Academic Writing across Genres: Language Choices in Research Articles and Impact Case Studies

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Context

• Different “academic” genres
• Funding council “Research Excellence Framework” (REF) (cf. VQR in Italy, SEP in the Netherlands, AERES in France, Rebora and Turri, 2013)
• 2014: included “Impact Case Studies”
• -> high stakes: attracts funding for universities!
• Impact: “an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia” (REF, 2011: 48)
Defining the Genre

1. What are linguistic differences between Impact Case Studies and Research Articles?

2. Are there differences between Impact Case Studies that received high and those that were given low scores?

3. How do these differences relate to Research Articles?
Impact case study (REF30)

Institution: University of Bristol

Unit of Assessment: 1 – Clinical Medicine

Title of case study: Delivering better birth outcomes: reducing maternal and child mortality in low-resource settings

1. Summary of the Impact (indicative maximum 150 words)

As a result of a research-based training program and partnerships, the lives of mothers and children in low-resource settings have been improved. The program has been successful in over 20 countries worldwide, reducing maternal and child mortality in low-resource settings.

2. Underpinning research (indicative maximum 650 words)

Safety in maternity services is a priority for women, their families, and health services. Obstetric emergencies are low-probability, high-stakes events that demand coordinated and immediate response from expert teams. The Safe (Situation-Prevention-Preparation) approach, funded by the UK Department of Health (2013-2015), was a multi-centre, randomised controlled trial of obstetric emergency training. The research was carried out by Bristol researchers (led at the end of this section) in collaboration with midwifery staff across the South West. This 27+ factorial design randomised trials compared high-intensity, simulation-centre training with the same intervention delivered in a low-technology setting, in front of hospital setting, with or without team training.

The trial identified that the research-based training programme for obstetric emergencies developed by the Bristol team for the SaFe study improved knowledge, skills, and attitudes for all staff and that these improvements lasted for at least 15 months. Additional team training and feedback from the simulation centre did not confer any additional benefit compared to training delivery. These were encouraging that the improvements were demonstrated only in simulations. At that time there was no robust evidence that demonstrated improvements in clinical outcomes for mothers and their babies associated with training. Indeed, there were two studies in the US and UK that demonstrated no change, or even deterioration in clinical outcomes post-training.

The training programme for the SaFe study was further developed using input and data from the study. It was then implemented at Southmead Hospital in Bristol and its effect evaluated using an observational review of clinical outcomes comparing five years of SaFe pre-training data. Following the introduction of training the Bristol research team identified significant clinical benefits (published in landmark papers – see section 3 for six papers that collectively have more than 400 citations):

1. A 10% reduction in birth outcomes in low-resource settings
2. A 70% reduction in neonatal deaths
3. A 50% reduction in the time taken to identify and treat complications of pre-eclampsia
4. Improved vertical transmission of HIV, reducing the incidence of HIV-1 among babies born to HIV-positive mothers

In response to demand from maternity units across the world, the Bristol team has developed PROMPT – a Practical Obstetric Multi-Professional Training package, which has been successfully implemented in over 20 countries worldwide. PROMPT has had a major impact on the health and welfare of thousands of mothers and their babies, as well as bringing substantial economic benefits and supporting international development.
The Corpus

- Unit of Assessment “Psychology, Psychiatry, Neuroscience”
- 10 Impact Case Studies from 4 universities (guaranteed high scoring: 4*)
  - “ICS-high”
- Research Articles cited as “underpinning research” in those case studies
  - “RA”
- 4 Impact Case Studies from 2 universities (guaranteed low scoring: 1*/2*)
  - “ICS-low”
The Corpus

<table>
<thead>
<tr>
<th></th>
<th>Impact Case Studies (high)</th>
<th>Research Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Files</strong></td>
<td>10</td>
<td>46</td>
</tr>
<tr>
<td><strong>Tokens (Lancsbox)</strong></td>
<td>Ca. 16,000</td>
<td>Ca. 235,000</td>
</tr>
<tr>
<td><strong>Types (Lancsbox)</strong></td>
<td>Ca. 3,000</td>
<td>Ca. 14,000</td>
</tr>
<tr>
<td><strong>Type-Token-Ratio</strong></td>
<td>38.6</td>
<td>37.1</td>
</tr>
</tbody>
</table>

(Standardised for 1,000, based on WS Tools)
Searches

- Keyword searches (RA vs ICS-high, ICS-high vs ICS-low)
- 3-grams and 4-grams in RA, ICS-high and ICS-low (any string of 3 or 4 words)
- KWIC for each Keyword and 3/4-gram
- Tools used:
  - WordSmith Tools to extract keywords and normalised type-token ratio (Scott, 2013)
  - AntConc to extract n-grams (Anthony, 2014)
  - LancsBox for KWIC lines, range, collocations and normalised frequencies of types (Brezina et al., 2015)
Results 1: Features of Impact Case Studies

• Names, **people**: “professor”, “institute”, “he”
  • Agency

• **Time frame**: “September”, “2012”

➢ More explicit about who did what when
Results 2: Features of Research Articles

• Details of the research
  • Methods, experimental design: “participants”, “sample”, “expected”
  • Results, analysis: “p”, “data”, “mean”

• Epistemic modality – how certain is the writer about their claim?
  • KW: “may”, “possible”
  • 4-grams (not in ICS!): “are likely to be”, “it is possible that”
  ➢ Absence in ICS: Do funding-related ICS argue the case for impacts that have occurred more strongly than when addressing peers in RA?
    (see Watermeyer and Hedgecoe, 2016)
Results 3: High-scoring ICS – Specificity

- 3-gram “was the first (… to)” (high) vs “the first to” (low)
  - “the first in the world to”
  - “the first, and to date only, prospective study to”
  - More specific with fewer words -> more persuasive within word limit

- KW “European”: 10x in 4/10 texts; 7/10 occurrences are institutions
  - European Commission, European Food Information Council
Results 3: High-scoring ICS – Causal pathway

<table>
<thead>
<tr>
<th></th>
<th>frequency</th>
<th>per 10,000 words</th>
<th>range</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Led to”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICS high</td>
<td>18</td>
<td>11.13</td>
<td>9/10</td>
</tr>
<tr>
<td>ICS low</td>
<td>3</td>
<td>5.37</td>
<td>3/4</td>
</tr>
<tr>
<td>“funded by”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICS high</td>
<td>6</td>
<td>3.17</td>
<td>5/10</td>
</tr>
<tr>
<td>ICS low</td>
<td>1</td>
<td>1.79</td>
<td>1/4</td>
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</table>

- “led to”:
  - Insights, conclusions
  - policy recommendations, ministerial decisions, the introduction of legislation

- “funded by”:
  - UK and EU Research councils, government departments, company names
  - Prestige – proxies for importance and/or application
Results 3: Low-scoring ICS – Less specificity

• 3-gram “a range of”
  • Combining examples – not strong enough to be persuasive in their own right?
  • ICS-low: “a range of health professionals”, “a range of comments”
  • ICS-high: “… funded by a range of sources: (...) our research (...) has been supported Nationally and Internationally (£3-4 million from ESRC, MRC, NHS and UK and US Governments).”

• KW “improvement”
  • Appears in ICS-low but not ICS-high. ICS-high more specific in what the improvement is?
Is “Impact Case Study” a separate genre?

<table>
<thead>
<tr>
<th>Genre</th>
<th>Feature</th>
<th>RA</th>
<th>ICS low</th>
<th>ICS high</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS</td>
<td>Agency</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Time frame</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>RA</td>
<td>Epistemic modality</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Methods</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ICS-High</td>
<td>Strong, specific evidence</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Dense persuasive text</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Causal pathway</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>
What next?

- Metadiscourse – stance and engagement markers in ICS and RA?
- Different disciplines: RA differ across disciplines (e.g. Gray, 2015; van Enk and Power, 2017), same for ICS?
- Suggestions, comments?

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References


Impact Case Studies – an “academic” genre?

- Systematic differences in the language
- University “impact coordinator” -> streamlining of style within a department or even faculty
- 60% of top-scoring ICS from prestigious universities (Russell Group / Red Brick)