32144 Technology Research Preparation

What is Research?

Given a problem or an issue, a "research question" is framed that when answered in the affirmative will address the issue. So a research problem:

- Focussed on a single well defined problem
- Researchable
- Feasible to answer within timeframe and practical constraints
- Specific enough to answer thoroughly
- Complex enough to require developing and validating the answer
- The potential answer is open to debate rather than accepted facts
- Relevant to your field of IT expertise

Why do we need Research?

The main purpose of **research** is to inform action, to prove a theory, and contribute to developing knowledge in a field or **study**. ... A Tool for Building Knowledge and for Facilitating Learning. Means to Understand Various Issues and Increase Public Awareness. An Aid to Business Success

The outcomes of Research are able to be independently replicated. This means research outcomes can be applied anywhere ideas can be communicated and by anyone with the requisite skills.

Differences between Academic and Industrial Research.

Typical aspects	University	Industry
Focus of the R&D	Basic research; curiosity-oriented	Applied research; exp. develop.
Basic rationale	Advance knowledge	Increase efficiency
Aim	New ideas	Profits
Characteristics	Idea-centered	Practical, product-centered
Framework	Open	Close, confidential
Evaluation	By peers	By the boss
Schedule	Open-ended	Tight, predetermined
Recognition	Scientific honors	Salary increases

Source: Vedovello(1998)