IRAC + MEAL Writing Framework Example

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YouTube

Transforming Your Research Writing: ***Using IRAC + MEAL to Build Stronger Arguments for Research*** **http://www.youtube.com/@dr.lauraannmigliore**

🔷 How to Integrate IRAC + MEAL

Use the IRAC framework to strategically develop and present a strong argument for your research. IRAC guides the logical structure of your major sections – such as the Problem Statement, Purpose Statement, and Rationale – by framing the issue, grounding it in scholarly rules, applying it to your study context, and concluding with a compelling rationale. Within each section, use the MEAL Plan to construct clear, evidence-based paragraphs that support your argument with coherence and flow. Together, IRAC and MEAL elevate your academic writing from merely descriptive to powerfully persuasive, ensuring your proposal demonstrates critical thinking and scholarly intent.

*IRAC Example (Commercial Space Industry)

• **Issue:** Few empirical studies have explored how upstream supply chain transparency impacts manufacturing efficiency among OEM partners in the commercial space industry.

• **Rule:** According to recent research by Berger (2023), McKinsey & Company (2024), and NASA's Office of Inspector General (2023), aerospace OEMs like SpaceX and Blue Origin increasingly rely on distributed, high-tech supplier networks—but often lack real-time data sharing standards.

• **Application:** These findings highlight gaps in real-time visibility protocols and predictive inventory models across privately held space firms, yet they do not specifically examine collaborative data-sharing mechanisms between primary OEMs and secondary suppliers.

• **Conclusion:** This lack of clarity justifies the need for a focused study on how strategic data transparency between Tier 1 suppliers and OEMs influences production timelines, cost containment, and risk mitigation in the space launch ecosystem.

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*MEAL Plan Example (for a Problem Statement Paragraph)

• **Main Idea (M):** The commercial space industry faces growing pressure to streamline supply chains as launch demand increases **[Cite source(s)].**

• **Evidence (E):** A recent Deloitte report revealed that over 65% of launch delays stem from inefficiencies in multi-tier supply coordination, particularly in critical engine and avionics components **[Cite source(s)].** For example, a 2023 satellite integration program experienced a 6-week delay when a Tier 2 subcontractor failed to deliver heat-shielding materials due to mismatched production forecasts – data that was not visible to the OEM until the delay occurred.

• **Analysis (A):** This highlights a critical vulnerability for OEMs like SpaceX and Blue Origin, whose vertical integration models still rely heavily on just-in-time inventory strategies **[Cite source(s)].** Without shared data systems across their supply chain, both firms risk delays and cost overruns **[Cite source(s)].**

• **Link (L):** Thus, a closer investigation into collaborative supply chain transparency mechanisms may yield actionable insights for improving efficiency and resilience in next-generation space launch operations **[Cite source(s)].** This qualitative needs assessment study will explore the perceptions, challenges, and expectations of key decision-makers within OEM and Tier 1 supplier firms in the commercial space industry. The aim is to identify specific data-sharing needs, communication breakdowns, and opportunities for implementing collaborative solutions that enhance visibility and performance across the supply chain.

*Example of a Polished Problem Statement for Research:

The commercial space industry faces growing pressure to streamline supply chains as launch demand increases **[Cite source(s)].** A recent Deloitte report revealed that over 65% of launch delays stem from inefficiencies in multi-tier supply coordination, particularly in critical engine and avionics components **[Cite source(s)].** For example, a 2023 satellite integration program experienced a 6-week delay when a Tier 2 subcontractor failed to deliver heat-shielding materials due to mismatched production forecasts – data that was not visible to the OEM until the delay occurred. This highlights

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a critical vulnerability for OEMs like SpaceX and Blue Origin, whose vertical integration models still rely heavily on just-in-time inventory strategies **[Cite source(s)].** Without shared data systems across their supply chain, both firms risk delays and cost overruns **[Cite source(s)].**

Thus, a closer investigation into collaborative supply chain transparency mechanisms may yield actionable insights for improving efficiency and resilience in next-generation space launch operations. This qualitative needs assessment study will explore the perceptions, challenges, and expectations of key decision-makers within OEM and Tier 1 supplier firms in the commercial space industry. The aim is to identify specific data-sharing needs, communication breakdowns, and opportunities for implementing collaborative solutions that enhance visibility and performance across the supply chain.

***Note from Dr. LauraAnn**
The example provided here is for educational and demonstration purposes only. While it reflects real challenges in the aerospace sector, it may lack current or company-specific detail and should not be interpreted as definitive research. Proper due diligence is required when designing your own study. The sources cited are intended as a starting point.

Online Sources:

🔗 **Elicit – explore relevant scholarly papers:** https://elicit.com/notebook/6aefa97d-4a09-43ac-8b66-7549612b7617

Roland Berger (2023) – Resilience in Aerospace Supply Chains

McKinsey & Company (2024) – Commercial Aerospace Supply Chain Insights
https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/addressing-continued-turbulence-the-commercial-aerospace-supply-chain#/

NASA OIG Report (2023) – NASA Artemis Supply Chain Management