Mixed research methods: How? Why?

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The project acknowledges the contributions of:
Outline

• Define mixed methods and some key terms
• A mixed methods study
  – Communication and perceptions of fairness
• Why use mixed methods?
‘Doing mixed methods research means employing both qualitative and quantitative methods of data collection and analysis in a single study’ (Krivokapic-Skoko & O’Neill, 2009, p279)

‘... in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research’ (Creswell, 2003, p212)

‘.... in a single study or in a series of studies that investigate the same underlying phenomenon’ (Onwuegbuzie & Leech, 2006, p474)

‘I consider a study “mixed methods” if it used strategies drawn from both approaches, regardless of how these were labeled, and used these strategies in ways that were mutually informative, rather than separate and compartmentalized’ (Maxwell, 2015)

Natural and social sciences combined qualitative and quantitative long before they became ‘mixed methods’ – presenting MM as a 3rd paradigm can ignore much research done over generations (Maxwell, 2015)
Mixed methods – key terms

- Triangulation – identify convergence, corroboration, to enhance validity, credibility (Greene et al, 2011) or paradox to generate new inquiry
- Focus on the ‘particular’
- Explore for meaning
- Focus on generalisability
- Focus on causation
- Engagement with context and allowing different questions to arise
- Standardisation and minimisation of extraneous influence
The goalkeeper’s brain explosion

How might communication help?
The ‘fair process effect’

- people react more positively when they perceive fair treatment, more negatively when they perceive unfair treatment

- unfairness is more powerful

(van den Bos, 2005)
Fairness heuristic theory

- People use distinct experiences of fairness to create a perception of general fairness that drives subsequent judgements and reactions (e.g., trust, prosocial behaviour) (Ambrose & Arnaud, 2005)

- Particularly important when ceding authority
Interview data – Players notice things

• .. if he’s slow and doesn’t know what he’s saying when he speaks before the game.. so he’s going to be a pretty casual ref .. but if the guy’s like real professional spoken.. you just know that he’s going to be professional (focus group 2.77).

• [good refs] pull you up and they’ll like explain things to you ..and you’ll get some refs and you’ll ask them what’s wrong and they’ll say ‘don’t talk back’ (focus group 3.58)

• If the ref’s calm the players are going to be calm too. Cause if the ref’s like screaming at you, you’re not going to talk back to them in a nice way .. Players scream back at him and then that causes yellow cards .. It changes the game (focus group 3.164)
Data reduction, display and transformation
(Onwuegbuzie & Leech 2006, p491)

• **Data reduction** involves reducing the dimensionality of the qualitative data (via thematic analysis, memoing) or quantitative data (via descriptive stats - factor, cluster)

• **Data display** involves describing pictorially qualitative data (matrices, charts, Venn diagrams etc) and quantitative data (tables, graphs)

• Qualitative
  – Competence, Dependability, Respectfulness and related referee behaviours and displays

• **Transformed** to operationalisable variables - Age, Explanation, Anger, Calm

• Quantitative
  – Age, Content, Tone,
<table>
<thead>
<tr>
<th>IDEAL</th>
<th>Property</th>
<th>Negative communication (unfairness)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competent to judge and do the job</td>
<td>Physical</td>
<td>Overweight, frailty, <strong>wrong age</strong>, Glasses, hearing aids</td>
</tr>
<tr>
<td></td>
<td>Mental</td>
<td>Slow speech, inarticulate, Frequent stops, Delayed decisions, <strong>Anger</strong> (inexperience), <strong>Youth</strong></td>
</tr>
<tr>
<td></td>
<td>Confidence</td>
<td>Faltering speech or <strong>no explanation</strong>, Changing mind, Limp gestures</td>
</tr>
<tr>
<td>Dependable under pressure</td>
<td>Consistency</td>
<td><strong>Angry</strong> voice, words, gesture (fear, unpredictable) Repeated warnings, Disorganised, unprepared <strong>Over familiar</strong> with some players, Only using some names, Picking on a player, Sloppy dress, grooming</td>
</tr>
<tr>
<td></td>
<td>Resilience</td>
<td>Changing mind, panic in voice (yielding to pressure), <strong>Youth</strong> (fearful, yielding, angry)</td>
</tr>
<tr>
<td>Respectful to players</td>
<td>Accountability</td>
<td><strong>Ignoring</strong> and turning back on players (arrogance) Sharp gestures, <strong>Not explaining</strong>, Severe penalties, Frequent stops, Fluoro clothes, <strong>Youth</strong> (punitive)</td>
</tr>
<tr>
<td>(Simmons 2007)</td>
<td>Personality</td>
<td>Shouting, <strong>arrogant</strong>, swearing (aggressive), <strong>ignoring</strong></td>
</tr>
<tr>
<td>IDEAL</td>
<td>Property</td>
<td>Positive Communication (fairness)</td>
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<tr>
<td>Competent to judge and do the job</td>
<td>Physical</td>
<td>Athleticism and stature (to keep up with play)</td>
</tr>
<tr>
<td></td>
<td>Mental</td>
<td>Quick and articulate speech, Quick decisions, <strong>Calm</strong>, Experience, Flowing play, recognising ‘diving’</td>
</tr>
<tr>
<td></td>
<td>Confidence</td>
<td>Firm voice, strong posture and body language, Clear speech, <strong>Explaining</strong></td>
</tr>
<tr>
<td>Dependable under pressure</td>
<td>Consistency</td>
<td><strong>Calm</strong> voice and manner, Equal treatment, Sticks to rules, Does as says, Carry out threats, Organised and professional, Clean and well-groomed</td>
</tr>
<tr>
<td></td>
<td>Resilience</td>
<td><strong>Calm</strong>, not reacting to player and spectator pressure, Mature, unfaltering voice. Experience</td>
</tr>
<tr>
<td>Respectful to players (Simmons 2007)</td>
<td>Accountability</td>
<td><strong>Listening</strong>. Explaining decisions, Approachable, Keeps play flowing, Chooses lesser penalty option. Admits when wrong or can’t see.</td>
</tr>
<tr>
<td></td>
<td>Personality</td>
<td><strong>Calm</strong>, Approachable, Talk to players as required.</td>
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</table>
AUS players’ ideal of fair referee

(Simmons, 2011)
Online experiment

http://wsww01.csumain.csu.edu.au/psysurveys/ps%5Fsurvey/

• Test influence of independent (referee) variables:
  – Anger
  – Explanation
  – Age

• On player perceptions of
  – Referee fairness (4 item)
  – Correctness of decision (1 item)

• 3 languages
• 5 countries
• n = > 4500
Randomly assigned vignettes

Imagine you are playing in a competition football match and it’s midway through the second half. The game has been played hard by both teams and it’s been a very even and physical contest.

Both teams have hit the goalposts but no goals have been scored.

An opponent is several metres outside your penalty area dribbling towards goal. You slide in from the side and clear the ball away.

You feel the tackle is probably legal.

1. Explain

The 18 year old referee blows his whistle and signals a free kick in favour of your opponents.

You ask him “What’s that for ref?”

He says “It’s a free kick” and explains “you got the ball alright, but there was contact with the player before the contact with the ball.”

2. No explain

The 18 year old referee blows his whistle and signals a free kick in favour of your opponents.

You ask him “What’s that for ref?”

He says “It’s a free kick. Just get on with the game”.

http://wsww01.csumain.csu.edu.au/psysurveys/ps%5Fsurvey/
Experiment data – Explain v not explain decision

Explanation improves perception of fairness of referee (except Malaysia) $p<0.05$

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<thead>
<tr>
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<th>Explain</th>
<th>Ignore</th>
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<tr>
<td>Australia</td>
<td>22.95</td>
<td>17.92</td>
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<tr>
<td>Malaysia</td>
<td>20.16</td>
<td>20.14</td>
</tr>
<tr>
<td>Singapore</td>
<td>24.21</td>
<td>18.33</td>
</tr>
<tr>
<td>Spain</td>
<td>22.63</td>
<td>18.55</td>
</tr>
<tr>
<td>GBR</td>
<td>24.98</td>
<td>14.96</td>
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Explanation improves perception of correctness of decision (except Malaysia) $p<0.05$

<table>
<thead>
<tr>
<th></th>
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<th>Ignore</th>
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</thead>
<tbody>
<tr>
<td>Australia</td>
<td>5.04</td>
<td>3.82</td>
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<tr>
<td>Malaysia</td>
<td>4.76</td>
<td>5.06</td>
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<tr>
<td>Singapore</td>
<td>5.37</td>
<td>4.1</td>
</tr>
<tr>
<td>Spain</td>
<td>4.65</td>
<td>3.6</td>
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<tr>
<td>GBR</td>
<td>5.36</td>
<td>2.84</td>
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Why mixed methods?

• To address the shortcoming of the other method – to explore meaning, to generalise
• To explore different perspectives
• Credibility and utility with different audiences (users and decision-makers)
• To provide evidence of ‘significance’ that helps decision-makers differentiate options
• To develop insights that resonate with decision-makers
• Researcher confidence in understanding –
  4 minute video of doctorate:
  https://www.youtube.com/watch?v=cKxav2JzuK0
References