
Research Report:

How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?

MA Professional Practice (Neuro coaching)

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TABLE OF CONTENTS

1. INTRODUCTION	5
2. LITERATURE REVIEW	6
Global Context	6
Culture, Diversity and Intersectionality	8
Psychological Safety	10
The Thinking Environment	12
3. THE RESEARCH QUESTIONS	14
4. METHODOLOGY, RESEARCH DESIGN AND METHODS	15
Research Paradigm	15
Methodology	16
Methods	18
Measures	19
Research Participants	20
Ethical Considerations and Risk Mitigation	21
5. FINDINGS AND DISCUSSION	22
Participation	22
Findings on the Primary Research Questions	23
Key themes from the qualitative data and ethnographic research	24
Findings from the quantitative data	37
Findings for the Secondary Research Questions	41
Discussion	43
How the Thinking Environment can help build psychological safety	43
The influence of the Thinking Environment on the quality of thinking	44
Creating spaces for psychological freedom	46
From polarisation to connection	48
The live-learning experience	49
6. CONCLUSION	50
APPENDIX	53
REFERENCES	86

FIGURES

Figure 2.1: The Megatrends: Five global shifts reshaping the world we live in (PwC 2022)	7
Figure 2.2: Types of diversity (Stout-Rostron 2019, pg79-80)	9
Figure 2.3: Edmondson's measures for psychological safety (Edmondson 1999)	11
Figure 2.4: The leader's toolkit for building psychological safety (Edmondson 2019, pg159)	12
Figure 2.5: The Ten Components of a Thinking Environment (Time to Think 2024)	13
Figure 2.6: Building Blocks of the Thinking Environment (Time to Think 2021)	14
Figure 4.1: The research methodology supporting the research questions (Britz 2023a)	17
Figure 4.2: Elements of the Thinking Environment Transforming Meetings process (adapted from Time to Think Facilitator Training Materials 2021)	19
Figure 4.3: The Participating Teams (Britz 2023b)	20
Figure 5.1: Participation across research groups (Britz 2023b)	23
Figure 5.2: Participant interview quotes on identity and intersectionality (Britz 2023b)	26
Figure 5.3: Participant interview quotes mentioning their leader - part one (Britz 2023b)	27
Figure 5.4: Participant interview quotes mentioning their leader - part two (Britz 2023b)	27
Figure 5.5: Participant interview quotes mentioning their leader – part three (Britz 2023b)	28
Figure 5.6: Meeting structure and team involvement across research groups (Britz 2023a)	29
Figure 5.7: Participant interview quotes on time – part one (Britz 2023b)	30
Figure 5.8: Participant interview quotes on time – part two (Britz 2023b)	31
Figure 5.9: Participant interview quotes reflecting transactional nature of meetings (Britz 2023b)	32

Figure 5.10: Participant interview quotes reflecting increase of relational elements	34
Figure 5.11: Participant interview quotes reflecting 'voice' part one (Britz 2023b)	36
Figure 5.12: Participant interview quotes reflecting 'voice' part two (Britz 2023b)	37
Figure 5.13: Overall average results for pre- and post- intervention surveys (Britz 2023b)	38
Figure 5.14a: Pre- and post-intervention quantitative response to question 21 – to what degree to do you think you are able to think fully and with quality in your team meetings? (Britz 2023b)	38
Figure 5.14b: Pre- and post-intervention quantitative response to question 22 – to what degree to do you think the team is able to think fully and with quality in your team meetings? (Britz 2023b)	39
Figure 5.15: Post-intervention quantitative data measuring influence of the Thinking Environment on individual thinking (Britz 2023b)	40
Figure 5.16: Leadership tasks for building psychological safety (Edmundson 2019, pg159) and elements of the Thinking Environment (Time to Think 2024).	41
Figure 5.17: Participant feedback on the research experience (Britz 2023b)	42

APPENDIX

Appendix A: The Ten Components of the Thinking Environment (Time to Think 2021)	53
Appendix B: Pre- and post-intervention online survey questions	55
Appendix C: Pre- and post-intervention qualitative questions for interviews	57
Appendix D: BMPF7010 - Research Proposal (A.Britz 2029338)	58
Appendix E: PG2_Application_for_Ethical_Approval_A.Britz (2029338) with Supervisor signature amended 4 March 23	73
Appendix F: SK-FRM-002 Application for full review - restructured doc A Britz amended 6 June 2023	80
Appendix G: Organisational approval from participating teams for research	86

1. INTRODUCTION

In a world of accelerating change, increased complexity, and volatility, society is facing significant challenges that will need the collective effort of nations, organisations, teams and individuals to address, and to do this, fresh thinking and innovation is needed. One of the shifts being seen is the increase in societal diversity due to labour mobility and a more technologically connected world. Environments of increased diversity of identity and intersectionality, present the opportunity for more effective problem solving and greater performance. However, with greater diversity also comes greater challenge in effectively navigating the 'difference' that exists, and importantly addressing the impacts of systemic inequality. The workplace is one area where efforts to build cultures of diversity and inclusion is receiving increasing attention.

As a coach, leadership development trainer and facilitator, the author sees how organisations, leaders and employees struggle with these challenges. Being committed to supporting clients in finding effective and generative ways of working, and playing a role in driving positive social change, the author wanted to explore the means of creating a space where 'difference' can be safely surfaced and in doing so, maximise effective thinking and performance.

In their practice, the author has become familiar with two bodies of knowledge dedicated to deepening our understanding on how to create spaces where individuals can feel safe to think with quality, and in so doing improve the quality of the outcome. These are Amy Edmundson's work on psychological safety, and Nancy Kline's *The Thinking Environment*. Psychological safety is widely understood as present when there is a commonly held belief in a group that they all feel comfortable speaking their mind, and are able to be themselves. *The Thinking Environment* is premised on the observation that the quality of every action is defined by the quality of the thinking done first, and the biggest influencer on our thinking is how the people around us treat us while thinking.

In this research the author seeks to explore whether the application of the Thinking Environment can help build psychological safety and improve quality of thinking in a team meeting setting, when applied as a live learning experience. The team meeting was chosen as the 'place' for the research as it is one of the most universal points of interaction in the workplace. Application through a live learning experience was chosen to explore whether content usually delivered in workshop format could support learning 'on the job'.

Three teams were identified to participate in a collective case study as a piece of small scale, work-based action research. All three teams are from different locations, have

different roles and professions and vary in structure in order to provide a richer data set. Similarities that the teams do share are that they all work in pressured operating environments where time is a scarce resource; there is a range of diversity that exists within each team; and they function within organisations that have expressed commitment to supporting inclusion and diversity in their workplace.

The study comprises three phases – pre-intervention observation and data gathering, intervention stage with auto-ethnographic and participant reflection, and post-intervention observation and data gathering. A mix of online surveys and individual interviews are utilised and, given the deeply personal and subjective nature of the content, a key consideration throughout the research is to protect the confidentiality of participants and honour their open sharing.

The intention of the research is to help provide leaders and teams with greater insights into how they can turn their team meetings into safe spaces where their rich layers of diversity of identity and intersectionality are welcomed, in order to support quality thinking and performance. The application of the Thinking Environment as a live learning experience is also intended to provide the teams with tools they can utilise moving forward, should they so wish. The author has also identified three personal learning outcomes namely, to introduce and build their skill in conducting insider research; to expand and deepen their knowledge and understanding of diversity, identity and intersectionality; and to inform and enrich the author's own personal practice.

2. LITERATURE REVIEW

Global context

In their October 2023 World Economic Outlook report, the International Monetary Fund (IMF) (IMF 2023) stated that despite efforts to recover from the disruption of the Covid-19 pandemic, global economic conditions continue to be volatile. Climate shocks, food security and geopolitical tensions were also listed as challenges facing our society today. These factors are not new, in fact, in a report PwC published in 2013 and updated in 2022, five megatrends shaping our world today were identified: climate change, technological disruption, demographic shifts, a fracturing world and rising social instability as summarised in Figure 2.1 below (PwC 2022).

The megatrends	What they mean
Climate change	While humanity is trying to figure out ways to reduce carbon emissions, greenhouse gas levels in the atmosphere are worsening, global temperatures are rising, and extreme weather events are becoming more frequent and more severe.
Technological disruption	Transformative technology changes how we function in the world and how we understand humanity. It enables huge value creation, but harmful consequences are – and will increasingly be – difficult to mitigate.
Demographic shifts	The median age in all countries around the globe is increasing, but at different rates and from a different starting position. This demographic change is causing some countries' social systems to break down and a lack of workers in critical areas, whereas other countries face skyrocketing un- and under-employment, weakening economies from emigrating citizens, and strain on social safety nets.
Fracturing world	The world is fracturing and becoming multi-nodal as more nation states are competing for influence, with the rest of the world aligning around them and some states acting as destabilisers. Countries are increasingly turning their focus inwards, prioritising their national resilience and localisation.
Social instability	Massive pressure – resulting from social and economic polarisation, disruption, demographic change, and eroding trust – leads to greater social unrest.

Figure 2.1: The Megatrends: Five global shifts reshaping the world we live in (PwC 2022)

PwC (2022) maintain the megatrends outlined in Figure 2.1 above are present on a global, national, organisational and individual level. Among the implications of the megatrends, the influence of a technologically more connected world and demographic shifts are having significant impacts on the workplace including increased diversity of the workforce (Cox et al. 2014, Stout-Rostron 2019, PwC 2022). Further, the COVID-19 pandemic and the resulting increase of virtual working has added another layer of complexity in the workplace (Brown 2018, Mangla 2021, Reuil 2022).

The turbulence experienced across the megatrends reflects the acronym VUCA, frequently used to describe our world today and which Stout-Rostron (2019) explains meaning a volatile, uncertain, complex and ambiguous environment. While change and uncertainty are not new for organisations, it is the pace of change, causing unpredictability and complexity, that organisations are grappling to navigate, and there is an increasing realisation that innovative thinking, new skills and ways of operating are needed to succeed (Stout-Rostron 2019, Çiçeklioğlu 2020, Taskan, Junça-Silva and Caetano 2022).

Culture, Diversity and Intersectionality

With increasing societal diversity, the concept of culture, how it influences us, and how we shape it, becomes even more relevant (Britz 2022). The early interculturalists viewed it as a construct of shared experience, values and worldviews between one set of people to differentiate themselves from another (Hofstede 1997, Trompenaars and Hampden-Turner 1997, Rosinki 2003). While more recent definitions challenge the idea of culture as a singular construct, instead suggesting interculturalism, where many elements of culture and identity play off each other (Chin, Desormeaux and Sawyer 2016). In a paper exploring the evolution of culture, the author offered a view that “culture appears to be a constantly changing construct of individual and social learning, within which an individual’s identity is shaped by their experiences in an interconnected world of globalisation, which in turn influences their behaviour that, when experienced by others, can further shape the broader culture.” (Britz 2022 pg7).

Existing at all levels of society, culture, or organisational culture as it is known in the workplace, is first described by Schein (1984) as dynamic and multi-faceted, created through a shared set of beliefs, assumptions, and rituals that are visible through the language and behaviour of an organisation. Many consider organisational culture a key lever for driving operational performance that can be intentionally shaped and influenced (Cotter-Lockard 2016, Carvalho et al. 2019, Hald, Gillespie and Reader 2020, Zagaria 2021).

With increasing diversity in the workforce, two prevalent themes in organisational culture dialogue are inclusion and diversity (Wilson 2023). Research has indicated the value of diverse teams including strengthening strategic capacity, innovative thinking, task performance and enhanced ability to deal with volatile environments (Jarzabkowski and Searle, 2004, Brown 2018, Stout-Rostron 2019, Mangla 2021, Reuil 2022). However, with increased diversity so too is the challenge of building trust, collaboration and effective communication among teams (Brown 2018, Stout-Rostron 2019, Mangla 2021, Reuil 2022).

There are various ways of explaining diversity, however the approach Stout-Rostron (2019) uses to describe diversity resonates with the author, where she articulates it as a dynamic combination of demographic, informational and behavioural differences as outlined in Figure 2.2 below.

Diversity types	What they are and the impact they have
Demographic diversity	This refers to obvious differences such as gender, age and race. Over time as members of a team get to know each other the differences of race, gender or age will become less remarkable.
Informational diversity	This relates to the different functional, experiential and educational backgrounds that members bring to a team. This diversity provides information and knowledge upon which the team draws and can add to the strategic capacity of the team by broadening the boundaries for envisioning strategic opportunities.
Behavioural diversity	This involves different personality styles within a team. The personality composition of the team will affect the way members work together and manage conflict.
Common diversity attributes	
Readily detectable versus less observable	
Surface-level versus deep-level	
Highly job-related versus less job related	
Task-related versus relations-orientated	
Role-related versus inherent	

Figure 2.2: Types of diversity (Stout-Rostron 2019, pg79-80)

As seen in Figure 2.2 above, in addition to the types of diversity that are at play in any team, the attributes within those types of diversity will likely vary, creating a complex environment to navigate (Stout-Rostron 2019). For example, one individual might be highly task-related and an extravert therefore vocal and readily detectable in their views, while another in the team might be more relational and introverted. Should these differences remain unexplored they can become obstacles to effective working, however Stout-Rostron (2019) suggests that if the right environment is created diversity can be an ‘asset’ rather than a source of conflict.

Closely connected to the discussion on diversity is the increasing recognition of intersectionality, and the dialogue evolving its thinking. The term was first introduced by Kimberlé Crenshaw (1989) in her essay “Demarginalising the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics” highlighting the marginalisation of black women in antidiscrimination law and feminist and antiracist theory and politics. Intersectionality has since expanded to cross disciplines, and issues, with Carbado et al. (2013) describing how intersectionality evolves each time it is applied to different disciplines in a changing society. This is echoed by Zhang

et al. (2021) who define intersectionality as a sense-making process for the complexity of multiple dimensions of identity existing within one person, such as race, gender identity, national cultural identity, education, and age. In their coaching of clients across the world, the author sees a similar phenomenon with individuals navigating complex layers of their own identity intersecting with each other such as their heritage, education, gender, profession and lived experience, and exploring how the interplay of these different facets manifest in their lives and relationships (Britz 2024).

While the concept of intersectionality evolves, it is important to remember the genesis of the intersectionality debate, that is to interrogate and challenge the power dynamics and systemic inequality that have let many voices of unique difference and lived experience to go unheard (Carbado et al. 2013, Roche and Passmore 2021). The author believes that to create environments where all voices can be heard, valued and respected, will not only help make meaningful social change, but will also nurture the innovative thinking required to address the global challenges of today. In their paper “Intersectionality as Critical Social Theory”, Collins et al. (2021) speak of the knowledge creation possible “in the crossroads spaces of a decolonizing and desegregating world. These meeting places enable those who enter them to retain the particularity of the insights and experiences that drive them there, while working through the meaning of what truly is universal with others who arrive from different paths” (2021 pg691). Brown (2018) shares a similar view, describing the importance of organisations, in particular leaders, to actively encourage environments where all perspectives are welcomed and respected, and individuals are able to be their authentic selves. In her work, including her latest book ‘Dare to Lead’, Brown (2018) explores how core to being authentic is the creation of trust and sense of safety, which in turn, leads to team cohesion, innovative thinking and performance.

Psychological safety

In her work Edmundson (2019) differentiates between trust and psychological safety, however acknowledging they do share a similarity as drivers of organisational success. One example of psychological safety’s influence on performance was seen in Google’s five-year study which found psychological safety to be a key contributing characteristic of their high performing teams (Newman et al. 2017).

In her seminal study ‘Psychological Safety and Learning Behaviour in Work Teams’ (1999), Edmundson defined psychological safety as a shared belief where one is safe to speak one’s mind and be authentic in a team environment “characterized by interpersonal trust and mutual respect in which people are comfortable being themselves” (p354).

Edmondson (1999) developed a series of measures as shown in Figure 2.3 below used to evaluate psychological safety in teams.

Part 1: Individual safety	In this team, it is easy to discuss difficult issues and problems
	I won't receive retaliation or criticism if I admit to an error or mistake
	It is easy to ask a member of this team for help
	I feel safe offering new ideas, even if they aren't fully-formed plans
Part 2: Team respect	In this team, people are accepted for being different
	My teammates welcome my ideas and give them time and attention
	Members of this team could easily describe the value of others' contributions
Part 3: Team learning	In this team, people talk about mistakes and ways to improve and learn from them
	We take time to find ways to improve our team's work processes
	Members of this team raise concerns they have about team plans or decisions
	We try to discover our underlying assumptions and seek counterarguments about issues under discussion

Figure 2.3: Edmondson's measures for psychological safety (Edmondson 1999)

As can be surmised from Figure 2.3, Edmondson (1999) explains psychological safety as an individual's perception of their experience in a team setting. Her research emphasises the role of the leader and in her book, 'The Fearless Organisation' Edmondson (2019) includes a 'leader's toolkit' providing guidance on how leaders can build psychological safety in their teams shown in Figure 2.4 below (Edmondson 2019, pg159).

Category	Setting the stage	Inviting participation	Responding productively
Leadership tasks	Frame the work - Set expectations about failure, uncertainty, and interdependence to clarify the need for voice Emphasize purpose - Identify what's at stake, why it matters, and for whom	Demonstrate situational humility - Acknowledge gaps Practice enquiry - Ask good questions - Model intense listening Set up structures and processes - Create forums for input - Provide guidelines for discussion	Express appreciation - Listen - Acknowledge and thank Destigmatize failure - Look forward - Offer help - Discuss, consider and brainstorm next steps Sanction clear violations
Accomplishes	Shared expectations and meaning	Confidence that voice is welcome	Orientation toward continuous learning

Figure 2.4: The leader's toolkit for building psychological safety
(Edmondson 2019, pg159)

As seen in Figure 2.4, Edmondson (2019) outlines specific tasks for leaders, each with a clear intended outcome. However, other than referring to the need for shared practice of speaking up, in her work she does not appear to detail specific guidance for teams on the type of behaviours or actions for a team to use to build psychological safety.

The Thinking Environment

Another body of work that also focuses on the process of building spaces of safety and trust is the Thinking Environment (Kline 2020).

Similar to Brown (2018), and Edmondson (2019), Kline (2020) makes the connection between creating an environment that recognises and embraces individuals as their authentic self, and, in doing so, enables them to think with high quality, which in turn translates into quality action and output. However, for Kline (2020) the focus of the Thinking Environment is on individual and collective accountability to demonstrate a set of behaviours or 'way of being' together that enables others (Time to Think 2024). These behaviours are known as the Ten Components of the Thinking Environment shown in Figure 2.5 below.

Attention	<i>Listening without interruption and with interest in where the person will go next in their thinking</i>
Equality	<i>Regarding each other as thinking peers, giving equal time to think</i>
Ease	<i>Discarding internal urgency</i>
Appreciation	<i>Noticing what is good and saying it</i>
Encouragement	<i>Giving courage to go to the unexplored edge of thinking by ceasing competition as thinkers</i>
Feelings	<i>Welcoming the release of emotion</i>
Information	<i>Absorbing all the relevant facts</i>
Difference	<i>Prioritising diversity of group identities and understanding their lived experience</i>
Incisive questions	<i>Freeing the human mind of untrue assumptions lived as true</i>
Place	<i>Producing a physical environment – the room, the listener, your body – that says, ‘You matter’</i>

**Figure 2.5: The Ten Components of a Thinking Environment
(Time to Think 2024)**

Through decades of action research Kline (2020) developed and evolved the Ten Components of the Thinking Environment summarised in Figure 2.5, with fuller definitions in Appendix A. To support these behaviours, Kline (2020) created a series of ‘building block’ practices, that can be applied to everyday interactions including in the workplace a summary of which is shown in Figure 2.6 below (Time to Think 2021).

Building blocks of The Thinking Environment	
•	Rounds – opening and closing the meetings with an Opening and Closing round that is a positively framed question. The group move methodically ‘around the table’ with everyone having an opportunity to speak without interruption. If meeting virtually this is done using a pre-designed and shared ‘virtual table’. Rounds can also be used to open discussion on a particular topic and also used as a ‘Freshest Thinking Round’ instead of a report-back or debrief.
•	Open discussion – a more free-flowing discussion, often following an initial Round.
•	Thinking Pairs – when a team is split into pairs to each take a turn sharing their thinking on a topic uninterrupted.
•	Dialogue – when a team is split into pairs for free-flowing dialogue (rather than Thinking Pairs).

**Figure 2.6: Building Blocks of the Thinking Environment
(Time to Think 2021)**

Each of the building blocks outlined above is designed to help groups of people create the space for quality thinking. Similar to Lehmann-Willenbrock, Allen and Van Vugt (2020) who state in their paper, “The Origins and Evolutionary Significance of Team Meetings in Organisations”, that meetings are one of the most common and universal practices in the workplace, Kline (Time to Think 2021), recognises the team meeting as a core element of organisational life where how individuals treat each other can significantly influence the quality of their thinking and efficacy of their action. And yet, as Kline (Time to Think 2021) observes, meetings are places where people often behave in a way that prevents good thinking from occurring, so she further developed the ‘building blocks’ into a ‘Transforming Meetings’ process.

In an environment of increasing diversity and intersectionality in the workplace, the author posits that it is increasingly important for the team meeting to be an environment where individuals feel safe to think fully and with quality. It is this environment that will help them collaborate and innovate, driving performance as a team and organisation, but also enabling them to help address the challenges facing society today.

Given the perceived synergies between Edmundson’s work on psychological safety and the Thinking Environment, the author wanted to explore how the Thinking Environment, as a ‘way of being’ with clear ‘building blocks’ could help build psychological safety in a team meeting setting and in doing so, improve the quality of thinking in that space.

3. THE RESEARCH QUESTIONS

The core research question is:

How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?

The research seeks to explore this topic using five focussing questions, with three questions comprising the primary focus of the research, and the remaining two as secondary ‘process’ questions.

Primary research questions:

1. To what extent can the Thinking Environment help build psychological safety in a team meeting setting?
2. What is the perceived impact of the Thinking Environment on individual thinking and action?

3. What is the perceived impact of the Thinking Environment on collective thinking and action?

Secondary 'process' questions:

4. How effectively can the Thinking Environment approach be applied as a live learning experience in a team meeting setting?
5. What is the experience of the team, the individual and the researcher in this process?

4. METHODS

Research Paradigm

With the study focussed on the subjective experience of participants using the Thinking Environment in their team meetings, it will be influenced by their own intersectionality and the organisational culture the meeting is taking place within. The ontology is therefore an Interpretivist¹ approach of Symbolic interactionism². Further, participants will be exposed to, and possibly influenced by their fellow participants, as well as the author as the researcher, whose viewpoint and behaviour is also subjectively influenced by their own layers of identity.

In addition, as the research seeks to identify potential action that can be taken on an individual and organisational level, to help address the global challenges facing society today, the research is informed by the Critical Theory of transformative learning³.

The author considers this research timely in the current global context, and hopes the findings will help contribute to the research on psychological safety and diversity in team settings, including a deeper understanding of the complexity of identity within teams, and provide the participants with a helpful experience of learning and self-discovery in the process.

¹ "Interpretivism argues that truth and knowledge are subjective, as well as culturally and historically situated, based on people's experiences and their understanding of them. Researchers can never be completely separate from their own values and beliefs, so these will inevitably inform the way in which they collect, interpret and analyse data" (Ryan 2018, p8).

² Symbolic interactionism has three core principles: 1) People's behaviour is based on their own meanings; 2) Meanings are generated from social interactions; 3) People may adapt meanings, based on their perceptions of situations or their experiences of them (Ryan 2018, p9).

³ Participatory research that creates awareness of current state in order to identify opportunities for social change (Fleming 2021).

Methodology

Given the author is a trained facilitator of the Thinking Environment this is a work-based piece of small-scale social research. Further, as the study is to apply the Thinking Environment as an interactive and immersive experience in team meetings, the findings will help further the author's practice in the field of leadership and team development, it is considered action research as described by Denscombe (2014).

In light of the subjective nature of the topic, and its exploration of a potential causal relationship between the Thinking Environment and psychological safety in a team meeting setting, the author has applied a case study approach which aligns with Denscombe's guidance (2014) for small-scale research. Considering Crowe et al. (2011), as the study is not on a particular phenomenon as would be the case in an intrinsic study, but rather exploring the 'typical' case of the team meeting, it is instrumental in nature. In addition, heeding Crowe et al. (2011), given the wide range of potential factors that could influence the process, the author has also opted for a collective case study comprising three teams to provide a richer data set for analysis and comparison.

Finally, in line with the underlying ontology, the study is phenomenological in nature, seeking to understand the perspective of each individual, and as far as possible, to view the experience through their eyes.

Taken from the author's research proposal (Britz 2023a), Figure 4.1 below provides an overview of how the methodology outlined above will help address the research questions.

Research strategy	Justification
The case study approach, widely used in small-scale social research seeks to explore in-depth one, or a few elements of a particular phenomenon. The aim is to gather insights from study of that specific element with potential for broader implication. In particular, case studies explore relationships and processes in social settings and the interplay of elements present in that situation.	A case study approach will explore the specifics mentioned in the overarching question: <i>How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?</i> It will examine a specific situation that is a common phenomenon in the workplace, ie team meetings, with the aim of understanding the effect of the Thinking Environment on participants in that situation. It is concerned with exploring how the relationships between participants shift as a result of the process applied.
Action research is focussed on addressing issues and finding solutions in the 'real world' and is often used in small-scale social research and to help further professional development. It is also committed to incorporating the findings to become a cycle of research, often encouraging the participants to be involved in the design and implementation of the research rather than subjects of it.	An action research approach will help address the research questions: <i>How effectively can the Thinking Environment approach be applied as a live learning experience in a team meeting setting?</i> <i>To what extent can the Thinking Environment help build psychological safety in a team meeting setting?</i> The research seeks to help organisations make progress in addressing the challenge of embracing diversity and nurturing high performing team.
Phenomenology seeks to study the subjective experience of a participant and understand a situation through their eyes.	A Phenomenological approach will help answer the research questions: <i>What is the perceived impact of the Thinking Environment on individual thinking and action?</i> <i>What is the perceived impact of the Thinking Environment on collective thinking and action?</i> <i>What is the experience of the team, the individual and the researcher in this process?</i> This approach is selected in recognition of the highly subjective nature of the study and seeks to consciously consider the perspectives of the participants with their unique intersectional identities and how these will each be different from each other and the researcher.

Figure 4.1: The research methodology supporting the research questions (Britz 2023a)

In addition to the considerations shown in Figure 4.1, the author was conscious of the subjective and personal nature of the research content, and the diversity and intersectionality at play in the teams including that of indigenous heritage. The author believed it important to select an ontology and methodology that fully respected and honoured the content. In researching different methodologies, and considering the intersectionality of participants, including that of indigenous heritage, the author explored some of the theory focussed on decolonizing research such as the work of Smith (2022) and Archibald et al. (2021). A framework for decolonizing research that Archibald et al. (2021) developed resonated, with its emphasis on honouring the participant's subjective content through respect, reverence, reciprocity and responsibility. While the author in no way presumes to be equipped to conduct indigenous research, the intention is to apply

methodologies that provide appropriate space, respect and safety for participants.

Methods

While the subjective nature of the topic lends itself to qualitative data collection, a collective case study will enable a comparison of the research across different groups. In addition, as the research explores whether the Thinking Environment can help build psychological safety in a team meeting setting, there is a need to measure pre- and post- intervention to evaluate results. Therefore a mixed approach of qualitative and quantitative was selected.

The data collection methods comprise an online survey and qualitative interview before, and after, the research intervention. In addition, participants were invited to provide their reflections at each stage of the research activity, and the author conducted reflection throughout the research process.

The research intervention activity itself involved three stages:

First stage: the author observing a typical team meeting of each group.

Second stage: the author facilitates a series of up to four team meetings applying the Thinking Environment Transforming Meetings process.

The choice of intervention with the author facilitating team meetings applying the Thinking Environment is informed by the intention for action research. As a facilitator of the Thinking Environment, as well as other team and leadership development activities, the author is witness to the increasing time pressure teams are under, and how time 'out of work' in learning and development activities can be challenging, especially for an entire time at the same time. The Thinking Environment is ordinarily 'taught' through experiential training in a workshop setting. In this format, it is subject to the same risk as many other learning and development activities, the challenge of applying and embedding the learning back in the learner's daily activities. The author wanted to test the possibility of delivering the Thinking Environment as a live and immersive learning experience within the very operating environment a team would apply it in themselves.

The Thinking Environment Transforming Meetings process outlined in Figure 4.2 (Time to Think 2021) below was used in the intervention.

Elements of the Thinking Environment Transforming Meetings process
Developing the agenda – considering what the desired outcome of the meeting is, and from there shaping the agenda items in the form of questions that help frame the discussion and identifying which building blocks of the Thinking Environment will best support the achievement of that outcome
Rounds – opening and closing the meetings with an Opening and Closing round that is a positively framed question. The group move methodically ‘around the table’ with everyone having an opportunity to speak without interruption. If meeting virtually this is done using a pre-designed and shared ‘virtual table’. Rounds can also be used to open discussion on a particular topic and also used as a ‘Freshest Thinking Round’ instead of a report-back or debrief.
Open discussion – a more free-flowing discussion, often following an initial Round.
Thinking Pairs – when a team is split into pairs to each take a turn sharing their thinking on a topic uninterrupted.
Dialogue – when a team is split into pairs for free-flowing dialogue (rather than Thinking Pairs).

Figure 4.2: Elements of the Thinking Environment Transforming Meetings process
(adapted from Time to Think Facilitator Training Materials 2021)

In addition to the ‘building blocks’ outlined in Figure 2.6, Figure 4.2 above includes the use of questions to shape the agenda. Underpinning the process, the Ten Components of the Thinking Environment, as shown in Figure 2.5. were provided to participants ahead of the research and reminded of them at each meeting.

Third stage: the author steps back into observer mode for the fifth meeting where participants apply the Thinking Environment independently.

The author attends all meetings remotely via Teams to ensure a consistent experience of the author.

Measures

The pre- and post-intervention surveys used a variation on Edmundson’s 7- point scale test for psychological Safety (1999), shown in Appendix B. In addition, participants were asked to evaluate the degree to which they experienced the presence of the Ten Components of the Thinking Environment in their team meetings, and the quality of their individual and team thinking in team meetings. Further questions in the pre-intervention survey sought to identify the influencers of participant’s psychological safety in society, and in their broader organisation (outside of their immediate team).

The pre-intervention interview included a description of identity, and intersectionality, inviting them to share some of the elements of their identity present and important to them. The pre- and post- intervention interview sought more depth to the survey questions on difference and the quality of individual and team thinking shown in Appendix C.

Research Participants

Three teams were identified and agreed to participate in the study. Their selection provided variety in team composition, function, diversity and location as shown in Figure 4.3 below.

The participating teams	
Group 1: The Rio Tinto Copper, Growth & Development team.	A highly culturally diverse group of individuals situated across multiple locations. Most team interaction is conducted virtually and each is physically working in an environment of cultural difference. There is also a variation in age, gender, education and work experience.
Group 2: The Richards Bay Minerals Communities & Social Performance team	A site-based co-located team within a subsidiary of Rio Tinto and based in South Africa. Team meetings are in person or remote – for the purposes of this research the team chose to meet remotely. All team members are from the same region however there is diversity in tribalism, gender, age, education and experience.
Group 3: A team from a New Zealand government agency	Situated across two locations with a mix of co-located in person and all-team virtual meetings. There is a mix of cultural heritage, indigenous identity, however with a dominant national culture. There is a range of age, gender and education.

Figure 4.3: The Participating Teams (Britz 2023b)

As shown in Figure 4.3 above, two teams are from Rio Tinto plc, a multi-national organisation with over 40 000 people across 40 countries worldwide. Globalisation and intersectionality in the workplace are strongly present factors, and the organisation has expressed a commitment to increasing the diversity of its workforce and driving a culture of greater inclusion where “all voices are heard, all cultures respected” (Rio Tinto 2023). While the teams are from the same ‘Group’, they are in different geographies, have different functions and organisational structures.

The third team is from a New Zealand government agency that has also expressed commitment to growing diversity across the organisation, enabling a culture of inclusion.

Ethical Considerations and Risk Mitigation

The author identified five main ethical considerations for this study.

1. To protect the psychological safety and well-being of participants through the study

In line with the University of Wales Trinity Saint David (UWTSD) code of ethics (UWTSD 2024) and the author's own practice based on the International Coaching Federation's (ICF) code of ethics (ICF 2024), ensuring the well-being of all participants is of prime importance. Given the topic of the study itself, there is even more focus on the commitment to provide a safe space for participants.

Three main forms of mitigation will be taken: a context setting call held with each team providing an overview of the research, its intent and what would be expected of them; a participant information and consent form to indicate their preferred level of participation ahead of the study; a reminder for participants at the start of every meeting of their autonomy in the process and their right to step off the study at any point should they not feel comfortable.

2. Confidentiality of the business information

Given the research occurs within the teams' usual team meetings, business content will be discussed, some of which might possibly be sensitive. The author will offer to sign an NDA and the meetings won't be recorded.

3. Confidentiality of the personal perspectives that will be collected from the participants

As stipulated by UWTSD in their code of ethics (UWTSD 2024) all personal information will be gathered, stored and disposed of in line with GDPR principles included in the author's research proposal as Appendix D (GDPR 2023). Data keys will be used, separating personal information from the data, which will be stored securely, and all personal information will be destroyed upon completion of the research project. While the research will be conducted with participants in different jurisdictions, no data will be transferred across borders, rather, all data will be gathered and stored in New Zealand where the author is located.

4. Respecting the cultural practices of participants

Given the research will be conducted with a diverse group of people, it is important to recognise and honour their individual perspectives, heritage and lived experience such as honoring te tiriti o Waitangi in New Zealand (hrc 2023), and being sensitive to the trauma of social and racial injustice that has, and continues to be, part of the lived experience for many South Africans, First Nations Australians and Māori. Approval from the Ethics Committee of

the New Zealand government agency was also obtained (Appendix F) and, as part of that process, the research proposal was assessed by Māori and Pacifica cultural advisors.

5. Implication of being an insider researcher and the potential impact on the research process and results

As Costley et al. (2010) explore, there are several implications and potential risks that need to be considered when conducting insider research. One is that the research is influenced by any pre-existing relationships between the research and participants. While there has been previous interaction with some of the participants, the use of the participant consent form, as well as the reminder at the start of each meeting, is intended to create clear boundaries for the purposes of the research.

Another consideration is that the author is actively involved in the research activity itself, rather than pure observation. The author has opted to incorporate this into the research through auto-ethnographic self-reflection. In addition, participants are invited to share their own reflections after each meeting. This feeds into the action research approach as it is the combined experience of the author and participants that will inform any adjustments to the research activity and ultimately back into the author's practice.

5. FINDINGS AND DISCUSSION

Participation

While the three team leaders all agreed to the research, in line with ethical practice as outlined in the section above, it was important, particularly given the nature of the topic, to ensure that individuals themselves were informed and willing participants and had the choice to opt out of any element at any time.

Figure 5.1 below provides an overview of the participation of the three groups across the period of the research.

	Total in team	Participated in pre-intervention quantitative survey	Participated in pre-intervention qualitative interview	Participated in post-intervention quantitative survey	Participated in post-intervention qualitative interview	Observation of team meeting prior to intervention	Intervention - Application of Thinking Environment in team meetings	Observation of team meeting post intervention
Group 1	10	8	10	6	3	Complete	4	Due to competing priorities a number of the meetings were rescheduled delaying research, and impacted ability to do observation of final session.
Group 2	7	7	7	7	7	Complete	3 One meeting was cancelled due to a team emergency, only three interventions could be conducted.	Complete
Group 3	13	11	10	10	9	Complete	4	Complete

Figure 5.1: Participation across research groups (Britz 2023b)

Figure 5.1 above shows a variation in team attendance. The author views this as a living example of teams operating in a dynamic and changing environment that influence their individual or collective attendance of meetings booked including, leave, changes to role, or external operational demands.

As reflected in the numbers for Group one shown in Figure 5.1 above, one individual joined the team temporarily post the pre-intervention survey, participated in the pre-intervention interview but had left by the time of the post-intervention data gathering. The author however considered their views still helpful as they might provide observations as a fresh member of team. A further influence of Group one's participation was individuals who were on leave or unavailable due to work travel over the period of post-intervention data gathering. For Group three, two individuals opted to not participate in data gathering but agreed to participate in the meetings. One individual didn't complete the pre-intervention data gathering before the research intervention commenced. As such, they didn't do the post-intervention quantitative survey but did do the post-intervention qualitative interview. Further, two individuals were on leave over the time of the post-intervention interviews.

Given the size of the teams and the commitment to protecting participant confidentiality, the findings and discussion of the research do not explore the differences between the groups. Rather, analysis was conducted looking across the three teams providing a 'meta' view for consideration.

Findings on the Primary Research Questions

The findings focus first on the primary research questions, that of exploring to what extent the Thinking Environment can help build psychological safety and improve individual and collective thinking and action in a team meeting setting.

The qualitative interview data gathered pre-, and post-, the research intervention, as well as the author's ethnographic reflections, were reviewed to identify key themes. This is followed by a summarised view of the quantitative pre-, and post-, results.

Key themes from the qualitative data and ethnographic research

Five key themes emerged across the three groups namely, varying levels of awareness of 'difference', the role of the leader, the influence of time and the meeting format, the transactional nature of interactions, and varying presence of shared 'voice' in the meeting space.

Awareness of 'difference'

As outlined earlier, with globalisation, workplaces are navigating increasing degrees of diversity and intersectionality. As this concept of 'difference' is present in the work of both Edmundson (2019), and Kline (2020), the author considered it important to explore with participants their own layers of identity and intersectionality present for them, their awareness of 'difference' in their teams, and their perceived ability to be themselves in team meetings.

The identity elements that emerged varied across the teams however the most frequently mentioned were gender, age, education, culture, heritage, professional experience, and upbringing.

The author found that those individuals who appeared to have a deeper awareness of the different elements of their identity and the intersectionality between them were also individuals who identified with indigenous or non-Western heritage. A number shared having grappled with the intersectionality of the influence of their heritage, and the environments of their professions, at times causing a feeling of 'otherness'. One participant reflected...

"I've always been a minority in whatever field I've been, I guess we will never be very heavily represented in whatever field that is, and whatever profession that is, and whether that's the corporate or any other aspect of it. But I think that's why it's been a big factor for me, the cultural barrier, and I guess, the way we intersect, the way I am interpreted and the way I communicate with others."

The strongest recognition of intersectionality referenced were by women with indigenous or non-Western heritage, navigating and challenging the traditional expectations of women in

their culture, as well as racial differences in society. This is reflected in this participant's comment ...

"Culture, it's where I come from, how my ancestors lived, it has shaped the way I am today. How I grew up under those traditions. Growing up in a society, being taught respect, being taught differently from your brother. The expectations from society when a woman grows up to a certain age, things like getting married, having a child, going to school, all of those things, I think they do influence how you look at life, the decisions you take later on. And then going into race, I believe. We may not, you know, we can say we are all equal, but I do know I always consider race for example, in professional settings, or in perceptions around you know, being a black woman at this age. So it does influence my decisions at some point."

It was the author's observation that the majority of white, Western individuals mainly identified themselves through their age, gender, profession and education with little mention of culture or heritage influencing their identity. However, some individuals, while identifying from European heritage, shared how, through their lived experience, had been exposed to a range of cultures and ways of life and felt this has shaped their worldview. For example, one participant shared...

"Over the years, I've actively worked at onboarding those perspectives on minority groups, disenfranchised people, gender diversity, sexual diversity."

The author noticed what appeared to be a deeper sense of cultural awareness and sensitivity to the differences existing in the teams and the experiences of others. This echoes the work of Plaister-Ten (2013) who maintain individuals who experienced a significant event, or were exposed to cultures developed a 'global mindset' that typified deeper consciousness of the diversity of lived experience.

The post-intervention interviews did however indicate that a shift in the awareness of diversity and intersectionality in the team meetings as shown in Figure 5.2 below.

"I think we have definitely improved. We're all now cognizant of a little bit more diversity."

"I think for me that, you know, the intersectionality. And I think, right at the beginning, I think for me, really sets that tone and analytics, you select which tone you bring to the meeting. And I think that's been a real strong point where we talk about everyone coming from a different culture, not even culture, but different group."

"We are using the diversity of the team more to deal with issues and questions on moving things forward. These are very different conversation that starting to develop in the team about views, perspectives, background experience, strengths, weaknesses out that's coming into the space where we talk about a problem that needs to be solved and who's going to work on the problem being solved."

**Figure 5.2: Participant interview quotes on identity and intersectionality
(Britz 2023b)**

The deepening of awareness as indicated in Figure 5.2 above, appeared to occur for both individuals with indigenous heritage, as well as individuals with European heritage. It was the author's observation that the research process enquiring about identity prompted reflection amongst participants which was then deepened through the Thinking Environment process, which actively welcomes the Component of Difference.

The role of the leader

As mentioned, Edmundson (2019) emphasises the influence a leader has on the psychological safety of a team. While the author did not overtly enquire about their leader, in working with the three teams, the author noticed the influence of the leader manifest in different ways.

With one of the groups, the leader appeared to be very present in the minds of the team members. The pre-intervention interviews included reference to a reticence to speak up in meetings as well as perception of varying degrees in familiarity influencing the leader-team dynamics. Examples of comments shared are shown in Figure 5.3 below.

"I don't always feel safe and comfortable on those calls, I sometimes feel like I have to, you know, prove or, you know, prove myself to [leader]."

"My observation of the team is that there's been a few new people that are clearly seen to be thinking differently. But then their views are not really the views that are accepted. It's nearly like, right, you've got a view. That's good. But you need to think the way the team thinks, you know what I mean, it's weird. It's not, it's not an obvious thing. It's not deliberate. It's like great that you think like that, but we need to think the way [leader] thinks."

"Some of the team members don't feel like they're part of that 'purple circle', and therefore, it creates this divide between the people who are willing to talk and the people who aren't willing to talk."

**Figure 5.3: Participant interview quotes mentioning their leader - part one
(Britz 2023b)**

Figure 5.3 above shows what appears to be a reticence to speak one's mind, and also, the perception of a 'tiering' of familiarity with the leader within the team.

In the intervention stage of the research the author noted that the leader was only intermittently present for the meetings and the team's level of participation and ease of independent thinking appeared to vary based on the leader's attendance.

However, in the post-intervention intervention interviews, there does appear to be a small shift from being very focussed on the leader to that of the wider team as shown in the comments in Figure 5.4 below.

"I also get the sense that everybody's getting more comfortable pushing back on [leader] and against one another as well also, I think it's starting to feel like a team that's starting to hang together."

"I do see a slight shift in terms of people delicately offering up their own thinking on a situation, I think people are still very conscious of jumping in, I think there's a big dynamic between if the boss is there, and if the boss isn't. If the boss is there, I will want to showcase how intelligent I am. Whereas, if the boss wasn't there, it becomes more of equal level discussion."

**Figure 5.4: Participant interview quotes mentioning their leader - part two
(Britz 2023b)**

The comments in Figure 5.4 above indicate a gradual increasing of individuals sharing their thinking with the team, however, the leader's presence remained a strong influence.

The influence of the leader was referenced by another of the teams but this time in connection with their encouragement of open dialogue and creating an environment for people to feel they can be themselves as shown in Figure 5.5 below.

"We truly have amazing leaders. They are amazing in the sense that they truly want to hear what we think. And they encourage it, you know."

"It's as a result of the support we're getting from our leaders and the fact that ... we truly are allowed to be."

**Figure 5.5: Participant interview quotes mentioning their leader – part three
(Britz 2023b)**

Reflecting on comments such as those in Figure 5.5, and the author's observation, the leader actively encouraged all members of the team to participate in the team meetings, and the team members themselves appeared comfortable to voice different opinions. In reflecting on the different styles of leadership observed, one difference the author noticed is that with the second group, the leaders would allow more time for an individual to share their perspective, whereas with the first team, the leader would very quickly move into sharing their own views. This would correlate with Edmundson's guidance (2019) that a leader should invite participation through questioning and listening.

Overall, the influence of the leader on a team's psychological safety as described by Edmundson (2019) and Brown (2018) was visible through the perceptions of the teams on their comfort to speak up.

Time and the meeting format

A significant theme that emerged in the research was the influence of 'time' and the meeting format itself. Figure 5.6 below outlines the types of meeting structures across the three teams all of which varied in cadence, length, and structure.

	Frequency of meetings	Involvement in agenda preparation
Group 1	• Every two weeks (although frequently cancelled due to competing priorities). • Meeting was in two parts – first was a 30-minute check-in, second part was 45 minutes of deeper project update with smaller group of individuals. • Majority of participants joined virtually, however at times subset of individuals would join in person together.	• Author worked with same two individuals to prepare the agenda for each meeting using the Thinking Environment meeting structure.
Group 2	• Two hours monthly. • Whole team would join virtually.	• Each meeting a different member of the team was nominated by the leader to lead the meeting. The author would work with the individual to shape the agenda using the Thinking Environment meeting structure.
Group 3	• 90-minute weekly. • Team split across two locations, with majority in one location, two individuals from the second location. Some individuals would join virtually when working from home.	• Each meeting a different member of the team was nominated by the leader to lead the meeting. The author would work with the individual to shape the agenda using the Thinking Environment meeting structure.

Figure 5.6: Meeting structure and team involvement across research groups (Britz 2023a)

It is the author's view that the application of the Thinking Environment Transforming Meetings process to the meeting format, and the level of team member involvement in the preparation, and running, of the meetings as shown in Figure 5.6 above, were two key influences on the overall research findings.

While all three teams' meetings followed different cadences, lengths, structures and agenda formats, in the pre-intervention observation of a 'normal' meeting, the author noted that all three teams found time a constraint. Team members often joined the meeting with a sense of rush and pressure and there was a tension between the time available and the content to cover. This was echoed in the pre-intervention interviews with some quotes shown in Figure 5.7 below.

"Your life is all about meetings ... how do we give time to transition? Okay, I've just come out of a granular meeting, but now I need to talk about all my team engagements, that's quite a hard transition, if you've got 30 seconds between meetings to get your head into the right spot."

"I don't think there's the appropriate time given to have a conversation to really explore things like there's barely enough time to get through the content in terms of just updates."

"We suffer from lack of time spent on stuff like this. And we also suffer from poor organisation and when I say poor organisation, I mean, meetings cancelled or changed at the last minute."

"I can see some people and even myself we maybe don't have time on agendas sometimes to enable the robust discussion, or stuff has only been landed with us just before the meeting, so we haven't had time to have our thoughts ready."

"You can often see that some of the team members are distracted. And they are not fully present in the room, whether they're busy answering an urgent email or something like that, so that happens quite a lot. The other thing I can't remember which element it was, is there never seems to be enough time to really get into issues. Everything always feels rushed."

"When you're on a call with your team and 80% of them have their cameras off it makes me think, well, are you actually listening? Or are you just waiting to speak, and you're not actually actively engaged in the content from your peers. I know they're all probably just doing something else, therefore that that that, to me, impacts the level of thinking."

"Nine out of 10 people have cameras off. I know, I'm not innocent in all of this. We have all gotten into the habit of calling into meetings and doing other stuff. Background and with cameras off, it suggests to me that people are doing that until such time it's their turn. I think attention that some basic pieces that suggests that we're not bringing our full attention to it."

**Figure 5.7: Participant interview quotes on time – part one
(Britz 2023b)**

As indicated in Figure 5.7 above, while all three teams utilised variations of an agenda, the format didn't appear to make space for fulsome discussion, and often finished with outstanding agenda items and some individuals not having spoken at all. This echoes Lehmann-Willenbrock, Allen and Van Vugt's (2020) observation that in the modern-day workplace, there is a proliferation of meetings but often without a clear purpose, and satisfactory outcome.

In addition, with the meetings being mostly virtual, several participants would have their cameras off, and this was reported to have a detrimental impact on impact on team participation and trust. This is an example of one of the challenges of maintaining meaningful

connection for teams in a post-pandemic and technologically connected world that Reuil (2022) speaks of in her paper calling for greater intercultural skills with the rise of remote working.

In applying the Thinking Environment Transforming Meetings process one of the first steps occurred ahead of the meeting, that of shaping and sharing the agenda, each item structured as a question. This was in line with Kline's (2015) belief that the mind works best in the presence of a question. In addition, the 'building blocks' used to structure the meeting were chosen based on the need of each agenda item and appeared to create an environment of space and ease for the discussions. The reminders to embody the Components encouraged participants to give attention and appreciation including by keeping cameras on, and if that wasn't possible, to use the Component of information to clarify.

The post-intervention interviews indicated the use of the Thinking Environment had a marked impact on participant experience of the team meetings as shown by a selection of comments shared in Figure 5.8 below.

"We're starting to get into the space now we're really threatening to start using the time to solve problems and talk through problems that might exist in one part or another part of the team."

"I'm not seeing as much passive aggressive behaviour. When things go against what somebody believes is the answer that we should be pursuing. There's definitely an improvement in people staying engaged or not checking out."

"I think the big thing for me from it is the importance of pace and slowing down."

"I think just the way of structuring our meetings around the table, you know, the sort of rules of engagement around no one speaks twice to everyone spoken once etcetera is a good tool to do that."

"I noticed a heightened level of attention. I think there was a heightened consciousness of the process from my colleagues, and a conscious delving into self and issues...I felt that this was different, and I felt that there was a better level of preparation from everyone in terms of the level of concentration that's needed, and the level of participation"

"The Thinking Environment has enabled the team to share more and gotten better outcomes by asking questions and listening more."

"Evoking critical thinking in discussions, giving room to produce new ideas"

"Create a good listening environment for different perspectives to solve problem with active participation in constructive discussion."

Figure 5.8: Participant interview quotes on time – part two
(Britz 2023b)

While overall feedback indicated a positive shift for participants, one individual shared the view

"I don't think that our meetings or the underlying way in which work is done in the team allows the thinking environment to make a difference in our meetings."

The influence of the broader working environment and underlying culture of the appear to be a form of interruption in this instance, correlating with the organisational culture research of the influence of culture on individual behaviours (Cotter-Lockard 2016, Carvalho et al. 2019, Hald, Gillespie and Reader 2020, Zagaria 2021).

Transactional vs relational

Building on the factors of time, and structure of the meeting itself, another theme that emerged was the strong transactional nature of the meetings. With the time pressures described above, it appeared that the teams tended to focus on the actions, outputs and artefacts with little to no relational space. This was reflected in comments shared during the pre-intervention interviews, some of which are shown in Figure 5.9 below.

"I kind of feel like well, if others don't want to feel like this is a meeting I want to come to then it's nearly like, well, I don't want to prolong people's time on by the meeting in the meeting by asking questions by being you know, I want it to just end because everyone wants it to end."

"I maintain one of the biggest challenges we have, in organisations like this is we don't have enough time to just talk and communicate."

"The deliverables that are expected, just push you to comply to this, let me comply to that. There'll be the audit now. There will be the report. Now there will be a session to say where we are."

"Because our meetings are transactional, it's all about the numbers. It's all about the processes, the improvements. There's nothing is no people factor."

"If I say team as in all of us, including me, then it probably wouldn't be high quality thinking I'd say, because there are people like me who are more on the emotional feeling side. Yeah. For me, I don't think I think fully and with quality. It's like I'm present, but I'm, you know, maybe looking out the window."

"I have learned over the last 12 months, sometimes you just keep your mouth shut. And you just get keep going, keep going forward."

"I just don't find it in an environment where people would readily want to say, Hey, this is for us. What do we want out of it? Yeah, it's quite process-driven and just seems to be to be historical. It's always been done so it always will be done."

**Figure 5.9: Participant interview quotes reflecting transactional nature of meetings
(Britz 2023b)**

The comments in Figure 5.9 above correlate with Lehmann-Willenbrock, Allen and Van Vugt's (2020) observation that the most common purpose of meetings in the modern-day world is for information sharing and decision-making. However, they also reflect on how ancestral group gatherings also importantly incorporated social elements that nurtured social connections, and interdependencies, and it is their recommendation that more time, and space, is made for this in the meetings of workplace (Lehmann-Willenbrock, Allen and Van Vugt, 2020).

Similarly, Lee and Kent (2023) in their programme, 'The Neuroscience of Coaching' explain how the human brain is wired to be social and emphasise the importance of building social connections to support learning and mental resilience. Paul (2021) describes this as 'social engagement' in her book, 'The Extended Mind', where she shares the observations of Carl Wieman around the power of learning within peer groups, and that "social interaction appeared to be an essential facilitator of intelligent thought" (2021, pg993).

The author noticed that in the team meetings, there was such a focus on 'getting the job done' that little, to no time, or space, was being made for the 'whole brain' of an individual. Kline (2020) speaks of the importance of inviting a person's full self into a space in order to think with quality. The Transforming meetings process aims to support this process with the use of the Appreciative Opening and Closing Rounds as well as Information Round, which all focus on inviting a participant to bring their full selves into the discussion.

In the book 'Brains Inspiring Businesses for Leaders', Kapai (2024) shares a series of examples where the Thinking Environment has been applied in organisations, and describes how it can nurture an integration of energy, information and relationships. Following their experience of the Thinking Environment applied in the intervention, the author noted a shift in participant perspectives during the post-intervention interviews as seen in the comments in Figure 5.10 below.

I've seen things happen. It is important in your meetings to bring all these issues, share with your colleagues, share help and guidance, right, because we are also called leaders, although we've got our leaders, but in our own little space are also leaders of our own, you must also meet other colleagues or assist them as well."

"Well, I consider that the value of people's experience in the team and with where they come from, what have they learned, being in conversations with some of our colleagues, you get to know them at a deeper level."

"I have noticed that I now actually take the time to listen to people. Not with intention to respond, but to just listen. And you find that in the quietness you, I see a lot of things."

"We allow ourselves to be expressive both on things we're not happy with, but also sharing each other's sympathising with each other where things aren't, aren't going well, we've got challenges in our life. And, and you see that in the rounds where we're talking about our personal life, or if there's something that's going on. And I've and I found that I was able to do that in another meeting that I had with some of the people from our leadership team, where I had some things going on at home. And I was able to start the meeting with that I need to get this off my chest. And I thought that's been a, that's been a helpful thing."

Figure 5.10: Participant interview quotes reflecting increase of relational elements

It is the author's view that, by consciously creating the opportunity for a more relational space, that is focussed on the people rather than the outputs, that their engagement and quality of thinking, as well as 'being' with their peers, improved as was reflected in the comments above.

That said, an individual did make the comment

"There are parts I like, and parts I dislike. Genuinely the biggest notable difference is that it slowed down meetings a lot, and also in places stifled constructive discussion or parts where people might have logical interchanges. We did have people that spoke more because of it though, so there might be some hybrid that is more ideal."

It was the author's observation that the shift into a more relational space was a very different experience for some individuals. This was particularly noticeable about those individuals who, in the pre-intervention observation, and by their own admission as well as others in team, were used to being the more vocal participants.

A place for voice

Building on the themes of time, structure and balancing the transactional and relational nature of the meeting, a strong theme across all the groups was that of 'voice'.

Edmundson (2019) speaks of the importance of building the belief that 'voice' is welcome in building psychological safety. In the observation meeting, and pre-intervention interviews however, the author noted that there appeared to be an inequality in the share of voice among participants in the meeting. Through the interviews it emerged that there several reasons for individuals keeping quiet. As mentioned in the previous section one reason was their perception of their leader, another was time and sense of urgency. Three further potential factors that the author observed are communication styles, culture and power dynamics in the group.

For example, some individuals who identified as being more introverted spoke of keeping quiet while other more extroverted dominated as shown by this participant's comment ...

"I think one downfall is probably sometimes there might be one or two members that do dominate the conversation in those big group settings. So I think for some of us that are a bit more introverted there you know, that's probably the biggest thing to watch out for. Sometimes you have to really like, interrupt to get some airtime and sometimes it is, yeah, don't bother."

Culture, in particular, how the cultural norms and practices of some individuals come bear in the workplace setting, such as team meetings, was identified. One participant reflected on their own experience of this ...

"Growing up I've always been told, you have to stay quiet, you have to be you have to listen to everything, you're not allowed to, like, jump into it when other people are talking that sort of thing. Because it's considered quite rude in my, in my culture. So in meetings, so I tend to be quiet."

A third factor that the author believes influences the share of 'voice' are the power dynamics at play between the majority and the few. Figure 5.11 below provides some of the comments that pointed to this.

"It does feel like there are those that speak up, and those that don't, and so are the ones not speaking up by their silence, saying they agree. And we just don't know, because often you don't hear from some people in a meeting ever. And that's interesting in itself. But I think, you know, as a team, we came to a way of making decisions where it wasn't majority had to agree to something that was consensus of when we agreed 80% of people, then to agree something and the risk, then had to support that decision. Because there was a few times, especially when I first joined, where we were very diverse in our views and couldn't come to majority. And we continue to sometimes quite heated discussions on the difference and never got to a resolution. So, we came up as a team to this at the scene of people had to agree and it was good enough."

"So that and it's not from me when I thought about it, because firstly, I will open my mouth and raise the question or, you know, contribute. I'm very comfortable to do that. And meetings. That's more from some of the others in the team and why are we not hearing their voice as much? When I can you watch their body language can see that there's obviously something that they're questioning or not particularly happy about or want to, but they're not willing to talk for some reason."

"And I think if you're naturally quite a quiet person. Yeah. I think yeah, I think those meetings can be dominated by certain people. And maybe that maybe the quiet people are fine with that. They might be might like to be under the radar. That's perfectly fine. But I'd be worried if they if they feel uncomfortable."

Figure 5.11: Participant interview quotes reflecting 'voice' part one (Britz 2023b)

The author noticed reflected in Figure 5.11 above, an awareness of the inequality of voice not only by those who are quiet, but also in those with the dominant voices. However, there was no acknowledgement of efforts to address this imbalance.

In their work, 'Implicit voice theories: Taken-for-granted rules of self-censorship at work', Detert and Edmundson (2011) build on previous work on 'voice' in psychological safety, exploring what other factors might be present. One finding is that for some groups who, due to their minority in the group, or less dominant styles, have encountered the experience of not being able to share their voice to such a degree, that it becomes an implicit and almost unconscious expectation of a situation (Detert and Edmundson, 2011). It is the author's view that in some cases this is what was occurring in the meetings, where individuals both dominant, and quiet, were so accustomed to their 'roles' that it had become an established pattern, or even ritual of the meeting.

However, as indicated by the quotes in Figure 5.12 below, in the post-intervention interviews, there again appeared to be a shift in perspective with both those who had been

quieter, feeling more comfortable in sharing their voice, and a greater awareness of their ability to make space for those voices by the more dominant.

"I think I think I've improved because for many years, and I'm introvert so I don't normally give out easily, I would take time to get warmed up. But now, it's important for all of us to share our views. We are a team I need to know what is happening in my section in my area. I have to bring in my thoughts as well, because I have my thoughts."

"And I know the temptation and the inclination is always if you're in the leading role to come across as 'I've got an answer, the answers must be taken now'. And that's not my natural default. Anyway. The thinking environment has, has legitimised that for me to say it's actually correct to create spaces for people to input and just work with the idea before any finality"

"Those quieter participants get a chance to voice their opinions. And those who speak up more take time to listen to other opinions."

"When we create that thinking environment, there is value, I'm being recognised, I'm being invited. But I'm also expected to have a voice because voice is valued. So once all of those empowerment elements are in place, I just think that people then get to a state of mind, where there is much more inclination to talk with confidence to contribute, knowing that they are fully invited here. It is not by mistake."

Figure 5.12: Participant interview quotes reflecting 'voice' part two (Britz 2023b)

In particular, the fourth quote in Figure 5.12 above, reflected for the author the impact of creating a space where everyone's voice is not just welcomed, but that the individual feels valued for that voice.

Findings from the quantitative data

In addition to reviewing the collective case study qualitative research findings, the author also considered the quantitative survey data gathered from participants before, and after, the application of the Thinking Environment in the team meeting setting as the research intervention.

Combining the pre- and post- intervention quantitative survey data results the author used Power BI to compare the overall average of the psychological safety related questions, and the Thinking Environment questions, to identify any shift in perceptions as shown in Figure 5.13 below.

Composition and Overall Measures															
Overall				Group 1				Group 2				Group 3			
Ave. Duration in Team (yrs)				Ave. Duration in Team (yrs)				Ave. Duration in Team (yrs)				Ave. Duration in Team (yrs)			
2.42				1.39				4.03				2.25			
Ave. Psychological Safety Rating															
Pre-Intervention		Post-Intervention		Pre-Intervention		Post-Intervention		Pre-Intervention		Post-Intervention		Pre-Intervention		Post-Intervention	
3.78		4.01		3.50		3.67		3.94		4.14		3.90		4.11	
Standard deviation	0.49	0.48		0.47		0.47		0.38		0.43		0.50		0.42	
Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
2.83	4.58	3.17	5.00	3.00	4.25	3.17	4.58	3.42	4.42	3.33	4.67	2.83	4.58	3.58	5.00
Ave. Thinking Environment Rating															
Pre-Intervention		Post-Intervention		Pre-Intervention		Post-Intervention		Pre-Intervention		Post-Intervention		Pre-Intervention		Post-Intervention	
3.17		3.46		2.90		2.95		3.44		3.64		3.24		3.64	
Standard deviation	0.55	0.59		0.51		0.37		0.47		0.53		0.55		0.57	
Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
2.27	4.36	2.45	4.73	2.27	3.55	2.45	3.64	2.89	4.36	2.82	4.55	2.27	4.09	2.82	4.73

Figure 5.13: Overall average results for pre- and post- intervention surveys (Britz 2023b)

While small, the results in Figure 5.13 above do show a positive shift for both the average combined questions regarding the Thinking Environment, and the average combined questions regarding psychological safety. While it would be hoped that the Thinking Environment score would increase post application, given the teams hadn't been exposed to the approach before, the increase in psychological safety does appear to indicate a positive correlation between the application of the Thinking Environment, and an increase in psychological safety.

In addition, using Power BI, the author reviewed the pre-, and post-intervention quantitative data for any shift in response to the specific questions 'to what degree do you think you are able to think fully and with quality in your team meetings?', as shown in as shown in Figure 5.14a below.



Figure 5.14a: Pre- and post-intervention quantitative response to question 21 – to what degree do you think you are able to think fully and with quality in your team meetings? (Britz 2023b)

Figure 5.14a above shows the average responses for each group across the five-point scale (1, the lowest of the scale wasn't selected at all and so is not shown). The results appear to indicate that, overall, in applying the Thinking Environment, the perceived quality of individual thinking does improve.

Similarly, the author compared the pre-, and post-quantitative survey data for the question 'To what degree to you think the team is able to think fully and with quality in your team meetings?', as shown in Figure 5.14b below.

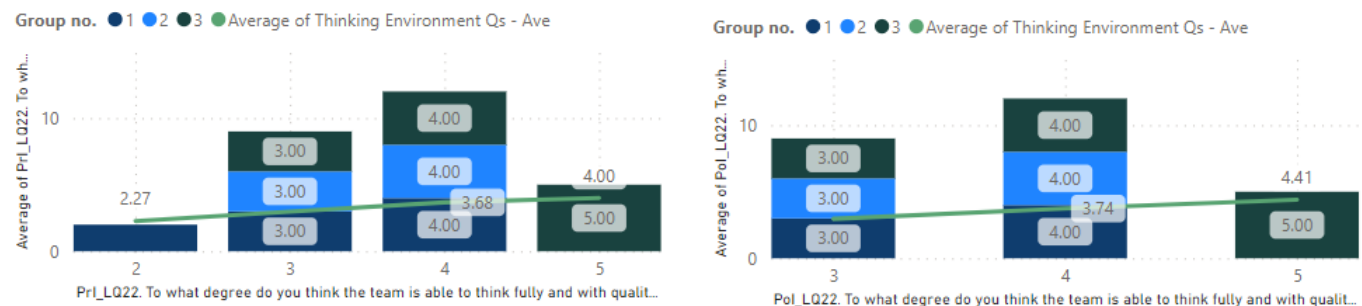


Figure 5.14b: Pre- and post-intervention quantitative response to question 22 – to what degree to do you think the team is able to think fully and with quality in your team meetings? (Britz 2023b)

Figure 5.14b above also shows a slightly positive increase in the perception of quality of team thinking when comparing pre-, to post-intervention survey responses with an increase from an overall 5 rating average of 4.00 to 4.41.

The author also used Power BI's key influencer analytics capability to explore the potential impact that the application of the Thinking Environment had on both psychological safety and the quality of individual and collective thinking.

Figure 5.15 below explored what happens to psychological safety and quality of individual thinking when there is an increase in the average overall response across the questions on the Thinking Environment.

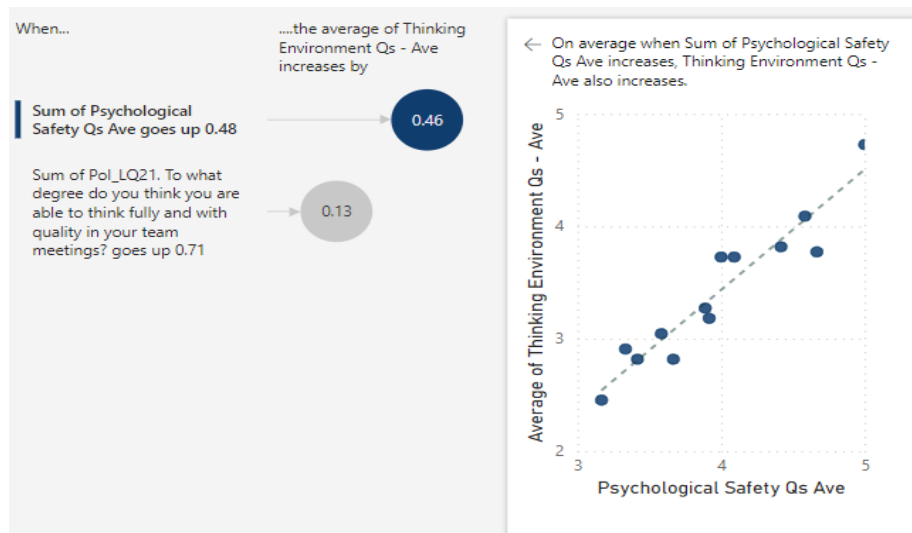


Figure 5.15: Post-intervention quantitative data measuring influence of the Thinking Environment on individual thinking (Britz 2023b)

The results in Figure 5.15 above, indicate that when there is an increase in the Thinking Environment questions there is a positive influence on both psychological safety, and the perception of the quality of individual thinking in a team meeting setting.

However, when applying the same key influencer question but in relation to the quality of collective thinking, no clear link with the Thinking Environment questions appeared.

This data, in conjunction with the qualitative interview data, does indicate that the application of the Thinking Environment did have a positive impact on both psychological safety in a team meeting setting, and the perceived positive impact on the quality of both individual, and team thinking. However, the shifts were small, and further research would be recommended to verify these findings.

Comparing the 'structures' themselves

The author also explored the guidance or "leadership tasks" Edmundson (2019, pg159) offers leaders to build psychological safety, and the elements of the Thinking Environment itself. Figure 5.16 below provides a summary of the similarities identified.

Leadership tasks for building psychological safety	Elements of the Thinking Environment
Set expectations about failure, uncertainty, and interdependence to clarify the need for voice	The 10 Components of the Thinking Environment
Ask good questions	The mind works best in the presence of a question. The Component of Incisive questions Structuring an agenda in the form of questions
Model intense listening	The Components of Attention and Encouragement Listening with full and generative attention to where the thinker will go next
Create forums for input	The 'building blocks'
Provide guidelines for discussion and Discuss, consider and brainstorm next steps	The Thinking Environment Transforming Meetings process The Component of Information
Acknowledge and thank	The Component of Appreciation

Figure 5.16: Leadership tasks for building psychological safety (Edmondson 2019, pg159) and elements of the Thinking Environment (Time to Think 2024).

As seen in Figure 5.16, there are several similarities between actions leaders are recommended to take, and the behaviours (Components) and structures of the Thinking Environment. Other than the leader's role in setting expectation for the team, Components of the Thinking Environment that do not appear to be reflected in Edmondson's leader toolkit (2019) are the Components of Feelings, Place, Equality, Ease, and Difference.

Findings for the Secondary Research Questions

The secondary research questions focus on the process of applying the Thinking Environment as a live learning experience in the team meeting, and consideration of the overall experience of the participants and researcher in the process.

In line with an action research approach, throughout the research intervention stage the author conducted auto-ethnographic self-reflection, and invited participants to provide feedback on their experiences.

The application of the Thinking Environment as a live learning experience was in keeping with the research favouring experiential learning as an alternative to traditional educational formats such as Tomkins and Ulus (2016) explored in their empirical study on Kolb's experiential learning approach. Similar to Tomkins and Ulus (2016), the author did notice the development of a more 'relationship-centred', versus 'student-centred', dynamic through the research process.

It was also observed that applying the learning in the 'real-world' team meeting setting reduced the author's ability to consciously create the type of reflective learning space considered key for introducing and building knowledge of the Thinking Environment. Rather, the author had to flex and adjust to external factors influencing the meeting space. In addition, due to these external factors, the author felt there wasn't complete consistency of learning experience across the groups.

Gathering feedback from the participants after the first session, it appeared that the format and ethos of the Thinking Environment was a very different experience for them. Some individuals immediately resonated with it, and others did admit to feeling some discomfort as the comments in Figure 5.17 below indicate.

"I think the approach did feel a bit uncomfortable to start with – partly because I don't know half the people and partly because we don't normally share feelings and personal information much in such forums. However, I thought it was very good to connect people and understand what people had going on and were focussed on / distracted by."

"I thought the session was great – it is the first time I can remember that we actually paused in a meeting to have a proper 'check-in' – I think that was what why some team members were a little dumbfounded and reluctant to share – focus is always on "performance, performance, delivery, delivery". I felt it was an excellent and refreshing change."

"A bit uncomfortable for people as it's very different, but I think it's great to challenge them... will be very interested to see how it goes."

Figure 5.17: Participant feedback on the research experience (Britz 2023b)

While there was some initial discomfort at the start as shown in Figure 5.17 above, as the sessions progressed it was the author's observation that so too did the teams' proficiency and comfort level increase. In addition, in keeping with action research, the feedback from participants enabled the author to make some adjustments to the process such as sharing the Opening Appreciative Round question ahead of time in the agenda, and combining the Opening Appreciative Round and Information Rounds to work within the time constraints.

Another observation was the positive impact of having rotating members of the team engage in deeper action learning by planning and chairing each meeting. One of the participants shared this reflection ...

“Probably the only thing was probably how I chaired the last meeting, which is quite difficult only because I think I was just trying to think about it like, you know, something different, it was just a different way of thinking, a different way of running things. And I think it does take a bit of time but that was probably the first time that we’ve actually gone about a different way of thinking. And I think it’s always going to be hard at the beginning, and kind of making sure that doesn’t stop us from giving it a try. And then sometimes you’ve got to go through that ugly stage. And I see the big advocate for changes.”

From an experiential learning perspective, this activity was true ‘on-the-job’ learning and, while most individuals did express some nervousness, the process helped more deeply embed the philosophy and practice of the Thinking Environment.

Discussion

How the Thinking Environment can help build psychological safety

Reflecting on the question, *‘To what extent can the Thinking Environment help build psychological safety in a team meeting setting?’*, the qualitative and quantitative data both pointed to the positive impact of the Thinking Environment on psychological safety in the team meeting setting. Further, what emerged was how the Thinking Environment could support the role of the leader in building psychological safety by providing the means for team members to play an active role in doing so themselves.

As seen in Figure 5.16, there are several similarities in the behaviours and actions to build psychological safety, however, in Edmundson’s case, these are specifically focussed on the leader. This research does concur with Edmundson that a leader’s behaviour does influence the degree of comfort, and ‘safety’ that an individual feels and therefore, how likely they are to speak up and share their views. However, the research also indicated that with the application of the Thinking Environment, the team were positively impacted by how they behaved with each other.

This influence of the group on the individual also emerged in the findings on ‘voice’. Edmundson suggested that by inviting participation, a leader can build “confidence that voice is welcome” (Edmundson 2019, pg158). This research indicated that ‘voice’ does appear to play an important role, however most comments referred to the behaviour of the group being the main influence in this factor.

Similarly, Edmundson refers specifically to leader behaviours including listening, acknowledgment and gratitude, and discussion (Edmundson 2019). While these are essential for a leader to model, the research found that the group's ease in sharing their thinking, their ability to listen attentively and engage in meaningful discussion was heavily influenced by the behaviours of those around them. This correlates with Kline's (2015) view that the biggest influence on the quality of our thinking is how those around us treat us while thinking. As one participant shared about using the Thinking Environment ...

"It's easy, you participate with ease. There's nothing forceful. You volunteer yourself, or the way that the meetings are flowing, you would want to contribute anyway. So yeah, I think level of participation was good. Everyone brought themselves on follow on. And it was really. It was a safe space, and we shared personal stuff. So yeah, I think the environment itself, I will conclude in saying that, being in a safe environment."

While Edmundson (2019) provides guidance to leaders on how to build psychological safety, there does not appear to be similar guidance for teams, however she does acknowledge that psychological safety should be built together. This idea of shared responsibility is seen in some of the evolving leadership models that have a more shared, collective or distributed approach as explored by Avolio et al. (2009) in their paper "Leadership: Current Theories, Research and Future Directions". Further, as Abramiuc and Popa (2021) discuss in their study "Rethinking leadership models after COVID-19", the workplace itself is a changing environment with remote working, greater employee self-management and empowerment. It is the author's view that increasingly, there is a need for a shared approach to building psychological safety. With the Thinking Environment, teams and leaders, can find that guidance, a philosophy, clear set of behaviours and practical 'building blocks' to help them create an environment of psychological safety together.

The influence of the Thinking Environment on the quality of thinking

In reflecting on the questions '*What is the perceived impact of the Thinking Environment on individual and collective thinking and action?*', the author refers again to the key themes that emerged in the qualitative interviews. What was noticed, is that a lack of awareness of 'difference', the pressures of time and constraints of the meeting format, behaviours that focussed on transactional interactions, and impacted sharing of 'voice' all appeared to contribute to a lack of 'ease' and safety. Kline (2020) describes 'interruption' as being an assault on a person's thinking, and discusses in her books the pervasiveness of interruption in today's world which she labels conformonomics, persuasion, polarization and digistracton. It is the author's observation that participants were experiencing repeated and ongoing forms

of interruption in the team meeting setting, including the feeling of not having a 'voice', blocking of their thinking.

In their paper, 'The Neuroscience of Coaching', Boyatzis and Jack (2018) explain how, when a person experiences the feeling of being excluded, the brain will register a similar pattern of activity to that of experiencing pain or fear. Boyatzis and Jack (2018) go on to suggest that providing a sense of connection and acceptance, not only helps people feel safe, but engages the pre-frontal cortex where clear thinking and innovation come from. In her book, "The Promise that Changes Everything: I will not interrupt", Kline (2020) describes her conversation with Dr Paul Brown, Faculty Professor at Monarch Business School where he said "the reason for this dependable quality of thinking is that generative attention, uncorrupted and sustained, calms the brain's amygdala, the emotional 'control centre' of the brain, producing hormones like serotonin and oxytocin. These hormones then 'bathe' the cortex, the cognitive 'control centre' of the brain, allowing a perfect interplay between these 'approach' hormones and cognition." (2020 pg33). It is a combination of the building block structures of the Transforming Meetings process, and the behaviours forming the 10 Components of the Thinking Environment that, when applied by individuals when together, such as in a team meeting setting, are able to create an environment for quality thinking. The concept of quality thinking being enhanced in a group setting is echoed by Paul (2021) who describes how cognitive scientists are now recognising that our ability to absorb, and store information, can be even greater when in groups, as we utilise the brain's social encoding practice to store information obtained socially.

One part of the question where the research was limited in its insights, was on the perceived impact the Thinking Environment has on individual and collective action. The qualitative interviews did not point to any particular findings on this point. Kline (2020) does maintain that the quality of every action is defined the quality of the thinking that comes first, so one could extrapolate that if there was a reported improvement in thinking that it would flow through into action. A similar perspective was shared by one participant

"It's funny how everything emanates from thinking that then there's other factors that are brought in, you know, just thinking that it's a thinking environment, then we get people to share, to open up more to participate, we get people to open up in terms of their personal lives, we get people to participate more, we get people to think more about a subject.

So when you think about it, that it all starts with saying that this is a thinking space. I'm thinking that everything comes from giving yourself time to reflect more, to think

more, to sit back to digest, to internalise everything before you action, before you could talk, before everything.”

However, this would be an area recommended for further research.

Creating spaces for psychological freedom

In considering the themes that emerged in the qualitative research, the awareness of ‘difference’ and a place for ‘voice’, the author believes there is a correlation with the Thinking Environment Component of Difference and ‘being accepted for being different’ as an element of psychological safety. Further, the author believes that these themes speak to the increasing complexity of diversity, identity and intersectionality present in the workplace today. The qualitative data points to a link between individuals who come from Indigenous cultures, or have experience of being a minority in a team, organisation or current society, and those who also spoke about not having equal share of ‘voice’. In other words, those who were more conscious of difference, also have the experience of ‘otherness’ and, for a range of reasons, have to work harder to share their voice as was shared by one participant ...

“I think back to my cultural upbringing and the way you get taught and cultural dynamics, completely different to the Western system, even the meeting systems. And if you don't have a good understanding of it, I look like a shy individual that doesn't like to pipe up in meetings. But in my culture, it's, it's always been, the elders will always be the ones to speak. And I think in our culture, the elders always speak, and you kind of take your lead from that. And, you know, for me, I think that's definitely a big one where it clashes up where my cultural identity doesn't fit in with the way society works for me. And so I think a lot of people that don't understand cultural aspect of it, we're often you know, they're perceive someone's personality as something completely different. Whereas the culture, like an example is eye contact. You're, you're in our culture, it's rude to make eye contact. But then you can completely go to an interview, and if people don't give you eye contact, people can turn around be like, Oh, he's really is quite rude. He doesn't want to look at me. But from a cultural perspective, for us, that's being that's not being rude. It's, actually being quite respectful. We're not doing eye contact, and you're kinda just so a lot of people perceive that as being rude or being submissive, or even being you know, calm, not confident, but that is about respecting our culture. So I think, and that's something I fight against every day. And that's why I guess for me, when you came and spoke, that was something that I guess for me, it was really important, because I

feel like, if you don't understand what's there, nothing will change. And I think for me, I've slowly started to change."

It was also the author's observation that, other than those who had developed more of a global mindset through their lived experience, the dominant members of the team also appeared to have less awareness of the presence of 'difference' or intersectionality in the team, or even themselves.

Edmundson (2019) has acknowledged that it is only recently that there has been increasing interest in exploring psychological safety in the context of diversity. It is the author's view that, given the proven importance of psychological safety for both well-being and performance, it stands to reason that it has an important role to play as part of the response to the changing macro-economic landscape, including the need to driver greater collaboration within society, and innovation in a competitive market.

To truly create spaces of psychological safety for those who have experienced marginalisation, the author argues that one needs to create a space that recognises their full selves. Similar to Kline's view (2020) of the Thinking Environment being a shared responsibility of a group, in "Readings for Diversity and Social Justice", Love (2018) explains the concept of liberatory consciousness where an individual is awakened to the inequality and social injustice that still exists in systems and institutions today. She states that a core component of liberatory consciousness is awareness, "deepening the capacity to notice, to give our attention to our daily lives, our language, our behaviours, and even our thoughts" (2018, pg560). With this awareness, an individual can take a shared responsibility to help effect positive social change, starting with how they show up in their own behaviours and interactions.

Through the research, the author observed an increased awareness among some of the participants of the 'difference' that exists, in particular, an increased awareness and appreciation of what that 'difference' might feel like for those who are not in the majority. With this awareness supported by the Components of the Thinking Environment, and the building blocks of the Transforming Meetings process, individuals are able to help create a space that is more welcoming and equal for all individuals, and in doing so those individuals feel an increased sense of ease and able to be themselves as shared by this participant ...

"I would be understood by some of my colleagues that are part of the thinking environment. So sharing what is in my mind, not worrying about filtering information, and what the next person would think, but I now understand the value of being yourself. I think there's power in each one of us. And that, that, was the culture that

was always promoted, but I've always said you know, it's fine if I don't say anything, some other people may take it otherwise, but knowing that it's, perfectly understood, I am now more, more confident to share my headspace at any time."

In this quote, the author sees a similarity to Kapai's (2024) conversation with Dr Brown and his concept of 'psychological freedom', which goes beyond psychological safety, to "the freedom to be wholly me" (2024, pg226). In Kapai's (2024) reflection on the word 'belonging' being formed of 'be' and 'longing', an individual longing to simply 'be', the author sees potential for how the Thinking Environment can help individuals create spaces where every person can simply 'be' themselves and in doing so, find belonging, and freedom, to think fully, and generatively.

From polarisation to connection

Another perspective of intersectionality that the research surfaced is how the Thinking Environment speaks to, and resonates with, several forms of Indigenous practices and wisdom. For example, Dadirri, is a word, concept and spiritual practice from the Ngan'gikurunggurr and Ngen'giwumirri languages of the Aboriginal peoples of the Daly River region (Northern Territory, Australia) and in part means "inner deep listening, quiet still awareness and waiting" (Miriam Rose Foundation 2024). The Thinking Environment deeply aligns with this practice, using the 10 Components of the Thinking environment to create a space of deep listening.

Similarly there is clear synergy between the Thinking Environment and the va/va'a/vaha, a pan-Pacific concept of the relational space within which all humans interact, and which nurtures "personal and collective well-being, and growth through knowledge generation, social action, and cultural transformation" (Tapasā 2024).

In Africa, the deep value and philosophy of 'Ubuntu' or 'humaneness' – I am because of who we all are (Stout-Rostron 2019). And in Zulu, the African language of one of the participating teams, there is a saying, "Injobo enhle ithungelwa ebandla" which directly translates to "A good lionskin is sewn in the company of others." The metaphoric meaning is that people perform better in whatever they are doing by seeking knowledge/information, and guidance from others (Britz 2023b). This congruency of the Thinking Environment with these traditional beliefs and practices was also recognised by some of the participants with one team exploring how they could utilise the Thinking Environment its interactions with external stakeholders and their community ...

“And just what you're saying there in terms of can they be influenced by what they think and the thought that comes to mind is and by how they are treated while they're thinking. And that feeling of being heard, respected, appreciated, while thinking what that will do for them. Yeah. And then it's collaborative. What we do while they're thinking,”

The author suggests that the Thinking Environment, with its Components that echo the practices of Indigenous wisdom, could be used as a bridge in meetings where potentially there may have been dynamic tension between Western systems and Indigenous ones. Kline (2019) speaks of the increasing polarisation within society, and suggests that it is not disagreement but rather disconnection, and is in itself a form of interruption to generative, quality thinking. The Thinking Environment could offer a means, a shared language, and set of behaviours, that helps overcome the polarisation so prevalent in today's society, and in doing so, help connect the richness of diverse thinking to help address the challenges of today's world.

The live learning experience

Reflecting on the auto-ethnographic, and participant feedback, it is the author's view that a learning experience that was 'relationship-centred' worked well in helping build the rapport needed for open discussions in the qualitative interview stage. This was particularly important given the ethical consideration of honouring each participant's subjective content. Further, with the author being involved in the research experience itself, the opportunity to actively role-model the Thinking Environment was even greater than if the more traditional dynamics of teacher-student were in place. This also correlates with Kline's explanation (2015) of the Thinking Environment as 'a way of being'. In this instance, it provided participants the opportunity to witness how the Thinking Environment can be embodied, even in an unpredictable 'real-world' environment.

That said, the author did find not having autonomy over the learning environment a challenge, in particular, as the experience was focussed on the application in a live team meeting, it did not provide opportunity in the group setting to invite active reflection on the learning process. While feedback was sought after each session, an important part of the Thinking Environment learning is having the opportunity to share one's 'freshest thinking' on the experience, and hear that of others. This correlates with the view of Cox et al. (2014) that key to adult learning is the process of reflection of what has been observed, or experienced. This was also reflected by one of the participants

“Reflecting on this, whether, if we could have had a bit more time focusing on why we’re doing this, each session”.

Building on the learnings of this action research, should the author have the opportunity to run the process with another team, it would be with the addition of a half-day workshop, providing the opportunity for some more conscious consideration of the Thinking Environment, and to build in conscious reflection time following the live learning experience.

While there is room for further improvement, what the author has noticed through all the research methods is that the participants underwent a process of unconscious learning through observation and lived experience. The realisation of this process of learning was shared by one of the participants in their final interview ...

“I wasn’t sure what the session would look like. And bearing in mind, the, the process that we have undertaken, you put me in a position where I needed to reflect, I wasn’t really analysing what we were doing, you know, along the way. So, what has tended to happen? Is that the things that you prompted us to do, we’re now becoming our way of doing things, of course, with our leaders, you know, and forcing some of them in the way that we are doing, but you are not realising that you are gradually shifting towards a certain way of doing things.”

Further, all three teams expressed the desire to continue applying the Thinking Environment in their team meetings.

6. CONCLUSION

Overall, results of the research indicate that when the Thinking Environment is applied in a team meeting setting, the psychological safety of that team increases, and that the perceived quality of thinking also increases.

Analysis of the findings presented five key themes: awareness of ‘difference’, the role of the leader, time and the meeting format, the transactional versus relational nature of meetings and the share of ‘voice’. In exploring these themes more deeply in the context of the original research aims, three core learnings emerged. The first, is how the Thinking Environment offers a means of supporting psychological safety by providing a shared set of behaviours

and structure for teams to use. This complements the guidance and emphasis that Edmundson puts on the role of the leader in building psychological safety.

Second, was affirmation of how the Thinking Environment can meaningfully help teams create spaces of ease free from the disruption, and assault of interruption to thinking caused by operating pressure and time constraints. This not only improves the quality of their thinking, but helps create a more relational space where 'difference' is welcomed.

The third learning was an observation that, with the resonance the Thinking Environment has with Indigenous wisdom, it offers a means to create environments where it is possible to bridge different worldviews to benefit from the richness of diverse thinking welcomed through equal share of 'voice'.

Reflecting on the research experience, what stands out for the author is how some of the themes that emerged, and which the Thinking Environment helped address, such as time and the constraints of the meeting format, were in themselves also challenges for the research process itself. The ethno-graphic reflection proved immensely valuable in processing the experience to ensure it did not interfere with the research or the experience of the participants. Through having to embody the Components of the Thinking Environment to 'hold the space' with much many forms of interruption present, the author has found their own understanding and appreciation of the Thinking Environment deepen significantly which will benefit their practice. Overall the author found the experience immensely enriching both personally and professionally.

In reviewing the research and the methodology, the author has identified several opportunities for further investigation. This case study involved three teams, while specifically selected to provide a range of team types and structures, it is still small in sample size, as is the size of the teams themselves.

To preserve the confidentiality of the participants the research took a more 'meta' approach looking at overall themes and insights that surfaced across all three teams. There wasn't any exploration into whether there is any influence through each team's role, location or broader organisational context, or comparison between the teams. In addition, as the focus was on the team environment the leader was not a specific area of exploration, however, as indicated, they do play a role in the team dynamics.

Further, the case study itself was conducted over a relatively short period of time and limited number of sessions, and follow-up exploration of how the teams have taken and if learning had continued to be applied was not in the scope of the research. A recommendation would be for future research to include in its design, expansion of the sample size to cover a

greater number of teams, and a combination of size teams, to run the study for a longer period of time, and include a follow-up session with the team. This would potentially provide even richer data to test the findings of this study. In addition, the study could be conducted by more than one researcher to test any differences through delivery of the intervention phase of the research.

Beyond building on the specific research of this study, the author also recommends further exploration of the use of the Thinking Environment as a means of bridging different cultural worldviews within meeting spaces to generate the type of thinking and resulting action so needed to address the challenges facing society today.

APPENDIX

Appendix A: The Ten Components of the Thinking Environment (Time to Think 2021)

Attention	<i>Listening without interruption and with interest in where the person will go next in their thinking</i> Attention is an act of creation. The quality of our attention <i>determines</i> the quality of other people's thinking. Attention, driven by the promise of no interruption, and by respect and interest in where people will go with their thinking, is the key to a Thinking Environment. Attention is that powerful. It <i>generates</i> thinking. It is an act of creation.
Equality	<i>Regarding each other as thinking peers, giving equal time to think</i> Even in a hierarchy people can be equal as thinkers. In a Thinking Environment everyone is valued equally as a thinker. Everyone gets a turn to think out loud and a turn to give attention. To know you will get your turn to speak makes your attention more genuine and relaxed. It also makes your speaking more succinct. Equality keeps the talkative people from silencing the quiet ones. And it requires the quiet ones to contribute their own thinking. The result is high quality ideas and decisions.
Ease	<i>Discarding internal urgency</i> Ease creates; urgency destroys. Ease, an internal state free from rush or urgency, creates the best conditions for thinking. But Ease, particularly in organisations and through the 'push' aspect of social networking, is being systematically bred out of our lives. If we want people to think well under impossible deadlines and inside the injunctions of 'faster, better, cheaper, more,' we must cultivate internal ease.
Appreciation	<i>Noticing what is good and saying it</i> The human mind works best in the presence of appreciation. In life we learn that to be appreciative is to be naïve, whereas to be critical is to be realistic. In discussions, therefore, we focus first, and sometimes only, on things that are not working. Consequently, because the brain requires appreciation to work well, our thinking is often specious. The Thinking Environment recognises the right ratio of appreciation to challenge so that individuals and groups can think at their best.
Encouragement	<i>Giving courage to go to the unexplored edge of thinking by ceasing competition as thinkers</i>

	To be 'better than' is not necessarily to be 'good'. To compete does not ensure certain excellence. It merely ensures comparative success. Therefore, competition between thinkers can be dangerous. It can keep their attention on each other as rivals, not on the huge potential for each to think courageously for themselves. A Thinking Environment prevents internal competition among colleagues, replacing it with a wholehearted, unthreatened search for good ideas.
Feelings	<i>Welcoming the release of emotion</i> Unexpressed feelings can inhibit good thinking. Thinking stops when we are upset. But if we express feelings just enough, thinking re-starts. Unfortunately, we have this backwards in our society. We think that when feelings start, thinking stops. When we assume this, we interfere with exactly the process that helps a person to think clearly again. If instead, when people show signs of feelings, we relax and welcome them, good thinking will resume.
Information	<i>Absorbing all the relevant facts</i> Full and accurate information results in intellectual integrity. We base our decisions on information of many sorts. When the information is incorrect or limited, the quality of our thinking suffers and we can be trapped in denial. Accurate and full information can both dismantle denial and construct a rich template of truth for fine independent thinking.
Difference	<i>Prioritising diversity of group identities and understanding their lived experience</i> Reality is diverse. To think for ourselves well we need to surround ourselves with people from different identity groups and to understand as fully as possible their lived experience. The greater the diversity of the group, the greater the difference in perspective, and the richer the divergent thinking of everyone.
Incisive questions	<i>Freeing the human mind of untrue assumptions lived as true</i> A wellspring of good ideas lies just beneath an untrue limiting assumption. An Incisive Question will remove it, freeing the mind to think afresh. The key block to high-quality independent thinking is an untrue limiting assumption, lived as true. To free the mind, therefore, we need to

	know how to construct an Incisive Question, a tool of unbelievable precision and power.
Place	<i>Producing a physical environment – the room, the listener, your body – that says, ‘You matter’</i> When the physical environment affirms our importance, we think more clearly and boldly. When our bodies are cared for and respected, our thinking improves. Thinking Environments are places that say back to people, ‘You matter.’ People think at their best when they notice that the place reflects their value to the people there and to the event. And because the first place of thinking is the body, it needs to be in a condition that says to us as thinkers, ‘You matter’. In these ways, Place is a silent form of appreciation.

Appendix B: Pre- and post-intervention online survey questions

Pre-intervention online survey questions

Open-ended questions:

What is your name?

Please note that this is simply so I can match your response here to your input in our 1-1 discussion. I am the only person with access to your input and all content is treated confidentially and anything used in the findings will be sanitized and anonymous.

Which team are you participating in this research with?

How long have you been with this team?

What are the factors that you believe influence your psychological safety in society more broadly?

What are the factors you believe influence your psychological safety within your organisation but outside of your team?

Psychological safety 5-point ranking questions (strongly agree to strongly disagree):

In this team, it is easy to discuss difficult issues and problems.

In this team, I won't receive retaliation or criticism if I admit to an error or [mistake](#)

It is easy to ask a member of this team for help.

In this team, I feel safe offering new ideas, even if they aren't fully-formed [plans](#)

In this team, people are accepted for being different.

In this team, my teammates welcome my ideas and give them time and attention.

Members of this team could easily describe the value of others' contributions.

In this team, people talk about mistakes and ways to improve and learn from them.

In this team we take time to find new ways to improve our team's work processes

Members of this team raise concerns they have about team plans or decisions.

In this team, we try to discover our underlying assumptions and seek counter-arguments about issues under discussion.

Thinking Environment 5-point ranking questions (strongly agree to strongly disagree):

To what degree do you experience the component of Attention in your team meetings?

To what degree do you experience the component of Equality in your team meetings?

To what degree do you experience the component of Ease in your team meetings?

To what degree do you experience the component of Appreciation in your team meetings?

To what degree do you experience the component of Encouragement in your team meetings?

To what degree do you experience the component of Feelings in your team meetings?

To what degree do you experience the component of Information in your team meetings?

To what degree do you experience the component of Difference in your team meetings?

To what degree do you experience the component of Place in your team meetings?

To what degree do you think you are able to think fully and with quality in your team meetings?

To what degree do you think the team is able to think fully and with quality in your team meetings?

Post-intervention online survey questions

Open-ended questions:

What is your name? This is simply so I can match your response here to your input in our 1-1 discussion. I am the only person with access to your input and all content is treated confidentially and anything used in the findings will be sanitized and anonymous.

Which team are you participating in this research with?

Psychological safety 5-point ranking questions (strongly agree to strongly disagree):

In this team, it is easy to discuss difficult issues and problems.

In this team, I won't receive retaliation or criticism if I admit to an error or [mistake](#)

It is easy to ask a member of this team for help.

In this team, I feel safe offering new ideas, even if they aren't fully-formed [plans](#)

In this team, people are accepted for being different.

In this team, my teammates welcome my ideas and give them time and attention.

Members of this team could easily describe the value of others' contributions.

In this team, people talk about mistakes and ways to improve and learn from them.

In this team we take time to find new ways to improve our team's work processes

Members of this team raise concerns they have about team plans or decisions.

In this team, we try to discover our underlying assumptions and seek counter-arguments about issues under discussion.

Thinking Environment 5-point ranking questions (strongly agree to strongly disagree):

To what degree do you experience the component of Attention in your team meetings?

To what degree do you experience the component of Equality in your team meetings?

To what degree do you experience the component of Ease in your team meetings?

To what degree do you experience the component of Appreciation in your team meetings?

To what degree do you experience the component of Encouragement in your team meetings?

To what degree do you experience the component of Feelings in your team meetings?

To what degree do you experience the component of Information in your team meetings?

To what degree do you experience the component of Difference in your team meetings?

To what degree do you experience the component of Place in your team meetings?

To what degree do you think you are able to think fully and with quality in your team meetings?

To what degree do you think the team is able to think fully and with quality in your team meetings?

What do you think is the biggest difference that the Thinking Environment makes in a meeting?

Appendix C: Pre- and post-intervention qualitative questions for interviews

Pre-intervention interview questions

Intersectionality is defined as the way in which different layers of our identity interact to shape our experiences and cognitive processes. These elements of social identity include ethnicity, national culture, race, gender, age, education, heritage, socio-economic status, gender identity, sexual orientation and disability amongst others.

- Reflecting on the different elements of social identity, which are important for you?
- (If necessary), what more?

In the quantitative survey you may recall a question exploring “in this team people are accepted for being different”.

- What do you think ‘difference’ means in the context of your team meetings?
- How would you describe your ability to be ‘yourself’ in team meetings?

The survey also asked you to reflect on the presence of the 10 components of the Thinking Environment in your team meetings.

- In reflecting on your ability to be ‘yourself’ in team meetings’ what influence do you think the presence (or not) of these components has?

The survey asked you about the ability for you and your team to think fully and with quality in your team meetings.

- What more, if anything else would you like to share on that?
- Taking a step back to reflect on our conversation today, what are your observations?
- In reflecting, what, if anything do you think may have influenced your responses in our time today?

Post-intervention interview questions

You may recall when we first spoke I read you a brief description of intersectionality. (check if would like to reread it)

Intersectionality is defined as the way in which different layers of our identity interact to shape our experiences and cognitive processes. These elements of social identity include ethnicity, national culture, race, gender, age, education, heritage, socio-economic status, gender identity, sexual orientation and disability amongst others.

- I wanted to check what if any freshest thinking may you have on this?

You may recall in our previous conversation I asked you what you thought the concept of ‘difference’ means in the context of your team meetings.

- Reflecting on the team meetings, what more have you maybe noticed about the ‘difference’ present in that space?
- Reflecting on applying the Thinking Environment in the team meetings, what if any change have you noticed in what you bring into the space?
- Reflecting on the application of the Thinking Environment in your team meetings, what, if any influence do you think it has had on your ability to ‘be yourself’ in that setting?
- Reflecting on the application of the Thinking Environment in your team meetings, what have you noticed about the:
 - Quality of discussion?
 - Ease with which you participate?
 - The level of participation of the group?
 - Your own level of participation?
- You may recall in the survey you were asked to reflect on the presence of the 10 components of the Thinking Environment in your team meetings. Which of the components of the Thinking Environment do you think felt easiest for you?
- And which may have felt more of a struggle?
- Reflecting on what you have just shared, what do you notice?
- The survey asked you about the ability for you and your team to think fully and with quality in your team meetings. What did you notice when applying the Thinking Environment?
- Taking a step back to reflect on the experience overall, what are your observations?
- In reflecting on our conversation today, what has been most present for you that may have influenced your perspectives?

Research Proposal:

How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?

MA Professional Practice (Neuro coaching)

Module: BMPF7010

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Student number: 2029338

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TABLE OF CONTENTS

PROVISIONAL TITLE	3
RESEARCH QUESTIONS	3
CONTEXT	3
Market Context	3
Literary Context	3
Culture	3
Intersectionality	4
Psychological safety	4
Introducing the Thinking Environment	4
Organisational Context	5
JUSTIFICATION AND INTENDED VALUE OF RESEARCH	5
METHODOLOGY	6
RESEARCH DESIGN AND METHODS	7
CASE SELECTION AND SAMPLY	8
ETHICAL CONSIDERATIONS	10
LEARNING OUTCOMES	11
TIMESCALES	11
APPENDIX	12
REFERENCES	14

APPENDIX

Appendix A:	
Example of Edmondson's 7-point scale test for psychological safety	12
Appendix B:	
Indicative pre- and post-intervention qualitative questions for interviews	12
Appendix C:	
GDPR Principles relating to processing of personal data	13

PROVISIONAL TITLE

How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?

RESEARCH QUESTIONS

6. How effectively can the Thinking Environment approach be applied as a live learning experience in a team meeting setting?
7. To what extent can the Thinking Environment help build psychological safety in a team meeting setting?
8. What is the perceived impact of the Thinking Environment on individual thinking and action?
9. What is the perceived impact of the Thinking Environment on collective thinking and action?
10. What is the experience of the team, the individual and the researcher in this process?

CONTEXT

Market Context

The technological advancements of the 20th century have driven globalisation, changing how we live and work. Labour migration and technology, in particular influence the complexity that societies, businesses, teams and individuals are grappling with (Cox et al 2014). More recently, the COVID-19 pandemic has led greater adoption of virtual and interconnected working (Mangla 2021, Reuil 2022). There is also emerging recognition of intersectionality and the far-reaching implications of this (Zhang et. al 2021).

Organisations are facing the challenge of how to adapt working practices to support individuals and teams navigate cross-cultural and intersectional complexity (Cox et. al 2014, Booysen 2015, Stout-Rostron 2017).

Literary Context

Culture

Early cultural theorists, such as Hofstede (1997), Trompenaars and Hampden-Turner (1998) and Rosinki (2003) define culture as the constructed and collective understanding a group of people differentiating it from another group, manifest through symbols and language, values and assumptions. However, as explored in their recent paper, this author (Britz 2022) concurs with more recent views that due to globalisation culture cannot be viewed as a single construct, rather as a shifting kaleidoscope of different dimensions such as race, ethnicity, gender, sexual orientation, education etc.

Intersectionality

There is also an increasing dialogue on the need to recognise these layers of 'difference' or 'intersectionality' as the complex multiple realities and lived experiences that exist within individuals and group identities, especially for those who have experienced social injustice. Roche and Passmore (2021) express the view that, in trying to manage diversity, many organisations have inadvertently been deaf to the voices of unique difference and lived experience.

Psychological safety

To hear difference, organisations need to first create an environment where people feel they are listened to and safe expressing themselves openly without judgement. In her study 'Psychological Safety and Learning Behaviour in Work Teams' Edmondson (1999) defines team psychological safety as a shared belief that it is safe to take a personal risk such as speaking one's mind and a team environment "characterized by interpersonal trust and mutual respect in which people are comfortable being themselves" (p 354).

In a competitive business environment where innovation and improvement is vital there is a commercial benefit of psychological safety as seen in the longitudinal study by Google's People Analytics Group which indicated that psychological safety was a key characteristic of the company's high performing teams (Newman et. al 2017). Similarly Stout-Rostron's (2017) review of diversity studies in the workplace included how cognitive task performance and solution finding is better when there are differing opinions. However, research such as Singh et al (2013) also indicates that the greater the diversity of the group the more challenging it is to create psychological safety.

Introducing the Thinking Environment

The Thinking Environment is an approach founded on a positive philosophical belief in the capability of all individuals as independent generative thinkers that is enabled through the creation of a safe space of deep, respectful and appreciative listening without assumptions (Kline 2020). The Thinking Environment methodology is imparted through a facilitated experiential learning process that calls on the individual and collective accountability of the group (Time to Think 2021).

As shown in Figure 1 (Time to Think 2021) below there are ten components which Kline (2020) suggests create the Thinking Environment when embodied by a group.

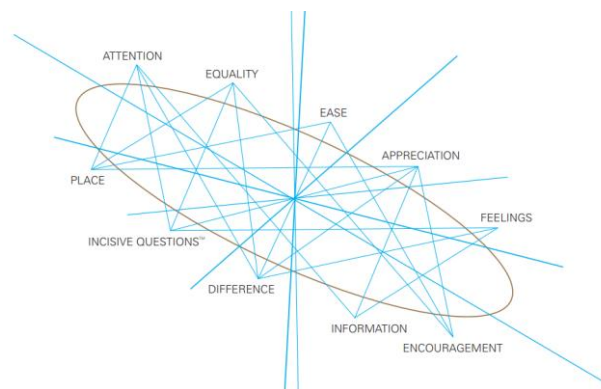


Figure 1: The Ten Components of a Thinking Environment
(Time to Think 2021)

One component is ‘information’ which includes all elements of an individual’s social context and the freedom to choose what to surface (Kline 2021). This aligns with Roche and Passmore (2021) who argue that to fully recognise the multiculturalism and intersectionality of today’s workplace it is important to also acknowledge the historical social injustice that was and still is present.

Organisational Context

Rio Tinto plc is an organisation that epitomises the influence of globalisation and intercultural complexity and intersectionality in the workplace. A multi-national company with over 40,000 employees located in more than 40 countries around the world, Rio Tinto is vocal in its commitment to increasing the diversity of its workforce and driving a culture of greater inclusion where “all voices are heard, all cultures respected” (Rio Tinto 2023).

JUSTIFICATION AND INTENDED VALUE OF RESEARCH

As a coach working with organisations of diverse workforces this author witnesses the challenges in navigating multi-cultural complexity and intersectionality outlined above and agrees with the potential positive impact on the individual, team, organisational and societal level of finding ways to recognise and make space for diversity of thought and identity.

As a trained practitioner of The Thinking Environment this author seeks to conduct a work-based research study that explores how the Thinking Environment might be used to build psychological safety in diverse teams.

This author believes this research is timely and offers three core potential benefits:

- 1) To raise awareness of the layers of complex multiculturalism and intersectionality that exists in teams.
- 2) To further contribute to the research on psychological safety and diversity in team settings.
- 3) To provide practical and accessible guidance on the Thinking Environment as a methodology to support organisations in recognising and embracing diversity.

METHODOLOGY

The author believes that the ontology for this study is that of **Interpretivism**. The research is focused on understanding participants' subjective experiences and perspectives of the Thinking Environment and recognises their views will be influenced by their respective layers of intersectionality. However, the author also acknowledges she comes with her own personal layers of intersectionality and cultural influence which will influence her interactions with the participants and the analysis of the data. Both these elements echo Interpretivism⁴ and in particular the Interpretivist approach of Symbolic interactionism⁵.

The research will also be informed by the **Critical Theory of transformative learning**⁶ in line with the intention to contribute to the movement for positive social change by helping

⁴ "Interpretivism argues that truth and knowledge are subjective, as well as culturally and historically situated, based on people's experiences and their understanding of them. Researchers can never be completely separate from their own values and beliefs, so these will inevitably inform the way in which they collect, interpret and analyse data" (Ryan 2018, p8).

⁵ Symbolic interactionism has three core principles: 1) People's behaviour is based on their own meanings; 2) Meanings are generated from social interactions; 3) People may adapt meanings, based on their perceptions of situations or their experiences of them (Ryan 2018, p9).

⁶ The process of participatory research to build awareness of current state in order to identify opportunities for social change (Fleming 2021).

organisations challenge their traditional practices and find ways to better embrace diversity in the workplace.

RESEARCH DESIGN AND METHODS

This author suggests the research is conducted as a **phenomenological action-based case study**. Figure 2 below briefly describes these elements (Denscombe 2014) and their link to the research questions.

Research strategy	Justification
The case study approach, widely used in small-scale social research seeks to explore in-depth one, or a few elements of a particular phenomenon. The aim is to gather insights from study of that specific element with potential for broader implication. In particular, case studies explore relationships and processes in social settings and the interplay of elements present in that situation.	A case study approach will explore the specifics mentioned in the overarching question: <i>How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?</i> It will examine a specific situation that is a common phenomenon in the workplace, ie team meetings, with the aim of understanding the effect of the Thinking Environment on participants in that situation. It is concerned with exploring how the relationships between participants shift as a result of the process applied.
Action research is focussed on addressing issues and finding solutions in the 'real world' and is often used in small-scale social research and to help further professional development. It is also committed to incorporating the findings to become a cycle of research, often encouraging the participants to be involved in the design and implementation of the research rather than subjects of it.	An action research approach will help address the research questions: <i>How effectively can the Thinking Environment approach be applied as a live learning experience in a team meeting setting?</i> <i>To what extent can the Thinking Environment help build psychological safety in a team meeting setting?</i> The research seeks to help organisations make progress in addressing the challenge of embracing diversity and nurturing high performing team.
Phenomenology seeks to study the subjective experience of a participant and understand a situation through their eyes.	A Phenomenological approach will help answer the research questions: <i>What is the perceived impact of the Thinking Environment on individual thinking and action?</i> <i>What is the perceived impact of the Thinking Environment on collective thinking and action?</i> <i>What is the experience of the team, the individual and the researcher in this process?</i> This approach is selected in recognition of the highly subjective nature of the study and seeks to consciously consider the perspectives of the participants with their unique intersectional identities and how these will each be different from each other and the researcher.

Figure 2: Research choice described by Descombe (2014) and author's justification

The author is recommending a three-stage **mixed methods** approach as shown in Figure 3 below. Mixed methods is recommended for case studies to increase the strength of the internal validity through data triangulation (Crowe et al 2011).

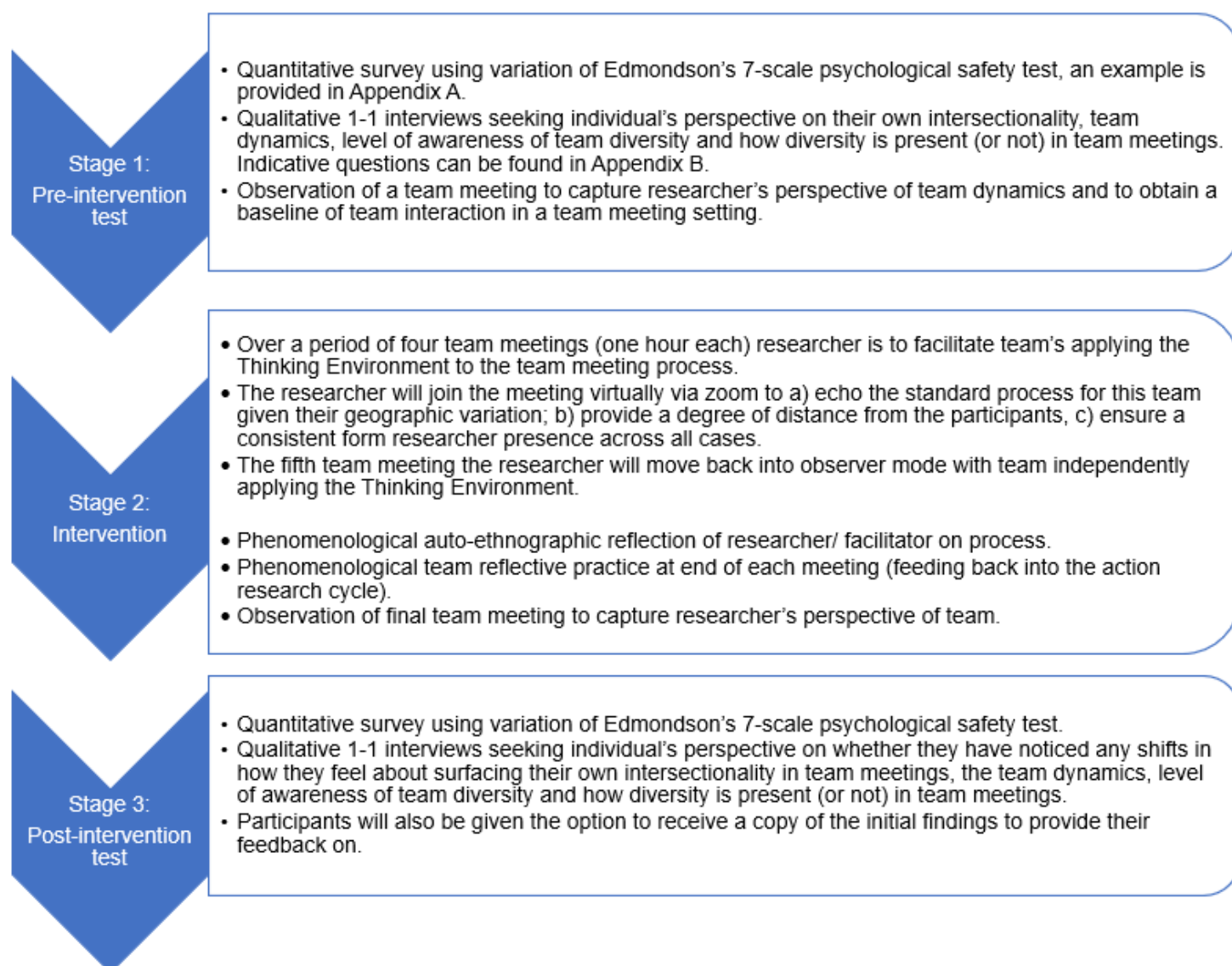


Figure 3: A proposed three-stage research design

CASE SELECTION AND SAMPLING

Crowe et al (2011) and Denscombe (2014) both stress the importance of careful case selection in any case study research. Given the specific focus of a case study there is not a recommended sample size (Denscombe 2014) however Crowe et al (2011) offer three types of case study approaches as shown in Figure 4 below.

Intrinsic study	Case is selected for its own unique merits rather than being representatives of other cases.
Instrumental study	The case is selected as a 'typical' case where it is not about the unique characteristics of a particular case but rather provides opportunity to study an issue or phenomenon.
Collective study	Multiple cases are carefully selected to enable comparisons to be made. 'Typical' cases may be selected to enable analytical generalisation, or they may be selected for replication logic (to test a theory by seeking to replicate the findings in a second or third case)

Figure 4: Three case study types (Denscombe 2014)

For this study the author proposes to run an **instrumental case study** however, would like to potentially expand the research to a **collective case study** with two other cases to test application of the Thinking Environment with teams of varying levels of multiculturalism and potential intersectionality as outlined in Figure 5 below.

Primary instrumental case study

- Case A: the Rio Tinto Copper, Growth & Development team. A highly culturally diverse group of 10 individuals situated across multiple locations. The majority of team interaction is virtual and each is physically working in an environment of cultural difference. There is also a variation in age, gender, education and work experience.

Further collective case study

- Case B: a team from a New Zealand government agency situated across two locations with a mix of co-located in person and all-team virtual meetings. There is a mix of cultural heritage, indigenous identity, however with a dominant national culture. There is a range of age, gender and education.
- Case C: a small site-based co-located team within a subsidiary of Rio Tinto and based in South Africa. Team meetings are invariably in-person. All team members are from the same region and tribal affiliation however there is diversity in gender, age, education and experience.

Note:

- All cases will ideally comprise a minimum of four and maximum of 10 individuals (numbers provide some degree of difference to be present but numbers are still manageable for all voices to be heard in a one-hour meeting structure).
- At the time of writing this author has received formal approval from Case A found in Appendix C, with pending approval from Case B and C.

Figure 5: A two-part case study

ETHICAL CONSIDERATIONS

There are five main ethical considerations for this study that the authored has identified which are outlined in Figure 6 including suggested mitigations.

Ethical considerations	Proposed mitigation
1. To protect the psychological safety and well-being of participants through the study	At the start of every meeting participants will be reminded of their autonomy in the process and their right to step off the study at any point should they not feel comfortable. A participant information and consent form will be shared for them to sign before the study commences providing full and transparent disclosure of the research aims, process and methodology. As an accredited coach with the International Coaching Federation (ICF), the author's practice is founded on the principles of the ICF's Code of Ethics (ICF 2023).
2. Confidentiality of the business information	The author will offer to sign an NDA with each of the organisations. No company information will be recorded in any way during any of the meetings.
3. Confidentiality of the personal perspectives that will be collected from the participants	All personal information will be gathered, stored and disposed of in line with GDPR principles as shown in Appendix D (GDPR 2023). This will include using data keys to separate identifying information from personal perspectives, encryption to store or send any data, and the destruction of all personal information upon completion of the research project. While the research will be conducted with participants in different jurisdictions no data will be transferred across borders, rather, all data will be gathered and stored in New Zealand where the author is located.
4. Respecting the cultural practices of participants	Given the research will be conducted with people from a range of different cultures and intersectional identities, it is important to ~~recognise and honour~~ the different cultural/ indigenous perspectives such as Aboriginal storytelling in Australia, honoring ~~te tiriti o Waitangi~~ in New Zealand, ~~recognising~~ the trauma of social and racial injustice that has and continues to be part of the lived experience of many South Africans.
5. Implication of being an insider researcher and the potential impact on the research process and results	Costley et. al (2010) refer to the risk of research influence through pre-existing relationships between the researcher and participants. The use of the participant consent form and the reminder at the start of every interaction of the purpose of the research and the frame of the interaction is intended to help boundary the research from any other interaction. Given the author's adherence to the ICF Code of Ethics, any conversations that occur outside of the research will also be bounded within those coaching interactions. The author is conscious that they are also involved in the research itself and so have built auto-ethnographic methods into the research and methods design to ensure those perspectives are captured and considered separate to the input provided by the participant. Participants will complete a reflective exercise during the intervention in line with action research and will also be invited to share their views on

Figure 6: Ethical considerations and proposed mitigation

LEARNING OUTCOMES

In addition to the Module 7 learning outcomes this author has three individual learning outcomes:

1. Building skill in conducting insider research
2. Deepening knowledge of cultural diversity and intersectionality, including in-depth literature review, and the implications of these for future society.
3. Expanding this author's consultancy to support organisations in their diversity efforts.

TIMESCALES

February	March	April	May	June	July
Engagement of participants					
	Pre-intervention test				
	Intervention process				
		Post-intervention test			
		Analysis			
		Draft and feedback review			
				Refinement	
					Submission on 12 July 2023

APPENDIX

Appendix A: Example of Edmondson's 7-point scale test for psychological safety (Edmondson 1999)

		Strongly disagree		Neutral		Strongly agree
Part 1: Individual safety		1	2	3	4	5
1	In this team, it is easy to discuss difficult issues and problems.					
2	I won't receive retaliation or criticism if I admit to an error or mistake.					
3	It is easy to ask a member of this team for help.					
4	I feel safe offering new ideas, even if they aren't fully-formed plans.					
Part 2: Team respect		1	2	3	4	5
5	In this team, people are accepted for being different.					
6	My teammates welcome my ideas and give them time and attention.					
7	Members of this team could easily describe the value of others' contributions.					
Part 3: Team learning		1	2	3	4	5
8	In this team, people talk about mistakes and ways to improve and learn from them.					
9	We take time to find new ways to improve our team's work processes.					
10	Members of this team raise concerns they have about team plans or decisions.					
11	We try to discover our underlying assumptions and seek counterarguments about issues under discussion.					

Appendix B: Indicative pre- and post-intervention qualitative questions for interviews

- Intersectionality is defined as the different layers of our identity such as ethnicity, national culture, race, gender, age, education, heritage etc. Please share some of the elements that in your view make up your identity.
- Please describe which if any of these elements of identity do you see in your team?
- Do you feel that this presence, or lack thereof of shared identity elements influences how you interact in team settings?
- How would you describe the dynamics of your team meetings?
- What is the impact, if any, of these dynamics on your ability to think fully and generatively in team meetings?
- How would you describe the team's collective thinking?

Appendix C: GDPR Principles relating to processing of personal data (GDPR 2023)

1. Personal data shall be:

- a) processed lawfully, fairly and in a transparent manner in relation to the data subject ('lawfulness, fairness and transparency');
- b) collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall, in accordance with [Article 89\(1\)](#), not be considered to be incompatible with the initial purposes ('purpose limitation');
- c) adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed ('data minimisation');
- d) accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay ('accuracy');
- e) kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed; personal data may be stored for longer periods insofar as the personal data will be processed solely for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes in accordance with [Article 89\(1\)](#) subject to implementation of the appropriate technical and organisational measures required by this Regulation in order to safeguard the rights and freedoms of the data subject ('storage limitation');
- f) processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures ('integrity and confidentiality').

2. The controller shall be responsible for, and be able to demonstrate compliance with, paragraph 1 ('accountability').

Appendix D: Organisational approval for research

MA Proposal



Hannigan, Dom (RTS) <Dom.Hannigan@riotinto.com>
To: Alannah Britz

[Reply](#) [Reply All](#) [Forward](#) [Share](#) [More](#)

Fri 20/01/2023 12:14

Dear Alannah,

Thank you for your proposal for our team in Rio Tinto, Copper Growth & Development to be part of your MA Research Project.

After sharing the proposal and talking with the team, and with Munkhsukh as our MD, I can confirm that we'd be delighted to take part.

We are a team of approximately 10, with our locations in Brisbane, Perth, London, Tokyo and Ulaanbaatar.

We are looking forward to hearing from you and getting started.

Dom

Dom Hannigan
General Manager, Growth & Development, Rio Tinto Copper

M (+61) 427 791052



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Appendix E: PG2_Application_for_Ethical_Approval_A.Britz (2029338) with Supervisor signature amended 4 March 23

APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS
This form is to be completed by the student within **SIX** months for full-time students and **TWELVE** months for part time students, after the commencement of the research degree or following progression to Part Two of your course.
Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).
This document is also available in Welsh.

RESEARCH STAFF ONLY
All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of research activity: 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications'. As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the 'principal researcher'.

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	Alannah Britz				
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐	
	Undergraduate Student:	☐	Taught Postgraduate Student:	☒	Postgraduate Research Student:	☐
3	Institute/Academic Discipline/centre:	Neuro Minds Ltd				
4	Campus:	International student				
5	E-mail address:	Alannah.britz@gmail.com				
6	Contact Telephone Number:	+84 21 321 842				
For students:						

April 2022

1

PG2 Ethical Approval Form

7	Student Number:	2029338
8	Programme of Study:	Professional Practice (Neuro-coaching)
9	Director of Studies/Supervisor:	Rabiya McKeeverne

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
2	If Yes please indicate source of approval (and date where known): Approval in principle must be obtained from the relevant source prior to seeking ethical approval	Research Degrees Committee	☐	Institute Research Committee	☐
		The research activity has been approved by the team who will be participating in the research – please see end of form.	☒	20/01/2023	

SECTION C: Internal and External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.		
1	UWTSO Research Ethics & Integrity Code of Practice	☒
2	UWTSO Research Data Management Policy	☒
3	COSTLEY, C. ELLIOTT, G. and GIBBS, P. (2010) <i>Doing work-based research: approaches to enquiry for insider-researchers</i> . Los Angeles: SAGE.	☒
4	Article 5 GDPR data privacy	☒

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	Rio Tinto plc			
2	Contact person name	Dom Hannigan			
3	Contact person e-mail address	Dom.hannigan@riotinto.com			
4	Is your research externally funded?	YES	☐	NO	☒
5	Are you in receipt of a KESS scholarship?	YES	☐	NO	☒
6	Voluntary	YES	☐	NO	☒

April 2022

2

PG2 Ethical Approval Form

7	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Employed	YES	☐	NO	☒
8	Is the research being undertaken within an existing UWTSO Approved Professional Learning Partnership (APLP)?	If YES then the permission question below does not need to be answered.	YES	☐	NO	☒
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue	YES	☒	NO	☐

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	☒	NO	☒
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate). The primary participant group for the instrumental case study, Rio Tinto Copper, Growth & Development team and one of the further potential participant groups to form a collective case study, Rio Tinto Richards Bay Minerals don't have their own ethic approval system. However, the NZ government department, ~~Kaitiaki~~, does have its own ethics approval system.				

SECTION E: Details of Research Activity

1	Indicative title:	How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?			
2	Proposed start date:	6 March 2023	Proposed end date:	12 July 2023	
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how <u>Existing Research</u> has informed the proposed activity and <u>explain</u> what the research activity will add to the body of knowledge <i>How it addresses an area of importance.</i>				
3	Purpose of Research Activity Research into the effects of globalisation is revealing how through factors such as technological advances labour migration people are increasingly required to work effectively with people from different cultures and backgrounds. Further, the COVID-19 pandemic has also led greater adoption of virtual, and interconnected working removing geographic barriers to collaborative working. The result is an increasingly intercultural workforce. Studies and social commentary is also pointing to a tide of social change underway which includes dialogue on the need to recognise the layers of 'difference' or 'intersectionality' that exist within individuals and				

April 2022

3

PG2 Ethical Approval Form

	group identities <u>as a result</u> of the complex multiple realities and lived experiences, especially for those who have experienced social injustice. Research is revealing that in trying to manage diversity and create a space of equality, many organisations have inadvertently been deaf to the voices of unique difference and lived experience. Key is for organisations to create an environment of psychological safety where people feel they are listened to and able to <u>expressing</u> themselves openly without judgement. In a competitive business environment where innovation and improvement there is a commercial benefit of psychological safety and some diversity studies in the workplace have pointed out how cognitive task performance and solution finding is better when there are differing opinions. However, research such as also indicates that the greater the diversity of the group the more challenging it is to create psychological safety. Organisations are facing the challenge of how to adapt working practices to support individuals and teams navigate cross-cultural and intersectional complexity. The Thinking Environment is an approach that believes all individuals are capable of independent generative thought by creating a safe space of deep, <u>respectful</u> and appreciative listening without assumptions. The purpose of the research is to work with a team in Rio Tinto plc as an organisation that epitomises the influence of globalisation and intercultural complexity and intersectionality in the workplace to explore how the Thinking Environment can help create an environment of psychological safety.				
4	Research Question How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action? RESEARCH QUESTIONS - How effectively can the Thinking Environment approach be applied as a live learning experience in a team meeting setting? - To what extent can the Thinking Environment help build psychological safety in a team meeting setting? - What is the perceived impact of the Thinking Environment on individual thinking and action? - What is the perceived impact of the Thinking Environment on collective thinking and action? - What is the experience of the team, the individual and the researcher in this process?				
5	Aims of Research Activity As a coach working with organisations of diverse workforces this author witnesses the challenges in navigating multi-cultural complexity and intersectionality outlined above and believes in the potential positive impact on the individual, team, organisational and societal levels of finding ways to support this navigation. As a trained practitioner of The Thinking Environment this author seeks to conduct a work-based research study that explores how the Thinking Environment might be used to build psychological safety in diverse teams.				
6	Objectives of Research Activity This author believes this research is timely and offers three core potential benefits:				

April 2022

4

PG2 Ethical Approval Form

1) To raise awareness of the layers of complex multiculturalism and intersectionality that exists in teams. 2) To further contribute to the research on psychological safety and diversity in team settings. 3) To provide practical and accessible guidance on the Thinking Environment as a methodology to support organisations in recognising and embracing diversity.	
7	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project. The ontology for this research will be that of Interpretivism and also informed by the Critical Theory of transformative learning in line with the intention to contribute to the movement for positive social change by helping organisations challenge their traditional practices and find ways to better embrace diversity in the workplace. The research will be conducted as a phenomenological action-based case study using a three-stage mixed methods approach. Stages 1 and 3 are pre- and post-intervention and will include: - Quantitative survey using variation of Edmondson's 7-scale psychological safety test. - Qualitative 1-1 interviews seeking individual's perspective on their own intersectionality, team dynamics, level of awareness of team diversity and how diversity is present (or not) in team meetings. - Observation of a team meeting to capture researcher's perspective of team dynamics and to obtain a baseline of team interaction in a team meeting setting. In stage 3 participants will also be given the option to receive a copy of the initial findings to provide their feedback on as a way of helping mitigate perspective influence as a result of insider research. Stage 2 – the intervention will involve: - Over a period of four team meetings (one hour each) researcher is to facilitate teams applying the Thinking Environment to the team meeting process. - The fifth team meeting the researcher will move back into observer mode with team independently applying the Thinking Environment. - The researcher will join the meetings virtually via zoom to a) echo the standard process for this team given their geographic variation; b) provide a degree of distance from the participants; c) ensure a consistent form researcher presence across all cases. The data gathering methods for Stage 2 will comprise: - Phenomenological auto-ethnographic reflection of researcher/ facilitator on process. - Phenomenological team reflection practice at end of each meeting (feeding back into the action research cycle). - Observation of final team meeting to capture researcher's perspective of team. It is proposed that the research is run as an instrumental case study however, would like to expand the research to a collective case study with two other cases to test application of the Thinking Environment with teams of varying levels of multiculturalism and potential intersectionality. The primary case study will be with the Rio Tinto Copper, Growth & Development team. A highly culturally diverse group of 10 individuals situated across multiple locations. The majority of team interaction is virtual and each is physically working in an environment of cultural difference. There is also a variation in age, gender, education and work experience. The secondary case studies will potentially comprise:

April 2022

5

PG2 Ethical Approval Form

	- a team from a New Zealand government agency situated across two locations with a mix of co-located in person and all-time virtual meetings. There is a mix of cultural heritage, indigenous identity, however with a dominant national culture. There is a range of age, gender and education. - a small site-based co-located team within a subsidiary of Rio Tinto and based in South Africa. Team meetings are invariably in-person. All team members are from the same region and tribal affiliation however there is diversity in gender, age, education and experience. - All cases will ideally comprise a minimum of four and maximum of 10 individuals (numbers provide some degree of difference to be present but numbers are still manageable for all voices to be heard in a one-hour meeting structure). - At the time of writing this author has received formal approval from Case A (attached), with pending approval from Case B and C.	
	(this box should expand as you type)	
	Location of research activity Identify all locations where research activity will take place. All research will be conducted virtually given the globally dispersed location of the participants. The participants of the primary Case study are located in Australia, Mongolia, Japan and UK. The potential participants in the secondary case studies are located in South Africa and New Zealand. The researcher is based in New Zealand.	
	(this box should expand as you type)	
	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this. Given the research will be conducted with people from a range of different cultures and intersectional identities it is important to recognise and honour the different cultural/indigenous perspectives such as Aboriginal storytelling in Australia, honoring te Whiri o Wairangi in New Zealand (Te Ara Itohi) https://www.brc.govt.nz/resources/te-ara-tika-guidelines-maori-research-etihiki-9	
	Chapter of c/Maria-Barbara-Chatter-3/8/mb/10f4e4dbb1f1b5eb3b/1/2913020610f44897/1494417935092/77 c/Maria-Barbara-Chatter-3/8/mb/10f4e4dbb1f1b5eb3b/1/2913020610f44897/1494417935092/77 that has and continues to be part of the lived experience of many South Africans. The researcher is located in New Zealand.	
	(this box should expand as you type)	
10	Use of documentation not in the public domain: Are any documents NOT publicly available? If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales.	NO ☐ YES ☒
11	As part of the Thinking Environment application in team meetings, an agenda will be developed for each meeting and circulated to the team ahead of each meeting. As this is a document specific to the team and that particular meeting and will be developed on organisation-specific content it is not expected to be publicly available. All business-related documentation will not be stored by the researcher. As in the team meetings where the Thinking Environment will be applied content specific to that	

April 2022

6

PG2 Ethical Approval Form

provide assurance that no company specific information will be shared or included in the research or related documentation. This is possible as the research will focus solely on the researcher's observations of the team interactions in the meeting, the individual interviews before and after the series of team meetings where the Thinking Environment will be applied, and the quantitative surveys and none of this will be on the specific content discussed but rather the individuals' perceptions of themselves and their experience.

(this box should expand as you type)

	Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?	YES	NO
12	A prosperous Wales	☒	☐
13	A resilient Wales	☒	☐
14	A healthier Wales	☒	☐
15	A more equal Wales	☒	☐
16	A Wales of cohesive communities	☒	☐
17	A Wales of vibrant culture and thriving Welsh language	☒	☐
18	A globally responsible Wales	☒	☐
19	If YES to any of the above, please give details:		
While the research does not directly/ immediately impact any of the above aims, the intended objectives of the research could be applied within Wales and would then contribute to these aims such: - Psychological safety has been proven to have a positive impact on business performance. - Psychological safety is directly linked to individual mental well-being and team resilience. - The Thinking Environment is aimed at supporting individuals, teams, organisations and society create a space of equality and mutual respect and in doing so embraces the cultural diversity with all its artefacts such as language. - This study aims to help further the drive for positive social change for diverse and intersectional communities. (this box should expand as you type)			

SECTION F: Scope of Research Activity

	Will the research activity include:	YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☒	☐
3	Use of focus groups?	☒	☐
4	Use of participant diaries?	☐	☒
5	Use of video or audio recording?	☒	☐
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☒	☐
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒

April 2022

7

PG2 Ethical Approval Form

10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.		
	Details of any other primary data collection method:	☐	☒
(this box should expand as you type)			

If NO to every question, then the research activity is (ethically) low risk and may be exempt from some of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

	Who are the intended participants:	YES	NO
1	Students or staff at the University?	☐	☒
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☐	☒
5	Prisoners?	☐	☒
6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.		
	Details of any other participant groups:	☐	☒
(this box should expand as you type)			
Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?			

April 2022

8

PG2 Ethical Approval Form

10	How many participants are expected?	10 participants for primary case study. Potentially another 20 for the secondary case study. <i>(this box should expand as you type)</i>
11	Who will the participants be?	Participants will be members of the teams who consent to participate in the study. <i>(this box should expand as you type)</i>
12	How will you identify the participants?	The participants will be auto-selected as they will be team members of the teams who agree to participate in the study. <i>(this box should expand as you type)</i>

Information for participants:		YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☒	☐	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
17	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
22	If NO to any of above questions, please give an explanation <i>(this box should expand as you type)</i>			

Information for participants:		YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details <i>(this box should expand as you type)</i>			

April 2022

9

PG2 Ethical Approval Form

SECTION H: Anticipated Risks

Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.	
1	Full risk assessment completed and appended? Yes ☐ No ☒
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information Risk to participants: There is the potential that in the 1-1 interviews, discussing their intersectionality may bring up some deep emotions particularly if there is any personal history of social injustice. <i>(this box should expand as you type)</i> How you will mitigate the risk to participants: At the start of every interaction there will be reminder of the participants' autonomy and ability to step away at any point. The practice of the Thinking Environment itself is focussed on creating a safe space of trust and rapport that recognises and honours feelings. <i>(this box should expand as you type)</i>
3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities The research will not involve any such activities as outlined above. <i>(this box should expand as you type)</i>
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest Risk to the investigator: On reviewing the proposed research activity to identify potential risk, the only one of the potential risks to the investigator is regarding conflict of interest as some of areas of the organisation are a client of the investigator and could be accused of lacking impartiality. <i>(this box should expand as you type)</i> How you will mitigate the risk to the investigator: As an accredited member of the International Coaching Federation (ICF), the investigator is bound by the ICF's Code of Ethics which includes protecting the confidentiality of individuals and in addition as part of the consent form there will be a statement of confidentiality meaning that no information will be shared between this research and any other interactions with the organisation. In terms of capturing the viewpoints of the participants, the focus will be purely on what they share themselves without incorporating any broader context the investigator may have of the organisation. In terms of the investigator's perspective itself, the element of ethnographic research as a result of the researcher being part of the research themselves through their involvement in the team meetings will be flagged to

April 2022

10

PG2 Ethical Approval Form

		participants as part of the consent form. In doing so it is acknowledged that in reflecting on their own experience in the team meetings, it is acknowledged that the investigator brings with them all their own prior experience. This will also be very clearly indicated in the research findings. (this box should expand as you type)
5	University/institutional risks For example: adverse publicity, financial loss, data protection	
	Risk to the University:	How you will mitigate the risk to the University:
	No risk to the University has been identified. (this box should expand as you type)	(this box should expand as you type)
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment:	How you will mitigate the risk to environment:
	No risk to the Environment has been identified. (this box should expand as you type)	(this box should expand as you type)
Disclosure and Barring Service		
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES NO N/A
7	Does your research require you to hold a current DBS Certificate?	☐ ☒ ☐
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending", in this case any ethical approval will be subject to providing the appropriate certificate number.	

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when?
	Participants will receive initial findings of the research for them to provide feedback. This will be done following the third stage, post-intervention testing. In the third stage interview they will be offered a final discussion where the researcher will share the initial findings for their feedback. (this box should expand as you type)
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation. A detailed participant information and consent form will be developed that will provide an overview of the research intention, methods, and process. (this box should expand as you type)
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case. All detail pertaining to the specific team and individual participants will be removed.

April 2022

11

PG2 Ethical Approval Form

	Permission will be sought from the organisation on whether they are willing for their company name to be used. If not then the company name will also be removed. (this box should expand as you type)
--	---

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
1	"Personal data" means any information relating to an identified or identifiable natural person (data subject). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.	☒	☐
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	The data collected will be on participants perspectives of their own intersectionality, the diversity of the team they are part of and observations of the research process itself. As this pertains to their mental state and cultural and social identity it is considered personal. (this box should expand as you type)		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	"Special category data" means sensitive personal data consisting of information as to the data subject's - (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1922), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes).	☒	☐
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	The focus of the study is on how to build psychological safety among diverse teams and so the topic itself is dealing with elements of identity. It is considered important to have participants identify the different forms of their intersectionality to prompt self-reflection in them as well as to explore whether there is a correlation between any particular forms of intersectionality and team psychological safety. (this box should expand as you type)		
	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☐	☒
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☐	☒
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐

April 2022

12

PG2 Ethical Approval Form

10	"Cloud" storage or websites?	☒	☐
11	Other – specify:	☐	☒
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation:		
All personal information will be gathered, stored and disposed of in line with GDPR principles. This will include using data keys to separate identifying information from personal perspectives, encryption to store or send any data, and the destruction of all personal information upon completion of the research project. Quantitative survey data will be gathered using Survey Monkey however this will be anonymous. (this box should expand as you type)			

Data Protection			
Will the research activity involve any of the following activities:		YES	NO
13	Electronic transfer of data in any form?	☐	☒
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
18	Publication of data that might allow identification of individuals?	☐	☒
19	Use of data management system?	☐	☒
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate): (this box should expand as you type)		
22	List all who will have access to the data generated by the research activity: The researcher in question (this box should expand as you type)		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity: The researcher (this box should expand as you type)		
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not: Data will be stored on an encrypted external hard drive. An identifier key will be kept separately to the files. Data will not be archived but destroyed upon completion of the project. (this box should expand as you type)		

April 2022

13

PG2 Ethical Approval Form

25	Please indicate if your data will be stored in the UWTS Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. (Most relevant to academic staff)		
No. (this box should expand as you type)			
26	Confirm that you have read the UWTS guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/		
1	Signature of applicant:	 Date: 04/03/2023
For STUDENT Submissions:		
2	Director of Studies/Supervisor:	Rabiya McKeever Date: 03/02/23
3	Signature:	
For STAFF Submissions:		
4	Academic Director/ Assistant Dean:	Date:
5	Signature:	

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☒	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (where appropriate) ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS ONLY
Once complete, submit this form via the **MyTSO Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk/>).

RESEARCH STAFF ONLY
All communications relating to this application during its processing must be in writing and emailed to prosearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTER'S PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

April 2022

15

PG2 Ethical Approval Form

Appendix F: SK-FRM-002 Application for full review - restructured doc A Britz amended 6 June 2023

Application for ethical review



This form aligns with the Kāinga Ora values of:

- **Manaakitanga** – showing care, generosity and care for others, including protecting participants and research partners from any potential harm caused by a Research or Related Activity
- **Mahi tahi** – working collaboratively on Research or Related Activities to ensure findings help us to achieve the best outcomes for Kāinga Ora customers, communities and mana whenua
- **Whanake** – thinking outside the box by filling gaps in our organisational evidence, then ensuring this is reported and shared in a way that as many as people as possible can learn from the findings

Ethical consideration also ensures that we meet our **obligations under Te Tiriti o Waitangi** when conducting Research or Related Activities with Māori. Since Te Tiriti and cultural considerations are relevant to all aspects of Research and Related Activities, these issues are discussed throughout this form, rather than in one section only.

Research or Related Activity name	MA Professional Practice (Neuro-coaching) Research project
Applicant/s	Alannah Britz

- ✓ I would like to discuss this proposed research with the Human Participants Research Ethics Committee (HPREC), if required
- ✓ This application has been amended and resubmitted after review by HPREC

I have attached the following:

- ✓ Participant Information Sheet – see template
- ✓ Consent Form – see templates
- ✓ Interview Schedule/Discussion Guide/Survey Questionnaire
- ✓ Initial communication/s for recruitment (email template, phone script, social media post etc)
- ✓ If relevant, an ethics application approved by another ethics committee (e.g. a university committee)
- ☐ If relevant, a completed Kāinga Ora Privacy Impact Assessment, preferably with the Privacy Team response (note if you are completing this ethics application first, you should attach this to your Brief Privacy Assessment)
- ☐ Other documents, please indicate here:

Note you may need to provide more than one interview schedule, questionnaire, survey or participant communication script if your Research or Related Activity involves different cohorts of participants.

30 October 2020

SK-FRM-002 / Version 1
Page 1 of 16

Please attach documents as Word, Excel or pdf documents. Do NOT provide links to shared Teams folders because external members of the HPREC cannot view them. Submit this form and any supporting documentation to ethics@kaingora.govt.nz

1. Kaupapa me te pēwheatanga | Purpose and methods

This section asks for a general overview of your Research or Related Activity, so the HPREC have sufficient context to assess any ethical implications.

1.1. Why are you doing this Research or Related Activity?

Please clearly explain any relevant context, key objectives or questions you aim to answer and how findings will be used to inform Kāinga Ora policies and practice (or will otherwise make a difference).

We are navigating an increasingly complex world

The technological advancements of the 20th century have driven globalization, changing how we live and work. More recently, the COVID-19 pandemic has accelerated adoption of virtual and interconnected working. As our experience of each other as a global community expands, there is an increasing need to acknowledge the layers of 'difference' or 'intersectionality' that make up our individual and collective identities.

Psychological safety is key to performing as a team

Workplaces are recognizing the need to adapt practices to support individuals and teams navigate this cross-cultural and intersectional complexity. Key is to create an environment of psychological safety - a shared belief that it is safe to take a personal risk such as speaking one's mind and a team environment of interpersonal trust and mutual respect where people are comfortable being themselves. We think and problem-solve better when there are differing opinions. However, the greater the diversity of the group the more challenging it can be to create psychological safety.

So how can we create a space where together we can embrace our unique difference?

Introducing the Thinking Environment

The [Thinking Environment](#) is an approach made up of ten components that aims to create a space where we as individuals and teams can feel comfortable to be our full selves, and in doing so think generatively and with high quality.



This research seeks to test whether the use of the Thinking Environment in team meetings can help strengthen the psychological safety present in those meetings. It also seeks to test whether skill in using the Thinking Environment can build 'live' in the team meetings rather than through formal training.

What are the questions this research seeks to answer?

How can the Thinking Environment build psychological safety in team meetings to improve the quality of individual and collective thinking and action?

19-9-22 DRAFT

SK-FRM-002 / Version 1
Page 2 of 16

1. How effectively can the Thinking Environment approach be applied as a live learning experience in a team meeting setting?
2. To what extent can the Thinking Environment help build psychological safety in a team meeting setting?
3. What is the perceived impact of the Thinking Environment on individual thinking and action?
4. What is the perceived impact of the Thinking Environment on collective thinking and action?
5. What is the experience of the team, the individual and the researcher in this process?

Please see the pre- and post-intervention quantitative and qualitative survey questions at the bottom of this document.

This research is structured as a collective case study with four teams from across the globe. One team is fully based in South Africa. One team is comprised of individuals from across four continents and the remaining two teams are proposed to be from Kāinga Ora.

The intent is to be able to gather data from individuals and teams across a range of cultural contexts as well as operating environments. The teams in Kāinga Ora were identified through the researcher's network and provide an opportunity to bring the rich and complex social, historical and cultural context of New Zealand into the research.

How will the findings of this research inform Kāinga Ora practice?

The experience of the research itself provides an opportunity for the team(s) involved to deepen their awareness of self and others and will build skill in using the Thinking Environment methodology to enhance the effectiveness of their team meetings. The findings of the research will provide the participating teams, and organisation more broadly, insights into some of the blockers that might occur in team meetings and how individuals and teams can be more mindful and intentional in how they interact with each other to bring out their very best.

1.2 Are you conducting a behavioural change project, intervention, pilot or prototype that involves human participants?

If no – go to question 1.3

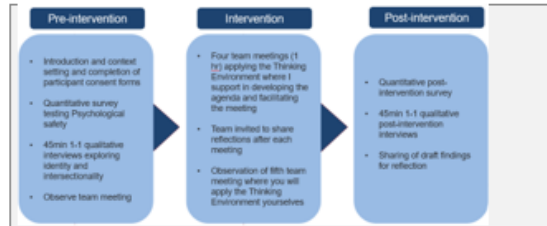
If yes – please explain below

Yes, as explained above the research aims to test whether the application of the Thinking Environment can help build psychological safety in a team setting. To do this the research will involve applying the Thinking Environment methodology in a team meeting setting and measuring the impact.

1.3 What method/s will you use to collect information?

e.g. Survey; focus groups; design or co-design workshops; face-to-face, video call or phone interviews.

The research will occur over three phases as shown below:



The data collection methods will include:

- Quantitative survey via Survey Monkey
- Qualitative 1:1 discussion
- Action research through live learning sessions applying the Thinking Environment in a team meeting setting with post meeting participant reflections. Please note that no content shared in the 1:1 discussions or quantitative surveys will be shared in the team meetings. This part of the research is where I test whether knowledge of the Thinking Environment can be imparted through a 'live learning experience' vs through formalised training.
- Researcher ethno-graphic reflection

Except for the researcher reflection participants will complete all the data collection activities listed above. This will help provide baseline data against which to measure any impact of the research. Recognising the subjectivity and depth of this topic, the combination of quantitative and qualitative pre- and post- data collection will help provide both comparable data as well as rich insights into individual experience. The reflection through the intervention process will help measure shifts as the experience progresses.

At every point of interaction individuals will be welcomed fully recognising and seeking to make safe, their full and complete selves and will also be reminded of their choice and that their participation is completely voluntary.

1.4 Who are your participants?

Please note if participants could be 'potentially structurally disadvantaged' (see Kāinga Ora Ethics Quick Guide for definition and examples).

The participants are intended to be the members of the Change & Enablement and Project Management Services teams.

The leaders of the teams (Emma Needham, Manager Change and Enablement and Steve Zingel, Manager Project Management Services) have provided initial agreement to participate (please see below emails from them both).

19/9/22 DRAFT

SE-FRM-002 / Version 1
Page 3 of 16

19/9/22 DRAFT

SE-FRM-002 / Version 1
Page 4 of 16

Re: Alannah's MA Progression

Steve Zingel <Steve.Zingel@kaiingora.govt.nz>
To: Alannah Britz <Alannah.Britz@kaiingora.govt.nz>
Cc: Emma Needham <Emma.Needham@kaiingora.govt.nz>
Sent: 19/09/2022 10:45

Hi Alannah

I am happy for myself and leadership team to participate in the study.

Yes I have both Pacifica and Māori in my team.

Happy for you to do a joint or individual briefing.

Regards

Steve Zingel

Re: Alannah's MA Progression

Emma Needham <Emma.Needham@kaiingora.govt.nz>
To: Alannah Britz <Alannah.Britz@kaiingora.govt.nz>
Sent: 19/09/2022 11:45

Hi Alannah

I am so sorry for not getting back to you sooner. So been a crazy week trying to juggle work and Sam who has covid, feeling fine, trying to complete school work on line.

I am very happy to take part in this and my team has Māori team members.

Regards,

Emma

Their initial agreement in no way assumes agreement on behalf of the individuals in their teams to participate, rather it is their agreement to share the opportunity with their teams to see if they would like to participate. This has been reiterated in a call with both managers.

Below is a script that will be provided to both managers to be used in person or via email in introducing the research to their respective teams:

I would like to share an opportunity that is available to our team to participate in a Masters Research project that is exploring how a methodology called the Thinking Environment can help build psychological safety in team meetings.

I will be scheduling a call with Alannah Britz, the Masters student where she can provide more detail on the research and how it will work.

Please note that attending this call, and participating in any, or all parts of the research is completely voluntary. There is absolutely no expectation for you to participate in your choice.

A participation information and consent form will be shared with you and should you like to participate you can complete that to proceed.

This research has been reviewed and endorsed by our Kāinga Ora Human Participants Research Committee and if you have any questions please contact Louise Humpage, Principal Evaluation and Research Specialist.

1.5 How will participants be recruited?

If participants are Kāinga Ora customers, please provide detail about how they will be contacted and by whom. Don't forget to attach any initial recruitment messages via email, phone, social media etc.

Following approval by the Ethics committee the managers will schedule an introductory call with their teams (please see introductory script in 1.4 above and introductory slides) where I will provide further detail on the research. Individuals will also be asked to ask questions/voice concerns.

Following the call the managers will send to all individuals Participant information and consent form (please see attached) including my contact details. Should they wish to participate they will be asked to sign the consent form and send it through to me.

Participants will have the choice on whether they want to fully participate, participate only in the team meetings, or not participate at all.

Should they wish to not participate at all, their managers have agreed they will share any information covered in the team meeting with them in their regular 1:1 meetings.

1.6 How will the information you collect be analysed?

e.g. Excel will be used to analyse survey responses by ethnicity, gender and age OR NVivo/Mio etc will be used to analyse focus group comments by theme, highlighting the most common issues raised by participants

I will be analysing the Pre-intervention and Post-intervention quantitative and qualitative survey responses to measure movement and to identify key themes.

I will also analyse the individual reflections from participants after each intervention meeting identifying key themes and analysing how they compare to the quantitative and qualitative survey findings.

I will also conduct ethno-graphic reflective analysis of my own experience in the research process.

2. Ngā hōnonga | Connections

This section asks you to discuss your skills, experiences and relationships with the types of participants that will be involved in your Research or Related Activity. These connections can bring benefits (e.g. knowledge of cultural appropriateness) or challenges (e.g. conflicts of interest) to our Research and Related Activities. New connections might also need to be supported to gain cultural or user-group specific advice that will improve your Research or Related Activity. Reflecting on these connections is an important aspect of demonstrating manaakitanga and meeting our Te Tiriti obligations.

2.1. Please tell us whether you (and your team, if relevant – including any external providers involved in the Research or Related Activity) have any skills, experiences or existing relationships with the types of participants being recruited.

e.g. You have worked with the participants' particular ethnic or identity group before or participants are colleagues you manage or work closely with

None

2.2. Do your skills, experiences or relationships bring any benefits to the Research or Related Activity?

e.g. you work closely with a participant group on a day-to-day basis, so have a strong understanding of their needs, culture, language etc OR your professional position means you are already well known in participant networks etc

If no – go to question 2.3

If yes – please explain below

None

2.3. Do your skills, experiences or relationships pose any ethical challenges for the Research or Related Activity?

e.g. there is a conflict of interest or power dynamic – such as a manager interviewing their team or a Housing Support Manager recruiting customers to participate – that may make it difficult to ensure participants take part voluntarily OR you might be able to identify a participant from what they say in open text boxes of an anonymous survey because of your relationship with them

If no – go to question 2.4

If yes – please explain how you will mitigate any ethical risks

None.

2.4. Who have you consulted about your Research or Related Activity design?

Depending on your topic, consultation might be appropriate with one or more of the following:

- Te Kaitiaki staff, hui, hapū or other relevant Māori organisations;
- The Pacific Advisory Group or one of the Pacific advisors in National Services;
- The Health and Wellbeing team if your participants will be Kāinga Ora employees;
- Kāinga Ora staff or others with expertise working with, or community organisations representing, the identity group your Research or Related Activity will focus on;
- Kāinga Ora teams who may benefit from Research or Related Activity findings or be responsible for data you require.

I have consulted with Emma Fergusson from the Ethics team.
I have reached out to Pasifika advisor Vito Nonumalo and TeKauri Wiremu in Te Kaitiaki to seek their guidance on cultural advice and will seek to implement any recommendations they share.

2.4. Will your Research or Related Activity likely involve participants from one or more Pacific ethnic groups?

If no – go to question 2.6

If yes – please explain what processes are in place for you to receive relevant cultural advice and support for the Research or Related Activity.

Yes Steve Zingel and Emma Needham have advised me that there are Pasifika and Māori members of their teams.

19/9/22 DRAFT

SK-FRM-002 / Version 1
Page 7 of 16

Informed consent – providing full information about the Research or Related Activity, its purpose and what is involved, including risks and benefits, so a decision to voluntarily participate can be made.

If no – go to question 3.2

If yes – how will you gain informed consent?

- ✓ Written consent via a hardcopy or electronic consent form (standard practice – see [template](#))
- ☐ Written consent via email
- ☐ Verbal consent as indicated by participant on an audio or video recording
- ☐ Verbal consent with participant consent noted in a list or spreadsheet
- ✓ Electronic consent via a tick box on an electronic form
- ☐ Other – please describe here:

3.2. Does your Research or Related Activity involve any of the following:

- ☐ Participants under the age of 16, those without the mental capacity to provide consent or those experiencing structural disadvantage that may inhibit their sense of agency
- ☐ Not fully informing participants, including concealment and covert observations
- ☐ Taking photos or video recording participants in a way that giving individual consent is difficult
- ☐ Using information about participants that they have not specifically consented to provide to you or for purposes different than intended when collected (e.g. you are an external practitioner planning to use Kāinga Ora customer contact details OR Kāinga Ora collected information for marketing purposes but now plans to run a research survey)
- ☐ Linking any Research or Related Activity data with existing data (e.g. from another government agency) without explicitly seeking participants' permission

If you ticked any of the above, please describe how you will mitigate any ethical risks:

3.2. Will you ask questions or collect information in a way that could potentially cause discomfort, embarrassment, psychological or spiritual harm to participants (or the groups, organisations or communities with which they are associated)?

Harm – an adverse experience, involving physical, psychological (including feelings of distress or embarrassment, compounding stigmas), cultural, social (such as reputational harm or discrimination), financial and/or legal damages.

Extraordinary care is necessary if the Research and Related Activity is on a 'sensitive' topic or with 'potentially structurally disadvantaged' participants, especially if asking specifically about experiences of structural

19/9/22 DRAFT

SK-FRM-002 / Version 1
Page 9 of 16

I have reached out to Pasifika advisor Vito Nonumalo to seek his guidance on cultural advice and will seek to implement any recommendations made.

2.5. Will your Research or Related Activity likely involve Māori participants?

If no – go to question 2.6

If yes – please explain what processes are in place for you to receive relevant cultural advice and support for the Research or Related Activity.

Yes. I have reached out to TeKauri Wiremu in Te Kaitiaki to seek his guidance on cultural advice and will seek to implement any recommendations made.
I am also referring to the guidance provided below:
Te Ara Tika <https://www.hrc.govt.nz/resources/te-ara-tika-guidelines-maori-research-ethics-0>
Charter of Te Mana Rauaunga
<https://static1.squarespace.com/static/58e9b10f9de4bb8d1fb5ebbc/t/5913020d15cf7d0e1df34482/149441>
I am also seeking cultural guidance from a member of New Zealand academia.

2.6. Has your consultation suggested opportunities for Māori individuals, iwi, hapū and/or relevant Māori organisations to be involved in partnership, co-design and/or governance of the Research or Related Activity?

e.g. Consultation with Te Kaitiaki has suggested a Māori advisory group, Māori mentor or a partnership with mana whenua

If no – go to question 3.1

If yes – please explain if and how you plan to take up these opportunities

I have not yet received that guidance, however should that come through I am committed to following it.
I have however already built into the research plan to invite individuals to input into the research findings.

3. Manaakitanga I Care, generosity and respect for others

This section focuses on how your Research or Related Activity demonstrates care for participants and others involved in the Research or Related Activity process, protecting them from harm and ensuring their dignity and mana is upheld.

3.1. Will the Research or Related Activity gain informed consent from participants?

19/9/22 DRAFT

SK-FRM-002 / Version 1
Page 8 of 16

disadvantage e.g. LGBTQ+ participants asked about discrimination OR Kāinga Ora team members asked for their perceptions of their manager's leadership. See the Ethics Quick Guide for examples of definitions of 'sensitive' topics and 'structurally disadvantaged participants'.

If no – go to question 3.3

If yes – please explain potential harms and what you will do to minimise them

Given the topic of the research some of the questions in the quantitative and qualitative data gathering will invite the individual to share perspectives on their identity and experiences in team meeting settings. There is a possibility that this content might connect to sensitive points for them.

In recognition of this the following actions are being taken in the research:

- These questions will only be asked in the pre- and post- intervention phases so that an individual is only sharing their perspectives with the researcher and not a broader group.
- At every interaction point I will remind participants of their autonomy in the process and the ability to step away should they not feel comfortable.
- As a practiced coach I will build rapport with the individual in the qualitative 1:1 discussions before starting with any research.
- The Thinking Environment itself is grounded on creating a safe space for individuals recognizing and welcoming them as independent thinkers.

3.3. In addition to anything discussed above, will you help your participants feel at ease during the Research or Related Activity process by doing any of the following?

- ✓ Meet participants to get to know them before the Research or Related Activity starts
- ✓ Start introductions with mihi/pepeha and/or a few words in their language
- ✓ Begin with karakia or prayer
- ☐ Provide refreshments for participants
- ☐ Offer the opportunity to bring a family member/support person to an interview etc
- ☐ Other (please explain)

The aim of the Thinking Environment is to create a space where individuals feel safe, welcome and able to think fully and generatively. In addition to including sharing of mihi/ pepeha and starting with a karakia, I will also do an 'opening round' which is one element of the Thinking Environment that helps individuals 'settle' into the space with every voice heard and sets the mind up positively.

3.4. Will your Research or Related Activity design try to avoid creating or reinforcing structural disadvantage for your participants by doing any of the following?

- ✓ Drawing on cultural models (e.g. Te Whare Tapa Whā, Te Whāke, Fonofale or Yasa: Foundations of Pacific Engagement) to frame the Research or Related Activity scope and questions
- ☐ Translating Participant Information Sheet into ethnic minority languages
- ✓ Consulting with cultural advisers when participants will be from minority identity groups

19/9/22 DRAFT

SK-FRM-002 / Version 1
Page 10 of 16

- ☐ Using interviewers or facilitators from the same identity group as participants
- ☐ Accessible design of Participant Information Sheet
- ☐ Choosing venues with ramps and disability parking
- ☒ Presenting findings verbally rather than in a report etc
- ☒ Other (please explain)

In addition, I will invite participants to share their thinking on what will help them feel most comfortable and empowered.

3.5. Will your reporting of Research or Related Activity findings try to avoid reinforcing any structural disadvantage experienced by participants by doing any of the following?

- ☐ Using a strengths, not deficit, based framing for the design of the Research or Related Activity
- ☒ Reporting data in ways that does not reinforce negative stereotypes
- ☒ Avoiding treating one group (e.g. homeowners, nuclear family, Pākehā etc) as the 'norm'
- ☒ Explicitly noting any potential biases emerging from the research, the way in which the data was collected, over-representation of particular groups in the sample, process of data analysis and publication etc.
- ☒ Other (please explain)

An important element of the research is consideration of how interculturalism and intersectionality play out in a team setting and using the Thinking Environment to recognize difference within the group and surfacing the component of equality across all participants.

3.6. Will participants directly benefit from the Research or Related Activity in any of the following ways?

- ☐ Koha (e.g. a supermarket voucher or other gift) will be provided
- ☒ Research or Related Activity findings will be returned to participants (and relevant organisations) to use as they wish
- ☐ Participation may raise awareness of Kāinga Ora services/products etc
- ☐ Other (please explain)

Participating teams will be offered a copy of the research report

3.7. Is there any potential risk of harm to you and/or other Research or Related Activity practitioner/s (or the groups, organisations or communities with which they are associated)?

e.g. Physical harm if conducting interviews with people with a history of anti-social behavior in their own homes; reputational harm if the Research or Related Activity finds significant problems with organisational processes etc

If no – go to question 4.1

If yes – explain these risks and how you will attempt to minimise them

No

19/9/22 DRAFT

SIK-FRM-002 / Version 1
Page 11 of 16

4. Kaitiakitanga | Guardianship

This section identifies how information you collect through the Research or Related Activity will be treated as taonga (a treasured possession that must be protected).

4.1. Will you be collecting any identifying information (or using identifiable data in a new way)?

Identifying information =

- personal information that directly identifies a person E.g. name, contact details, age, ethnicity, gender etc (even if you do not plan to report this data)
- OR
- information that has the potential to identify a person E.g. Someone may be able to work out from the data who the participant was, even if no personal information was collected; a participant could be identified through metadata, even if no personal information was collected; photos or video/audio-recordings are taken of customers or staff, including through Teams

If no – go to question 4.3

If yes – please explain

All data gathered will be sanitized before use in the report to ensure that an individuals' confidentiality and privacy is protected.

4.2. Are you conducting an anonymous survey?

Note that a survey is only truly anonymous if absolutely NO personal information is collected – this includes contact details sought for the purposes of a prize draw or further contact UNLESS these contact details were collected and stored separately from anonymous survey data AND no one can identify who participated via their IP address, comments made in survey comment boxes etc.

If no – go to 4.3

If yes – please confirm that you will take the following measures to ensure the anonymity of Research and Related Activity data:

- ☐ I will collect contact details for the purposes of a prize draw or further contact separately from anonymous survey data (e.g. by requesting that participants click a link at the end of the survey that takes them to a separate document where contact details will be stored)
- ☐ If open-ended comment boxes are used in the survey, participants will be asked to avoid including identifying data in their responses and, if they fail to do this, I will deidentify the data as soon as possible
- ☒ No one will be able to identify who participated in the survey online via their IP address

If you did not tick one or more of the above, please provide an explanation as to why you are deviating from these best practices:

19/9/22 DRAFT

SIK-FRM-002 / Version 1
Page 12 of 16

All data gathered will be sanitized before use in the report.

4.3. Will you do ALL of the following to ensure you meet your responsibilities to protect private information and participant confidentiality:

- ✓ Personal information (i.e. participant name, contact details, consent forms) will be stored separately from Research or Related Activity data (e.g. interview transcripts, survey forms etc)
- ✓ Names and other identifying information will be removed from interview or focus group transcripts, surveys etc as soon as possible (i.e. the data will be 'deidentified' data)
- ✓ Any records of personal information will be shredded or deleted as soon as possible, once used for the purpose for which it was collected (and no other purpose)
- ✓ Any electronic records of Research or Related Activity results/findings will be stored in Objective for at least 10 years (after this period, the Knowledge Team will either transfer the records to Archives or dispose of it)
- ✓ Any electronic records of Research or Related Activity data (e.g. unanalysed interview transcripts, spreadsheets of survey data, Miro board analyses of findings, early drafts of reports held in Teams) will be stored in password-protected files until no longer needed and then deleted
- ✓ Any hardcopy records of Research or Related Activity data will be stored in a secure lockable location until it is practicable to scan and save electronically in Objective for at least 10 years (e.g. consent forms) or shred and dispose of it (e.g. handwritten notes)

If you did not tick one or more of the above, please provide an explanation as to why you are deviating from these best practices:

5. Āhei te tohatoha | Opportunities to share

Sharing our Research or Related Activity findings (and sometimes our data) can ensure that maximum benefit is gained from the contributions made by participants, but the questions in this section aim to ensure this is done in a way that also ensures the privacy and mana of participants is upheld.

Note it is usually best practice to share only deidentified data with individuals/organisations outside of Kāinga Ora, but it may sometimes be appropriate to share identifiable data with iwi/hapū or external organisations if they are research partners.

You are expected to include information about who you will share any data/findings with beyond Kāinga Ora in the Participant Information Sheet (including whether the data will be identifiable or deidentified).

5.1. Will you share identifiable Research or Related Activity information with any of the following:

- ☐ Kāinga Ora staff outside of your research team
- ☐ Individuals or organisations outside of Kāinga Ora

If no – go to question 5.2

19/9/22 DRAFT

SE-FRM-002 / Version 1
Page 13 of 16

If yes – please explain who you will share data with and how you will ensure the privacy and confidentiality of participants

e.g. you will send Kāinga Ora address details to an external research provider via Objective Connect and require this provider to sign an Information Sharing Agreement or confidentiality agreement. The Kāinga Ora Approving Contracts and Commitments Policy states the delegations/approval of external sharing.

5.2. Will you share your deidentified Research or Related Activity data or findings with any of the following?

Deidentified Research or Related Activity data – information collected that has had identifying information removed but has not yet been analysed and/or has not been written up as a report

Deidentified research or Related Activity findings – information collected that has been analysed and key themes/issues reported

- ☐ Kāinga Ora staff outside of your research team
- ☐ Other government agencies
- ☐ Other non-government organisations, including iwi/hapū or Māori organisations, community groups or external research partners
- ✓ Other specified individuals, including participants
- ☐ The general public (E.g. because the findings will be available on the Kāinga Ora website)

If you ticked any of the above boxes, please explain how you will share this information:

e.g. Findings reports or a verbal presentation will be made available to participants; iwi/hapū feedback will be sought on findings before finalising reports

The participants involved in the study form part of a broader research study with participants from two other organisations. The final report will be shared with all participants involved in the research. However, no organization will be named, all participants will be anonymous and the report will have all identifying detail removed.

5.3. Are you aware of any other projects currently being undertaken at Kāinga Ora on a similar or related subject, or with a similar spatial or demographic focus?

If no – you are finished! Please check you have completed all relevant questions and attached all required documents and submit to ethics@kaingaora.govt.nz

If yes – please explain and indicate how you will mitigate any negative cumulative effects e.g. 'consultation fatigue' or confusion about who is doing the Research or Related Activity if the same cohort of participants are being approached

No.

Indicative survey questions

19/9/22 DRAFT

SE-FRM-002 / Version 1
Page 14 of 16

Quantitative pre-intervention questions:

- What are the factors outside of your team but within your organisation that influence your psychological safety in the workplace?
- What are the factors in society more broadly that influence your psychological safety?
- Edmondson's 7-point scale psychological safety test

	Strongly disagree		Neutral		Strongly agree
Part 1: Individual safety					
1	1	2	3	4	5
In this team, it is easy to discuss difficult issues and problems.					
2					
I won't receive retaliation or criticism if I admit to an error or mistake.					
3					
It is easy to ask a member of this team for help.					
4					
I feel safe offering new ideas, even if they aren't fully-formed plans.					
Part 2: Team respect					
5	1	2	3	4	5
In this team, people are accepted for being different.					
6					
My teammates welcome my ideas and give them time and attention.					
7					
Members of this team could easily describe the value of others' contributions.					
Part 3: Team learning					
8	1	2	3	4	5
In this team, people talk about mistakes and ways to improve and learn from them.					
9					
We take time to find new ways to improve our team's work processes.					
10					
Members of this team raise concerns they have about team plans or decisions.					
11					
We try to discover our underlying assumptions and seek counterarguments about issues under discussion.					

- To what degree do you experience the 10 components of the Thinking Environment as outlined below in your team meetings? (this will be a list of the components with a brief descriptor and 1-5 ranking).

Qualitative pre-intervention questions:

- Intersectionality is defined as the different layers of our identity such as ethnicity, national culture, race, gender, age, education, heritage, cognitive processes etc. In reflecting on which elements are important to you, what would you like to think, feel or say?
- In the quantitative survey you may recall a question exploring "in this team people are accepted for being different" reflecting further on your team meetings. What more would you like to think, or feel or say?

19/9/22 DRAFT

SE-FRM-002 / Version 1
Page 15 of 16

- How would you describe your ability to be 'yourself' in team meetings?
- The quantitative survey also asked you to reflect on the presence of the 10 components of the Thinking Environment in your team meetings. What more, would you like to think, or feel, or say?
- How would you describe the quality of your individual thinking in your team meetings?
- How would you describe the quality of the team's collective thinking in your team meetings?

Quantitative post-intervention questions:

- Reflecting on the experience of applying the Thinking Environment in your team meetings, what is your freshest thinking on the factors outside of your team but within your organisation that influence your psychological safety in the workplace?
- Reflecting on the experience of applying the Thinking Environment in your team meetings, what is your freshest thinking on the factors in society more broadly that influence your psychological safety?
- Edmondson's 7-point scale psychological safety test
- To what degree do you now experience the 10 components of the Thinking Environment as outlined below in your team meetings? (this will be a list of the components with a brief descriptor and 1-5 ranking).
- How would you rate the effectiveness of applying the Thinking Environment as a live learning experience in your team meetings?
- What are the key factors to your response above?
- What could help make the experience even better?

Qualitative post-intervention questions:

- You may recall the question on intersectionality in our first discussion. What more if anything else would you like to think, or feel, or say?
- Following your experience in the team meetings and the quantitative survey exploring "in this team people are accepted for being different" what is your freshest thinking?
- What difference if any did you find the Thinking Environment application in your team meetings have on your ability to be 'yourself' in team meetings?
- Reflecting on your experience in the team meetings how would you describe the quality of your individual thinking in your team meetings?
- Reflecting on your experience in the team meetings how would you describe the quality of the team's collective thinking in your team meetings?

19/9/22 DRAFT

SE-FRM-002 / Version 1
Page 16 of 16

Appendix G: Organisational approval from participating teams for research

MA Proposal



Hannigan, Dom (RTS) <Dom.Hannigan@riotinto.com>
To: Alannah Britz

Reply Reply All Forward

Fri 20/01/2023 12:14

Dear Alannah,

Thank you for your proposal for our team in Rio Tinto, Copper Growth & Development to be part of your MA Research Project.

After sharing the proposal and talking with the team, and with Munkhsukh as our MD, I can confirm that we'd be delighted to take part.

We are a team of approximately 10, with our locations in Brisbane, Perth, London, Tokyo and Ulaanbaatar.

We are looking forward to hearing from you and getting started.

Dom

Dom Hannigan
General Manager, Growth & Development, Rio Tinto Copper

M (+61) 427 791052



Discussion with Alannah



Xulu, Spha (RBM) <Spha.Xulu@riotinto.com>
To: Nsumalo, Zama (RBM); Mathenjwa, Qondisile (RBM); Shabangu, Simon (RBM); Bhengu, Sicelo (RBM); Shongwe, Boni (RBM)
Cc: Alannah Britz

Reply Reply All Forward

Tue 25/04/2023 20:27

You replied to this message on 25/04/2023 21:44.

Hi all,

Please find attached the link to the session we had with Alannah on her applied research this morning. Same is on the chat for the meeting invite. Sicelo, Zama and I are excited about what could be personal development coming out of Alannah's project. Please go through the recording to get a better sense of what the project is about and what we can expect as next steps.

The link is:

https://riotinto-my.sharepoint.com/:v/p/spha_xulu/EZt4j3xRa9f9sieBF_269dQB3HkbYhYkuiMTcMibfNQQu

Kind Regards,

Sphamandla Xulu
Principal Advisor: Communities & Social Performance (CSP)
Richards Bay Minerals (RBM)

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RioCommunities

We work in a global team that also supports flexible working, so whilst it suits me to email now, I do not expect a response or action outside of your own working hours.

This email is confidential and may also be privileged. If you are not the intended recipient, please notify us immediately and delete this message from your system without first printing or copying it. Any personal data in this email (including any attachments) must be handled in accordance with the Rio Tinto Group Data Protection Policy and all applicable data protection laws.

RE: HPREC response letter



ethics@kaingaora.govt.nz
To: Alannah Britz

Reply Reply All Forward

Thu 08/06/2023 10:10

You replied to this message on 08/06/2023 16:14.



Participant Information and Consent Sheet with ethics comments 8 6 23.docx
125 KB

Kia ora Alannah,

Right, we've had a chance to review your docs and are happy with the revisions. The PIS and CF, in particular, look much more comprehensive so thanks for putting in the mahi there!

I have suggested a couple of minor tweaks in the PIS (attached) because you asked for clarification about the ethics committee endorsement. There are also a few typos/awkward wordings in the PIS and the email script to potential participants, so having a good proofread of those before sending would be great.

You can now go ahead with your project – good luck!

Louise

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