31	0.00
Giving Direction/Long Term	3.30	0.00	0.66	0.00
TOTALS (instances and durations)	308.9	360.3	106.8	111.8

Table 2: From left to right, the total durations for mono- and multicultural teams, and the frequencies for mono- and multicultural teams, for each behaviour identified.

For the behaviours below, which can be argued as more task oriented, mixed results arose.

Stimulating Teamwork occurred as the literature expected, as *Developing* behaviour, and was one of the most common behaviours.

Agreeing was usually closely linked to *Positive Feedback* when it was linked to an EI instance. When it was not linked to an EI instance, it was more befitting of its description in the deductive list: merely agreeing with a statement.

Asking for Ideas; an *empowering* behaviour, we suspected this may be the primary task-oriented behaviour to be linked to EI. However, most often this behaviour was a quick verification. It seems that *empowering* behaviour is not as prominent in agile squads where there are no real leaders.

The remaining behaviours listed next were not in our deductive list. These show that moments of EI can also occur through task-oriented behaviours, for instance:

Giving Direction/Own Opinion is a bit of a chameleon. In EI instances it might occur as anywhere from relating to others through a story (where it is not Sharing Personal Information) to giving Positive Feedback or similar.

Shaping the Discussion; this behaviour usually displays a creative way of introducing a meeting or topic, via a way to relate to members or get them together, and is a strong display of Social Awareness. *Informing with Facts* occurs in EI instances in similar situations, though is not as exclusive to POs and Scrum Masters.

Defending Own Position is not as much a conflictive behaviour; instead, it occurred as EI in some instances, and is a display of strong social awareness and conflict avoidance.

An interesting finding comes up following our research. We suspected that relations-oriented behaviours were primarily going to be involved in moments of EI, which is still the case. However, task-oriented behaviours have found their way into our analysis inductively. Hence, it should be considered that the behaviour itself does not matter as much, but rather the way it is brought. This, in turn, is influenced by the person bringing the behaviour being emotionally intelligent, and this type of person does not need to use relations-oriented behaviours only to manage their relations to others, and of the group.

Looking at Table 3, it is also interesting to notice that some 'task-oriented' behaviours occurred more in the sprint planning meeting, which seems a more task-oriented meeting, and a relations-oriented behaviour like *Being Friendly* occurred most often in the retrospective meetings.

4.2. Quantitative Analysis

In the following section, we have attempted to answer the main research question through two questions relating to the two main parts of our research question. Afterwards, a handful of exploratory tests were done.

4.2.1. Does observed Emotional Intelligence differ between members of mono- and multi-cultural teams?

To kick off, we tested whether members of mono- and multi-cultural teams differ. First, we included *all members* in the test, including the Product Owners. The Mann-Whitney U test indicated that the difference in EI behaviour frequency between members of monocultural and multicultural teams was not statistically significant, U ($N_{mono}=26$, $N_{multi}=29$) = 297.5, z = -1.341, p = 0.180, meaning there is also no significant difference in EI behaviour frequency between members of mono- and multicultural teams. The Mann-Whitney U test indicated

that the difference in duration between members of monocultural and multicultural teams was not statistically significant, U (Nmono=26, Nmulti=29) = 349, z = -0.472, p = 0.637, suggesting there is no difference in terms of duration of observed EI behaviour between members of mono- and multicultural teams.

Second, we tested just the regular members and excluded the Product Owners. Where frequencies are concerned, the Mann-Whitney U test indicated the difference in EI between mono- and multicultural teams was not significant, U (Nmono=23, Nmulti=25) = 215.5, z = -1.487, p = 0.137, meaning there is no difference in EI frequency between the two team types either. Concerning the duration, the Mann-Whitney U test indicated the difference in EI between mono- and multicultural teams was not significant, U (Nmono=26, Nmulti=29), z = -0.341, p = 0.733, meaning there is no difference in EI duration between mono- and multicultural teams.

We thus concluded that observed EI through verbal behaviours does not differ significantly between members of mono-and multi-cultural teams.

4.2.2. Do Product Owners differ in observed EI between mono- and multi-cultural teams?

The second part of our research question was focused on the POs and his/her observed EI differences in mono- and multicultural teams. The Mann-Whitney U test for frequencies indicated no significant difference in EI between POs of mono- and multicultural teams, U (Nmono=3, Nmulti=4) = 6 , z = 0, p = 1, meaning there is no difference between POs of mono- and multicultural teams. The Mann-Whitney U test for durations indicated no significant difference in EI between POs of mono- and multicultural teams, U (Nmono=3, Nmulti=4) = 5, z = -0.354, p = 0.857,

Hence, product owners do not differ significantly from each other between mono- and multicultural teams.

For exploratory purposes, we also investigated other differences regarding the POs, observed EI and Sprint Meetings.

4.2.3. Do Product Owners have a higher observed EI than regular members?

We tested first and foremost whether POs differ in observed EI from regular members.

The Mann-Whitney U test for frequencies indicated the difference in EI frequency between POs and regular members is also statistically significant, U (Npo=7, Nregular=48) = 301 , z = 3.361, p = 0.000, meaning there is a significant difference between regular members and POs in EI duration. The Mann-Whitey U test indicated the difference in EI duration between POs and regular members is statistically significant, U (Npo=7, Nregular = 48) = 269.5, z = 2.563, p = 0.008, meaning there is a significant difference in EI duration between regular members and POs.

4.2.4 Do POs in mono- and multi-cultural teams differ from the regular members?

We isolated the cases of mono-cultural teams and tested again. The Mann-Whitney U test for frequencies indicated the difference in EI between POs and regular members is statistically significant, U (Npo=3, Nregular=23) = 62.5, z = 2.251, p = 0.018, meaning there is a significant difference between regular members and POs in EI frequency, in monocultural teams. The Mann-Whitney U test for duration indicated the difference in EI between POs and regular members is not statistically significant, U (Npo=3, Nregular=23) = 58, z = 1.886, p = 0.064, meaning POs cannot be proven to display a higher EI duration than regular members. However, if we decide on a more lenient alpha of 0.10, we can also say that the results *are* significant and that POs do differ in observed EI across the two. Thus we will state that POs are higher than regular members in observed EI, within monocultural teams.

We did the same for multi-cultural teams. The Mann-Whitney U test for frequencies indicated the difference in EI between POs and regular members is also statistically significant, U (Npo=4, Nregular=25) = 89.5, z = 2.502, p = 0.008, meaning there is a significant difference between regular members and POs in EI frequency, in multicultural teams. The Mann-Whitney U test for durations indicated the difference in EI between POs and regular members is not significant, U (Npo=4, Nregular=25) = 75.5, z = 1.613, p = 0.109, meaning there is not a significant difference between regular members and POs in EI duration.

4.2.5. Do Sprint Planning and Sprint Retrospective Meetings differ in observed EI in total members and Product Owners?

A Wilcoxon Signed Rank test indicated the difference in EI frequency between the two meeting types was not significant, T = 33, z = -0.471, p = 0.638.

The Wilcoxon Signed Rank test also did not indicate a significant difference in EI duration between the two meeting types, T = 24, z = -1.177, p = 0.239, indicating no difference between the two meeting types.

A catch here is that the Wilcoxon test here only tested those members that have data on both meetings, so among *those* members (N=12) there is no significant difference between the two meetings. And for Product Owners, there simply was not enough data for a valid test. In Table 7 in the Appendix, we provided some descriptives for the durations and frequencies of both meetings instead, to provide an idea as to whether they would differ or not.

4.2.6. Do Sprint Planning and Sprint Retrospective Meetings differ in observed EI in members and Product Owners, in mono- and multicultural teams?

For mono-cultural team members, The Wilcoxon Signed Rank test did not report a significant difference for frequencies, T = 231, z = 1.410, p = 0.159, so the

frequency of EI behaviour does not differ between the two meeting types, in monocultural teams.
The Wilcoxon test also did not report a significant difference for durations, T = 233, z = 1.460, p = 0.144, meaning there is no significant difference between the two meetings' observed EI duration in monocultural teams either.

Looking at multicultural teams now, The Wilcoxon Signed Rank tests did not report a significant difference, T = 165, z = -1.136, p = 0.256 for frequencies and T = 149, z = -1.481, p = 0.139 for durations. So there is no significant difference in observed EI behaviours, frequency and duration, in multicultural teams either. For POs, none of the above tests reached a value below 0.655, meaning we cannot reject any H0 we discussed above when looking at just product owners.

5. DISCUSSION

5.1. Theoretical Implications

This thesis has contributed to the literature in two main ways. The first contribution is to the EI literature through our innovative measurement method, observing EI via verbal behaviours. As mentioned, Rajah et al. (2011) have lined out the problem of measurement issues in the EI research field. The primary measurement method used in EI research is self-reporting, a measure that Dasborough et al. (2021) have criticized as inaccurate, and likely inflated, as people have a tendency to overestimate their own ability. Our analysis through observing video data and verbal behaviours has attempted to fill that void in the literature and come closer to reality when it comes to measuring EI.

In our analysis, *Supporting* and *Recognizing* behaviours such as *Humour*, *Positive Feedback* and *Being Friendly* have shown themselves as most often connected to EI, as have some *Developing* and *Empowering* behaviours. The key takeaways, regarding behaviours, of our research were observable in Table 1 and the subsequent results section above.

As another theoretical contribution this thesis has, primarily, aimed to discover whether there is a difference between members of mono- and multicultural teams, in terms of their observed EI. According to the literature, different cultures display and interpret emotions differently (Moon, 2010), and this may also be the case in a team context (Ekermans, 2009). This first point seemed true at first as in our results, frequency of moments and durations of behaviours we had identified as EI looked to be higher in monocultural teams. However, when tested statistically, our findings show that members of mono- and multicultural teams actually did not differ in displaying EI behaviors. This is indeed different from previous research pointing to the fact that language barrier can possibly negatively influence the emotional climate in teams, through interpretation of emotions and even the words of others themselves (Tenzer & Pudelko, 2013). Similarly, multicultural team members could be more hesitant to share ideas compared to monocultural teams (Cheng et al., 2012) and interpersonal conflicts may be more likely to happen in multicultural teams (Polzer et al., 2002).

Heinz (2014) pointed out too that, although multicultural teams are stronger performers if the individuals' cultural differences are well-managed, often these teams' social cohesion suffers due to values not being aligned, as well as a cause from language barriers (both verbal and non-verbal).

More specifically, the language barrier we observed did play a role. Tenzer and Pudelko (2013) reiterate Cheng et al.'s (2012) points, expanding on the idea that not only are members of multicultural teams more hesitant to speak out on topics, in general they can be frustrated by a communication problem, and find it hard to get their point across, so often they would likely not bother. However what made it so that monocultural teams did not have higher EI durations and frequencies across the entire meetings could have been due to tension and conflicts in multicultural teams being less common in our analysis. Previous studies suggested quite the opposite, in that team coordination would generally be easier in monocultural teams and that conflict was a more likely occurrence in multicultural teams (Cheng et al., 2012; Polzer et al., 2002).

Further, Moon et al. (2010) state that emotions are of different intensities in different cultures, and that EI is the solution to multicultural team problems.

What are possible reasons for such discrepancy of results? First, one plausible reason could be that monocultural teams tend to show a higher willingness to express themselves and speak out on something they disagree with. As a consequence, this may increase the sources of conflict for monocultural teams, so that, consequently, conflict moments were less common in multicultural teams (Cheng et al., 2012). This may have counterbalanced the fact that multicultural teams have less periods of lengthier and more frequent EI instances, and rather a more steady duration and frequency across the meeting, where monocultural team meetings are more often filled up partly by this conflict state. So this ability of monocultural team members to express themselves is a double-edged sword with higher EI possibility on one end, and higher conflict likelihood on the other.

Second, the fact we used a novel measurement method for EI, i.e., verbal behaviours, can indeed mean results differ from the existing literature mainly based on self-reporting. Hence, our different findings can be explained by the new methodology and can offer a fresh perspective on how EI can be studied further.

5.2. Practical Implications

This thesis also provides implications for practice. Given our EI findings, we suggest that, in order to minimize conflict in mono- and multicultural teams and maximize performance, EI training for POs and team members should be promoted by organizations and their managers.

Indeed, on the one hand, the PO – or whomever is in charge – should recognize the importance of EI behaviors in relation to patterns of emerging conflict and, ideally, intervene. On the other hand, when there is no leader, formal or informal, it is then beneficial that all team members are able to recognize and manage emotions. Hence, this type of training should be available for all employees within an organization.

This point can then also be related to the fact we studied mono- and multicultural teams, and we have a key takeaway for both; in monocultural teams, the PO or any other individual in charge should recognize conflict in an early stage of emergence and intervene before it spirals the meeting into hostility. When the members in the meetings went adversarial, it hindered productivity of the meeting and the occurrence of emotionally intelligent behaviour.

In multicultural teams, it is imperative that those in charge make sure, as the prior literature has recommended, that cultural barriers such as values and language be minimized in order for better alignment of team members' behaviours and goals. This will lead to, as also previously stated by the literature, stronger squad performance; in fact, multicultural teams can actually perform better than their monocultural counterparts when facilitated correctly.

6. LIMITATIONS & FUTURE RESEARCH

As all research, this thesis is not without limitations. First, only a single enterprise was used in the analysis. Although the quality of the data made the results trustworthy, future research may conduct a similar study in other services and organisations that implemented Agile to have more variety of data and increased generalisability. To build on this point, this research only had all-Dutch monocultural teams to play with, and using a larger variety of types of monocultural teams is recommended as different patterns of behaviour may occur.

Second, this research is also dependent on the person analysing the meetings, as it is their interpretation of observed EI that formed the dataset, so full objectivity was not attainable. Due to scheduling conflicts, extensive reliability analysis for the qualitative, inductive interpretation did not take place. Hence, if a similar study is conducted in the future, we do suggest using a second coder to detect EI moments. As another point for analysis quality, some meetings had a suboptimal audio or visual quality, and thus we may have missed instances of EI involuntarily.

Thirdly, the sample size was rather small. A prime example being the testing of mono- versus multicultural Product Owners, where we could only use 7 POs in total. We have also only been able to use 5 of each team type, of which 6 monocultural and 7 multicultural team meetings were analysed. Hence, future research should therefore look at a larger sample size, as well as a wider range of potential behaviours. We recommend refining our set of behaviours, and/or using one's own set of behaviours, though built on Yukl et al. (2012)'s four categories of relations-oriented behaviours, as these have each proven to be linked to EI-related behaviour in some way.

Lastly, future studies interested in observing EI through our novel way of analysing verbal behaviours should also take a look into intra-team conflict; as this was our main explanation as to why we did not find a difference between mono- and multicultural teams.

7. CONCLUSION

With this research we have aimed to find differences in observed moments of EI between members and Product Owners of mono- and multicultural Agile teams, using standardised frequencies and durations. This was achieved by using a novel method of *observed* EI, which moved away from the commonly used, though flawed, self-reporting method. Contrarily to our expectations, we did not find a difference between members of mono- and multicultural teams, but indirectly observed that members of monocultural teams surprisingly find themselves in moments of tension and conflict more often. We also noticed that Product Owners display EI behaviors more frequently, and for longer, compared to the other members. These results seem to underline that not only when EI is manifested conflicts can be minimized, but also that POs play an important role in managing the team's relations and emotions, as well as in recognising when tensions arise.

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10. APPENDIX

Table 3: Table with Behaviours and Frequencies, Averages and Totals

Behaviour	M1Freq	M3Freq	FreqT	M1Avg	M3Avg	Avg	M1TD	M3TD	TD
Humour	48.53	44.46	92.99	3.41	2.71	3.08	165.50	120.64	286.14
Positive Feedback	18.22	16.24	34.46	2.60	2.91	2.74	47.30	47.20	94.50
Giving Positive Attention/Being Friendly	2.93	12.08	15.01	1.92	2.66	2.52	5.63	32.15	37.78
Professional Challenging/Stimulating Teamwork	11.45	2.22	13.67	2.42	1.32	2.24	27.66	2.93	30.59
Giving Direction/Own Opinion	4.38	3.11	7.49	4.17	4.41	4.27	18.25	13.71	31.96
Giving Positive Attention/Personal Interest	5.56	4.35	9.91	2.40	1.41	1.96	13.33	6.14	19.47
Informing with Facts	6.34	3.49	9.83	2.81	4.36	3.36	17.84	15.21	33.05
Negative Feedback (Constructive)	0.00	5.84	5.84		3.99	3.99	0.00	23.28	23.28
Shaping the Discussion	2.40	3.10	5.50	4.66	6.40	5.64	11.18	19.83	31.01
Agreeing	7.54	0.00	7.54	1.97		2.44	14.87	3.54	18.41
Defending Own Position	4.71	1.09	5.80	2.54	10.01	3.95	11.98	10.91	22.89
Professional Challenging/Asking for ideas	3.05	1.09	4.14	5.12	6.00	5.35	15.61	6.54	22.15
Sharing Personal information	0.00	3.36	3.36		3.34	3.34	0.00	11.21	11.21
Other/null	2.31	0.00	2.31	1.50		1.50	3.47	0.00	3.47
Giving Direction/Long Term	0.00	0.66	0.66		5.00	5.00	0.00	3.30	3.30
TOTAL	117.42	101.09	218.51	-	-	-	352.62	316.59	669.21

Table 3: An overview of the behaviours linked to observed moments of EI. Included are the standardized frequencies, average durations and total durations for meetings 1 (sprint planning), 3 (sprint retrospective) and combined, when applicable.

Table 4. Table with Behaviours and their Frequencies, split over the two team types.

Behaviour	M1FreqMono	M1FreqMulti	M3FreqMono	M3FreqMulti	TotalFreqMono	TotalFreqMulti
TOTALS (instances and durations)	63.82	53.60	42.93	58.16	106.75	111.76
Humour	19.53	29.00	17.96	26.50	37.49	55.50
Positive Feedback	12.07	6.15	8.67	7.57	20.74	13.72
Giving Positive Attention/Being Friendly	2.93		7.11	4.97	10.04	4.97
Professional Challenging/Stimulating Teamwork	6.51	4.94	1.04	1.18	7.55	6.12
Giving Direction/Own Opinion	4.38		0.66	2.45	5.04	2.45
Giving Positive Attention/Personal Interest	5.56		1.04	3.31	6.60	3.31
Informing with Facts	4.11	2.23	1.04	2.45	5.15	4.68
Negative Feedback (Constructive)			3.71	2.13	3.71	2.13
Shaping the Discussion		2.40	1.04	2.06	1.04	4.46
Agreeing	4.11	3.43			4.11	3.43
Defending Own Position	2.31	2.40		1.09	2.31	3.49
Professional Challenging/Asking for ideas		3.05		1.09	0.00	4.14
Sharing Personal information				3.36	0.00	3.36
Other/null	2.31				2.31	0.00
Giving Direction/Long Term			0.66		0.66	0.00

Table 4: Table with standardized frequencies of all the behaviours linked to observed moments of EI, split across the two meetings and the two types of teams; in other words, frequencies of all behaviours for both mono- and multicultural teams, for the sprint planning and sprint retro meeting as well as the two meetings combined.

Table 5. Table with Behaviours and their Averages, split over the two team types.

Behaviour	M1AvgMono	M1AvgMulti	M3AvgMono	M3AvgMulti	AvgMono	AvgMulti
Humour	3.09	3.63	2.51	2.85	2.81	3.26
Positive Feedback	2.41	2.96	3.85	1.83	3.01	2.34
Giving Positive Attention/Being Friendly	1.92		2.17	3.37	2.10	3.37
Professional Challenging/Stimulating Teamwork	2.63	2.14	1.12	1.50	2.42	2.02
Giving Direction/Own Opinion	4.17		4.50	4.38	4.21	4.38
Giving Positive Attention/Personal Interest	2.40		0.00	1.85	2.02	1.85
Informing with Facts	2.71	3.00	4.20	4.42	3.01	3.75
Negative Feedback (Constructive)			4.27	3.48	4.27	3.48
Shaping the Discussion		4.66	7.64	5.77	7.64	5.17
Agreeing	2.64	1.17			3.51	1.17
Defending Own Position	2.92	2.18		10.01	2.92	4.62
Professional Challenging/Asking for ideas		5.12		6.00		5.35
Sharing Personal information				3.34		3.34
Other/null	1.50				1.50	
Giving Direction/Long Term			5.00		5.00	

Table 5: All average durations of all behaviours associated with moments of EI, divided across both team types and meeting types. In other words, the average durations of all behaviours associated with moments of EI for mono- and multicultural teams, for both meeting types (Sprint Planning and Sprint Retro) and averages over both meetings together.

Table 6. Table with Behaviours and their Total Durations, split over the two team types.

Behaviour	M1TDMono	M1TDMulti	M3TDMono	M3TDMulti	TotalDMono	TotalDMulti
TOTALS (instances and durations)	175.96	176.66	132.94	183.65	308.90	360.31
Humour	60.32	105.18	45.02	75.62	105.34	180.80
Positive Feedback	29.10	18.20	33.36	13.84	62.46	32.04
Giving Positive Attention/Being Friendly	5.63		15.41	16.74	21.04	16.74
Professional Challenging/Stimulating Teamwork	17.09	10.57	1.16	1.77	18.25	12.34
Giving Direction/Own Opinion	18.25		2.97	10.74	21.22	10.74
Giving Positive Attention/Personal Interest	13.33			6.14	13.33	6.14
Informing with Facts	11.15	6.69	4.37	10.84	15.52	17.53
Negative Feedback (Constructive)			15.86	7.42	15.86	7.42
Shaping the Discussion		11.18	7.95	11.88	7.95	23.06
Agreeing	10.87	4.00	3.54		14.41	4.00
Defending Own Position	6.75	5.23		10.91	6.75	16.14
Professional Challenging/Asking for ideas		15.61		6.54	0.00	22.15
Sharing Personal information				11.21	0.00	11.21
Other/null	3.47				3.47	0.00
Giving Direction/Long Term			3.30		3.30	0.00

Table 6: Table with the behaviours' standardized total durations for each meeting, divided into the two types of teams; in other words, the total duration of each behaviour for both mono- and multicultural teams, for both meeting types analysed as well as the total durations of a behaviour per respective team type.

Table 7: Descriptives on both meeting types

	N	Min	Max	Mean	SD
EI_M1_D	35	1.3	34.92	10.45	7.65
EI_M3_D	32	0.96	35.24	9.97	8.98
EI_M1_F	35	0.80	11.55	3.35	2.47
EI_M3_F	32	0.95	13.52	3.09	2.76
Valid N	12				

Table 7: Brief descriptive statistics on both meeting types.

Table 8: Behaviours and whether they occurred deductively/inductively

Behaviour	Deductive	Inductive
Humour	X	X
Positive Feedback	X	X
Giving Positive Attention/Being Friendly	X	X
Professional Challenging/Stimulating Teamwork	X	X
Giving Positive Attention/Personal Interest	X	X
Negative Feedback (Constructive)	X	X
Agreeing	X	X
Professional Challenging/Asking for ideas	X	X
Sharing Personal information	X	X
Governing/Delegating	X	
Other/null		X
Giving Direction/Own Opinion		X
Informing with Facts		X
Shaping the Discussion		X
Defending Own Position		X
Giving Direction/Long Term		X

Table 8: All behaviours included in the deductive and inductive analysis. As one can see, a handful of task-oriented behaviours were not included deductively but presented themselves as EI-related in the inductive analysis.