

Wales Academy for Professional Practice and Applied Research

MA Neuro Coaching

Work Based Research Project Proposal

Can Neuro Coaching Change Unconscious Bias?

BMPF7010

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The Research Question

In the Literature Review 'Can Neuro Coaching Change Unconscious Bias?' (Minton, 2022) the researcher defined unconscious bias as a cognitive process that has a micro-second impact on the judgements and decisions that people make about other human beings. Unconscious bias has been connected to stereotypes from social psychology. An outcome of the Literature Review was the identification of:

a gap in research regarding the ability of coaching to change unconscious bias, despite a massive investment by organisations into raising awareness of unconscious bias and research showing how little return on investment this delivers (p16).

To resolve the problem of unconscious bias, the researcher acknowledges that organisations would need to consider systems and processes, however, there is currently no real intervention in organisations to address the individual (unconscious) component of the problem. This research arises from the observation that Neuro Coaching, with a focus on the process of cognitive meaning-making and routine engagement with the unconscious mind, may be able to contribute to a solution.

Research Aims and Objectives

The study aims to explore the following questions:

1. Can NLP Coaching change unconscious bias as measured by the Implicit Association Test?
2. If so, is it possible to identify one technique with a greater correlation to change?
3. What is the subjective experience of any change for the Coachees?
4. How do Coachees experience the frame of 'coaching to develop as an ally'?

The Wider Ramifications

The research topic is important for several reasons:

- To deliver this change through coaching would enable coaching for social outcomes to potentially replace unconscious bias training.
- To deliver real change in unconscious bias in organisations could potentially contribute to change in systemic discrimination in workplaces.
- For the researcher, a formative experience of personal development in the past would align with her present profession and interests in critical cultural theory and social change.

Organisational Context

There are two organisations involved in the research:

1. The researcher is a sole trader, providing coaching and NLP qualifications, as well as coaching and organisational development services as the Neuro Coaching Academy.
2. The Water Corporation is a state-owned utility providing for the water needs of Western Australia. As at 2022, it is an employer of 3,822 (Water Corporation, 2022 p.54).

On 19 January 2022, the Head of Customer Service verbally confirmed that the Water Corporation would participate in the research project. This project proposal is written with the Water Corporation in mind, however discussions towards a written agreement are still in process. At least one other organisation has also indicated a willingness to participate. The researcher believes that if the Water Corporation is unable to support the requirements of the study as described here, another organisation in Perth will be found without compromising the project timeline.

Organisational Context for the Water Corporation

The Water Corporation has a diversity and inclusion goal to have a workforce that is as diverse as the Western Australian community. In 2023 the organisation is commencing training in unconscious bias for all employees (Surendorff, 2023).

Organisational Context for Neuro Coaching Academy

Should the research provide sufficient evidence of change, the researcher intends to design a training for other coaches to replicate the results.

Learning Outcomes

Individual learning outcomes for the researcher include:

1. Design and conduct research that provides sufficient evidence to justify:
 - a. further research into Neuro Coaching to change unconscious bias;
 - b. and/or investment by organisations into Neuro Coaching to change unconscious bias.
2. Reflect critically on research data to further develop understanding of unconscious bias as simultaneously an internal/individual and social/cultural phenomenon. This will include theoretical thinking regarding how Neurolinguistics may be related to critical theory regarding subjectivity, power, and discourse as a frame of reference.

Research Philosophy

Research Philosophy	Research Design
Transformational (Creswell and Creswell, 2018 p. 9-10)	
The research contains an action agenda for reform that may change the lives of the participants, the institutions in which they work and the researchers own life.	• Coachees will choose the bias they wish to change in the context of being an ally for a specific group. • Coaching will utilise NLP tools to explore the full extent and consequences of change for the Coachee in the first coaching session. This will include identifying any impact in the organisation. • Should the study prove that changing unconscious bias is possible, the focus of the researchers own coaching practice with change.
Specific issues need to be addressed that speak to social issues of the day, (e.g. inequality).	• The research question seeks to address one of the biggest issues of the day regarding inequality.
Assumes the inquirer will proceed collaboratively to avoid further marginalising the participants as a result of the inquiry.	• The experience of Coachees will be collected via a Questionnaire to provide a voice for participants experience alongside the IAT data. • Within the coaching, the researcher will be guided by the International Coach Federation ethics and definition of coaching as partnership with the Coachee (The International Coaching Federation, no date).
Transformative research subscribes to a program theory of beliefs about why the problems of oppression, domination and power relationships exist.	• The Study will include 'pre-framing' material prior to the Coaching that will communicate sociological assumptions re socialisation into cultural stereotypes from a young age, avoiding the de-politicised 'ancient survival mechanisms' explanation (Minton, 2022, p.8)
Pragmatist (Creswell and Creswell, 2018, p.10-11)	
"Instead of focussing on methods, researchers emphasize the research problem and question and use all approaches available to understand the problem" (Roseman & Wilson, 1985, cited in Creswell and Creswell, 2018, pg. 10). The pragmatist believes that individual researchers have freedom to choose the methods, techniques and procedures of research that best meet their needs and purposes.	• The use of the IAT in justifying investment in unconscious bias training in organisations (Noon, 2018, p.199) is a key factor in the decision to use a mixed methods approach. The researcher believes that the IAT assessment tool has been established in the organisational context as the most convincing measurement of 'the problem' that the coaching is seeking to 'solve'. It is her belief that quantitative measurements of results will enable the study to speak the language that is most highly valued in the organisational context. • For the same reason, the researcher will seek to establish as many elements of an experiment as possible, e.g. random selection of participants and a control group.

Image 1: Research philosophy informing the research design

Research Methodology and Methods Used

The researcher has chosen a mixed methods approach in order to balance pragmatic benefits of quantitative measurement with a more complete picture of the coachees experience and the practitioners' learning.

Quantitative Component:

This component of the research will seek to answer question 1 and 2 under research aims.

Measurement Instrument

The IAT is the most broadly recognised measurement of implicit bias. It is usually administered as a computerised task in which the speed that a participant selects from positively-valenced and negatively-valenced words, combined with either faces or category words, is used to calculate a level of bias (FitzGerald et al., 2019, p.2).

The IAT as a quantitative instrument is freely available to the public for self-assessment via Project Implicit (2023) and offers a simple test for the working hypothesis that Neuro Coaching can positively change unconscious bias.

Any concerns about a 'training effect' impacting the internal validity IAT results will be addressed by following research guidelines to: (1) create a control group that does not experience the intervention and/or (2) administer an IAT prior to the IAT that is used as the benchmark (Greenwald et al. 2022, p.1171). The researcher will seek to establish (1) and also utilise (2) to mitigate against this failing in the real-world context.

Pre-Test, Mid-Test, Post-Test, Control Group Design

1. The random allocation of people from a pool of volunteers, sorted by different demographic groups, to experimental group and control group.
2. A pre-test, mid-test and post-test measurement using the IAT before, during and after four Neuro Coaching sessions.
3. The use of a control group for comparison to eliminate 'training effect'.

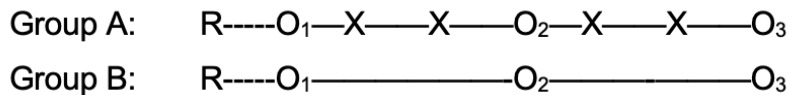


Image 2: Quantitative component of research design

Whilst it is unusual to administer a mid-test in studies to change unconscious bias (FitzGerald et al., 2019, p.3), the researcher believes that NLP, as a ‘brief method’ requires a mid-test in order to accurately correlate any change to specific techniques, should they prove successful.

Experimental and Control Groups

The recruitment of volunteers will involve standard information by email, a website page with an introductory video and an online form. Volunteers will complete the online form and provide demographic details. This data will be anonymised, sorted into demographic groups and then Group A will be selected using random sampling from within each demographic category to ensure diversity of participants. Group B will be selected in the same way to match the demographics of Group A. All volunteers will need to meet the inclusion and exclusion criteria below:

Inclusion Criteria	Exclusion Criteria
• Have a personal interest in the possibility of changing their own unconscious bias • Are available during the practical research time-period to meet at one of the locations for in-person coaching to take place • Are an employee of the Organisational Partner	• Have attended unconscious bias training in the past 3 months • Have studied coaching or NLP • Work in Diversity and Inclusion, or Psychology

Image 3: Selection criteria

Factors to remain constant to enable an equivalent control group:

- Demographics (age, gender, race).
- The initial benchmark IAT result shows bias.
- Neither group will attend unconscious bias training during the research period.
- IAT results will remain anonymous in the research findings.

If, in practice in the field, it is not possible to create equivalent groups, or it is not possible to form the groups through random selection, the researcher intends to continue on the basis of a quasi-experiment design (as defined by Cook and Campbell, 1979, cited in Denscombe, 2014, p.76).

Qualitative Component:

The researcher aims to provide a pre, mid and post study questionnaire to Group A that will incorporate both closed and open questions. This component of the research will seek to answer questions 3 and 4 under research aims and provide a more complete picture.

The sequence is shown below:

QUAN, QUAL—X—X—QUAN—X—X—X—QUAN, QUAL

QUAN = IAT

QUAL = Questionnaire

X = Intervention

Image 4: Sequence of quantitative and qualitative measures

The researcher will be participating in an emergent process of coaching in which the techniques used inside of the individual coaching sessions will diverge from coachee to coachee, from session 2 to 4. For this reason, the researcher will maintain a diary for reflection and capture of learning. This process will take place inside of an action learning cycle in which different techniques may be researched and feed into the practice of coaching, on an ongoing basis (as described by Denscombe, 2014, p.125).

Sources of Data and Intended Analysis

1. IAT results of coachees taken pre, mid and post study.
2. IAT results of control group participants taken at similar intervals.
3. Questionnaires taken pre, mid and post-study by coachees.
4. Audio recording and transcriptions of coaching sessions.
5. Coaching session notes.
6. Journal kept by the Coach/Researcher capturing post-session notes and reflections.

Data Source	Intended Analysis
Group A IAT Results	Statistical analysis of change from Pre, Mid to Post testing to determine if there is a change in measurable unconscious bias. The significance will be compared to studies conducted in psychological research using the IAT, in the absence of any like studies in the field of coaching.
Group B IAT Results	Statistical analysis of change from Pre, Mid to Post testing to determine if there is a change in measurable unconscious bias in comparison to Group A. This is solely for the purpose of identifying if testing effect has occurred in Group A results.
Questionnaire results	Coachees' perceptions of learning and outcomes (conscious mind) will be compared to the IAT results. In addition, the perceived usefulness of the 'allyship' frame and other activities that were undertaken as an outcome of coaching will be captured.
Researcher/Coach Journal, Coaching Session Transcripts, Coaching Session handwritten notes.	If positive change occurs in Group A IAT results, the researcher will seek to identify any common techniques used to establish a more specific correlation between coaching and the IAT results. Coaching transcripts will be used to assist accurate recall. Should positive change not occur as a result of the coaching, a summary of techniques and reflections, including learnings as the practitioner-researcher will form an alternative focus.

Image 5: Data sources and intended analysis

Research Ethics and Insider Research

Informed Consent	In order to ensure that participants are volunteers who have not been pressured to participate, a communication process will be designed that allows individuals to access the same information centrally and complete an online form to indicate interest in participating. The volunteer list will remain confidential from Sponsors. Participants will sign an agreement containing clear information re what consent entails, requires and implies following selection.
Withdrawal	Participants will be volunteers who can withdraw from the study if they choose.
Beneficence	Coachees will work on the bias that they are personally motivated to change, based on their own interest in contributing to social change.
Confidentiality and Anonymity	Participant identities will be protected, with coding used in the researchers' journal to ensure confidentiality and the Journal will be saved to OneDrive. Handwritten notes from coaching sessions will be kept on a Remarkable tablet that is secured by password and backed up to an encrypted server based in Europe (Remarkable, 2023). Coaching sessions will be transcribed by the researcher using Otter.ai and transcripts will be stored there and in OneDrive. Both locations are encrypted and comply with GDPR standards (Microsoft, 2023; Otter.ai, 2023). All transcripts and notes from coaching sessions will be deleted following the marking of the research report. Organisational Sponsors will not be informed of the content of coaching conversations and made aware of this. Reporting at an individual coachee level will be limited to attendance/participation and, at an aggregate level, reporting on 'goals' will be limited to anonymised reporting on which bias's participants have chosen to focus on. Both coachees and Sponsors will be informed of this in the Agreement documents as per professional association ethics (The International Coaching Federation, 2021, p.4). IAT results will be sourced from the Harvard Project Implicit website, which states that the data will be encrypted. Participants' data will also contribute to the longitudinal study at the University of Virginia that is collating IAT results internationally. They will provide their consent for this with every use (Project Implicit, 2023) and be made aware of this in the Participant Consent Form (Appendix 1). Consent and Agreements will be managed via Dropbox Sign.
Debriefing	Both the Organisational Partner (management level) and all participants will be offered the opportunity to view a presentation of findings at the end of the research project. All participants will see their IAT result as part of the assessment process (at the point of taking the assessment online).

Image 6: Research Ethics Table

Insider Research

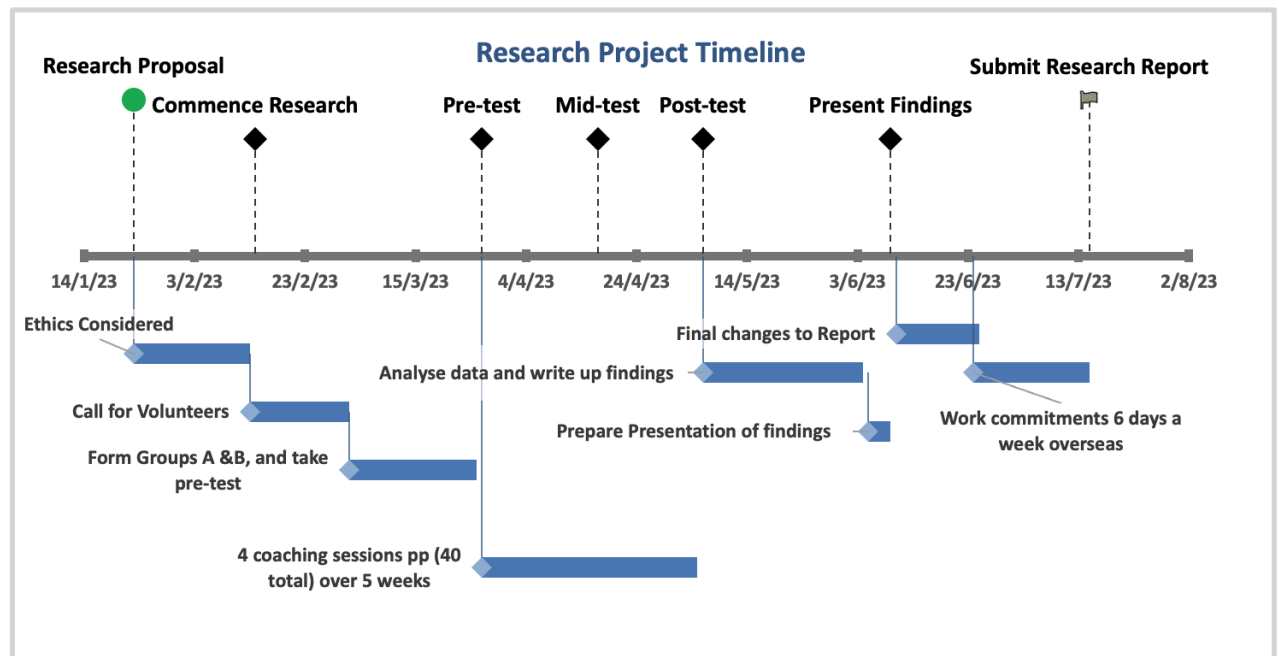
Discussion of risks is informed by Costley, Elliott and Gibbs (2010, pp.30-34) description of advantages and disadvantages of insider research.

Potential Risk	Response
<i>In relation to the Water Corporation</i>	
1. Casual Contact within the organisation	The researcher is not an employee of the organisation with casual contact with any participants. There is no risk of casual observations of people unaware of participating in research, or of continued future contact
2. Access to and use of data without permission	The researcher has no access to data as a result of anything other than the action research.
3. Compromised anonymity for the organisation	There is also no reason that the organisation will be automatically identified in connection to the researcher should they choose to remain anonymous in relation to findings.
4. Power dynamics compromising participant choice	Power dynamics that could be involved in Sponsors requesting subordinates to participate will be addressed via controlled communication in self-nomination and selection process for volunteers.
5. Relationship with Sponsors	Both Sponsors are clients who will be receiving coach mentoring as part of their coaching qualifications in 2023, however they will not be participating in the action research. Clear agreement will be in place regarding reporting on coaching conversations, and the Sponsors are familiar with this standard of confidentiality for coaching.
<i>In relation to the Neuro Coaching Academy</i>	
6. Use of resources and ownership of IP	The resources of the organisation will be directed to supporting this project part-time, and as a sole trader, the intellectual property rights will remain that of the researcher. The written agreement with the organisation will reflect this and the UK copyright laws will also support this as the project is for private study, with no remuneration for the researcher (Costley, Elliott and Gibbs, 2010).
7. Significant potential commercial benefits for the business depending on a positive result	The quantitative component of the research design using the IAT mitigates risk that bias could impact the measurement of outcomes.

Image 7: Insider Research Risks Table

Project Schedule and Logistics

Schedule



Tasks

Start	End	Duration	Label
23/1/23	13/2/23	21	Ethics Considered
13/2/23	2/3/23	18	Call for Volunteers
3/3/23	26/3/23	23	Form Groups A & B, and take pre-test
27/3/23	5/5/23	39	4 coaching sessions pp (40 total) over 5 weeks
6/5/23	4/6/23	29	Analyse data and write up findings
5/6/23	9/6/23	4	Prepare Presentation of findings
10/6/23	14/7/23	15	Final changes to Report
24/6/23	15/7/23	21	Work commitments 6 days a week overseas

Insert new rows above this one

Milestones

Date	Label
23/1/23	Research Proposal
14/2/23	Commence Research
27/3/23	Pre-test
17/4/23	Mid-test
6/5/23	Post-test
9/6/23	Present Findings
15/7/23	Submit Research Report

Insert new rows above this one

Image 8: Project Timeline, Tasks and Milestones

Logistics

The organisation investment will be limited to the attendance of participants during work hours and providing physical meeting rooms. The coaching services will be delivered at no charge. All participants will use their work computers to take the IAT on the same browser and submit a PDF print out by email.

The Researcher will be assisted in the logistics of the project by the Neuro Coaching Academy Virtual Assistant (VA). All tasks that would be assigned to the VA and hardware and software required are familiar from normal business operations and suitable for the role of a Research Assistant. Support with the logistics of scheduling and tracking will be key to the success of the project.

See Appendix 2 for further details.

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Appendix 1:

Appendix 2:

Detail of Logistics

Considerations	Details	Provided by
Physical location of in-person coaching	For 2.5 – 3 day blocks in a week.	Water Corporation in two locations in Perth metro area.
Scheduling and reminders for 50 coaching sessions	All appointments with coachees will be scheduled during the 'set-up' period. Reminders will be issued by SMS, enabling a confirmation response.	Virtual Assistant (VA), with supervision by Researcher.
Standard written communication	All emails and SMS reminders re scheduling will be standardised and issued using the CRM software.	Written by Researcher Bulk messaging and tracking of responses by VA.
Data collection from coaching sessions	Coaching sessions will be transcribed, stored on encrypted cloud services and purged by the researcher manually after marking of the paper. The handwritten records of the coaching sessions will also be destroyed by the researcher on the digital device and backup.	The Researcher only.
Participant's viewing of 'pre-framing' video online prior to first coaching session	Video will be hosted on Vimeo Pro (not visible to public) and embedded in e-learning platform that enables the Researcher to track who has viewed it.	The Researcher to create video. VA to issue logins to participants, reminders to view leading to first session and maintain tracking of this.
Participant Individual Agreements	Agreements will be issued and collected digitally using Dropbox Sign.	The Researcher, supported by VA.
Data collection from Coachee Questionnaire	To be built and issued using Survey Monkey.	Researcher to design and VA to build under supervision. Researcher to retrieve data.

Endnotes

ⁱ The project is currently designed in a timeframe to enable presentation of findings, and a further 2 weeks to complete the Research Report several weeks short of the submission deadline of 15 July 2023. This is due to the researcher's contract to deliver coaching in Canada 6 days per week in February - March and from the last week of June up to the submission date. **The timeline reflects a condensed action learning/practical component of 4 coaching sessions over 5 weeks to accommodate this work commitment.**

The researcher has requested the ability to submit in something closer to the eight months from ethics approval being received (closer to October 2023) that is discussed the Module Guideline. In this case, the action learning component would move to 4 coaching sessions fortnightly, instead of weekly. This change would be more in keeping with the norm.