

# Chapter 4

## Experiments

### 4.2 Literature Search and coding for Project Management in Healthcare

#### **Experiment 1**

##### **Prompt:**

*I am conducting a thorough exploration of project management strategies or processes or anything else project management related that can be employed to successfully deliver Digital Transformation (DT) projects in NHS and Community Health Services. Generate a Boolean search string for WoS based on the provided information.*

Figure (1) – Initial prompt to instruct LLM to generate a Boolean search string for WoS

##### **Output from LLM:**

*("digital transformation" OR "digital health" OR "healthcare digitalisation" OR "eHealth initiatives" OR "health IT implementation") AND ("project management" OR "project delivery" OR "program management" OR "change management" OR Agile OR PRINCE2 OR "Waterfall methodology" OR "Lean management" OR "Kotter's change model" OR ADKAR) AND (healthcare OR "health care" OR "health services" OR NHS OR "National Health Service" OR "Community Health Services" OR CHS) AND (UK OR "United Kingdom" OR Britain OR British)*

Figure (2) – AI generated Boolean search string

#### **Experiment 2**

##### **Prompt:**

*Amend the Boolean string so that it does not include UK and concentrate only on PRINCE2 methodology*

Figure (3) – Boolean string refinement to exclude UK and include PRINCE2

### Output from LLM:

*("digital transformation" OR "digital health" OR "healthcare digitalisation" OR "eHealth initiatives" OR "health IT implementation") AND (PRINCE2 OR "PRINCE2 methodology" OR "PRINCE2 project management") AND (healthcare OR "health care" OR "health services" OR "Community Health Services" OR CHS)*

Figure (4) – The refined AI generated Boolean search string excluding UK and including PRINCE2

### Experiment 3

#### Prompt:

*Now, create a Boolean search string that does not include PRINCE2, but project management of digital transformation in healthcare.*

Figure (5) – Boolean string refinement to exclude PRINCE2

### Output from LLM:

*("digital transformation" OR "digital health" OR "healthcare digitalisation" OR "health IT implementation" OR "eHealth initiatives") AND ("project management" OR "program management" OR "project delivery" OR "project governance" OR "implementation strategy") AND (healthcare OR "health care" OR "health services" OR "community health" OR "medical services")*

Figure (6) – The refined AI generated Boolean search string excluding PRINCE2

### Experiment 4

#### Prompt:

*Create a Boolean search string for project management processes such as Stakeholder Management, Budget Management, Risk Management, Quality Management, and Time Management that are used to successfully deliver digital transformation initiatives in healthcare. The Boolean search string will be used on Web of Science to identify relevant literature on the subject.*

Figure (7) – Boolean string refinement to include various project management processes

**Output from LLM:**

*("digital transformation" OR "digital health" OR "eHealth" OR "telehealth" OR "health IT") AND ("project management" OR "Stakeholder Management" OR "Budget Management" OR "Risk Management" OR "Quality Management" OR "Time Management") AND (healthcare OR "health care" OR hospital\* OR "medical services")*

Figure (8) – The refined AI generated Boolean search string that includes various project management processes

#### 4.3.2 Literature Analysis and Coding in ATLAS.ti

**Prompt:**

*Let's create a prompt for ATLAS.ti coding to identify and code all mentions of project management strategies, practices, or processes that are used to support or deliver digital transformation initiatives in healthcare settings.*

Figure (9) – Prompt instruction to LLM to generate ATLAS.ti coding instructions

**Output from LLM:**

*Identify and code all mentions of project management strategies, practices, methodologies, or processes that support or enable the successful delivery of digital transformation initiatives in healthcare settings. Focus on key project management aspects such as planning, stakeholder engagement, risk management, budgeting, scheduling, quality control, and implementation. Include references to specific frameworks or tools (e.g., PRINCE2, Agile, Lean) when mentioned.*

Figure (10) – LLM generated coding instructions for ATLAS.ti analysis and coding