



WHY DO I NEED TO RESEARCH MY TOPIC?

Thinking about what you want to research at the start, saves you time further down the line!

Research my topic



*Standing on the shoulders of giants
(Newton, 1676)*

Your Aim: It is really important to think as widely as possible about your topic. You need to have a clear focus for your work such as a question or idea that you want to investigate.

◆ If you simply rush into your project:

- 01 How will you know what has been discovered or developed already?
- 02 Perhaps someone else has had the same idea already?
- 03 You may miss important research that has been done in your area of interest.
- 04 You may miss a new development that would really help you or change your mind

◆ Putting some time aside to find out what has already been done and researched will:

- 01 Stop you doing unnecessary research or testing
- 02 Help you to understand the field or market you are working in
- 03 Give you facts about what is possible & key ideas in your area of research
- 04 Give you names/universities/businesses that are market leaders or experts in your field

WARNING!

If you don't get your focus correct from the start; then this could lead to problems later on, especially if you don't know what it is that you are trying to achieve.

You may need several thinking sessions in order to find your focus -think as widely as possible about your topic.

Set aside some time to generate your ideas. Record them in a format that suits you, for example; a spider diagram, post-it notes, lists, ideas board, Word.doc, PPT slide.

REMEMBER

At any stage of your project you might need or want to do some research so that you can make decisions based on real information. Use information to back up a hunch or idea.



Therefore it is useful to learn by "standing on the shoulders of giants." (Isaac Newton, 1676) or, to put it another way, using what has already been found out to inform your own thinking and to shape your investigations.

THERE ARE TWO KINDS OF RESEARCH THAT YOU CAN DO

The first is secondary research or looking at evidence produced by others (meaning you didn't do the actual research). Innovation means developing something new, but without knowing what has already been done in your area you will not know what is possible, what has already been learned or what mistakes have been made!



- ✓ You will need to think about what you want to find and plan how to start your search (key words, search terms).
- ✓ Your research might reveal that there is a gap in the market that you could fill. It could also show what people think about a certain topic.
- ✓ To do effective research you will need to find out about which databases are available and which search engines that you can use to access academic research. Ask your Librarian or Teacher, or contact a Local University for support.

You might decide to use a generative AI tool to answer the first three points. Make sure you make a note of the prompts you used and record the date you generated the answers. Try to choose at least two different AI platforms and reflect on what you decided to use and why.

- ✓ Academic research is more likely to present conclusions that are backed up by evidence and include research aims and methods. In this way you will be able to look at the data and make up your own mind about the findings rather than relying on a blog or newspaper journalist's opinion on the research.

- ✓ Research can help you with both academic and practical projects, for example, scientific and technical knowledge can help with designs and material choices or provide examples or case studies.

- ✓ You will need to review and go over the information that you have found: Do you need more answers? Has the research presented you with more questions?

If your project is more practical and involves creating a product or service then it's important to find out what people think and what they need. To do this you may need to carry out primary research and gather your own information using questionnaires or interviews.

- ✓ You may do this by interviewing people in general to gather opinions or 4 by asking specific questions to the potential users of your innovation.



As you gather the different kinds of information, you will be starting to firm up your ideas for your project. Once you start to put them into practice you may find that things don't go as you planned, so more research may be required. The information that you gather should enable you to improve your project.