# Forming Research Questions

Moving from a topic to a specific research question is a critical step in the research process. As you read the literature, a conceptual framework of the topic should develop. A concept map (or mind map) can identify concepts and the relationships between concepts. At this point some idea of a suitable research question or statement will emerge (this is sometimes known as “illumination”). You will now want to narrow down your reading to focus on this problem.

***Research questions*** are often best framed using words like “how?”, “why?”, “what?” – open questions rather than closed. There are usually associated sub-questions.

***Problem statements*** put forward a thesis about a topic you believe to be true and that you intend to support and explain in your research report.

**Problem Statements/Research Questions:**

* structure your inquiry
* set limits on relevant information
* must be possible to answer (within capability and resources)
* must be narrow but not trivial
* need to be stated clearly and unambiguously
* are often stated as questions (can have sub-questions / sub-problems)
* should include at least two variables (two things interacting with each other)

**Types of Research Questions:**

Knight, P. (2002). *Small-scale research*. London: SAGE.

|  |  |
| --- | --- |
| **Descriptive**  Once considered low-level  Now regarded as legitimate | What?  Who?  Where?  When/ |
| **Evaluative**  Problem – from whose point of view? | How good?  How effective?  How serious/  How cost effective/ |
| **Narrative**  A form of descriptive | What…(happens)../  How …(does it happen)../ |
| **Causal**  Powerful  Can the answer be found? | Why/ |

**Examples of Research Questions:**

1. How is the problem of electronic waste being addressed?
2. What factors influence professional acceptance of computer technologies?
3. How can Internet retailing replicate the social experience of traditional shopping?
4. Why have small businesses in New Zealand failed to adopt e-business at expected levels?
5. How can elections be conducted fairly over the Internet?
6. How will agent technology impact on personal privacy?
7. What effect do network delays have on the perceived usability of distributed documents on the Internet?
8. What factors limit the effectiveness of email communication?

**Question**

What type of research question, as defined by Knight (2002) is each one of the above? Write your answer in the space below.

|  |  |
| --- | --- |
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |

**Examples of Problem Statements:**

1. E-waste : the IT industry can no longer ignore its responsibility
2. User selected passwords provide little real protection
3. Software agents: the next serious privacy threat
4. E-business: not yet a viable option for small businesses
5. General elections which use Internet voting can be fair
6. Universal Internet Access: why we should care
7. Wearable computers can measure up to the media hype.
8. Software projects are failing at an unacceptable rate.

# Examples :

**Topic**

Password security for users of computer networks

**Research** **Question**

How secure are user-selected passwords?

**Subquestions**

What counts as a “secure” password?

What are the characteristics of user-selected passwords?

What is the literature concerning user-selected passwords?

How well-informed are computer users about security threats?

What prompts computer users to choose more secure passwords?

**Topic**

E-waste

**Research** **Question**

How is the problem of electronic waste being addressed?

**Subquestions**

What is electronic waste?

Who is affected by electronic waste, and how?

How can e-waste be eliminated?

What are the options for re-cycling?

What are the incentives for businesses to minimise pollution?

What regulations have been introduced?

**Topic**

Democracy and Internet Voting

**Research** **Question**

How can elections be conducted fairly using Internet voting?

**Subquestions**

What constitutes a “fair” election?

What technological risks threaten the security of Internet voting?

What can be learned from elections which have trialled Internet voting previously?