NAWATE INQUIRY MAP

The Inquiry MAP illustrates the process of inquiry activities step by step. Let's proceed with the inquiry while checking essential items and points of caution with your team.

How to Use the INQUAIRY MAP

Step 1
Motivation and Purpose

The motivation is clearly explained
The purpose is clearly defined
The significance of the research is conveyed

☑Share with your team why this theme was

- Understand the steps in the Inquiry Process
- **Goals = Evaluation Points:** Understand what to focus on at each step
- ☑**Checklist:** Ensure all items are checked before moving to the next step

Advice for proceeding to the next step is shown in the arrows

ZONE 1 Planning and Preparing Experiments/Surveys

Step 1 Motivation and Purpose

The motivation is clearly explained

The purpose is clearly defined

The significance of the research is conveyed

☑Share with your team why this theme was chosen and what you aim to clarify

☑Make sure your team's focus: WHY or HOW

☑ Pick up relevant keywords for your topic

Use these keywords to search academic papers

Step 2 Positioning of this Research and Previous Studies

Have a good understanding of the previous research

Clearly distinguishes what is known and unknown in prior research

The relevance to this study is clearly shown

☑Read many papers to clarify what is already known

☑Clearly identify unknown aspects

☑Accurately present prior research

Clarify unknown aspects and connect them to RQ.

Step 3 Validity of Goals

The objective is appropriately positioned based on the research purpose and prior studies

A valid and concrete achievement objective

☑Develop multiple RQs and hypotheses based on evidence

☑Visualize your research methods (e.g. for hypothesis testing)

☑Check if the scope of your goal is appropriate

Focus on one RQ → form a hypothesis and specify methods

Step 4 Planning

Able to outline the path toward achieving the goal

The research is planned in several distinct stages

The plan is consistent with the research objectives

☑Share necessary steps and plans within the team

☑Plan the needed materials and time for experiments /surveys

☑Ensure your expected results align with your research goals

Step 5 Research Methods

An appropriate method for achieving the objective

The most suitable method was selected after considering multiple approaches

☑Thoroughly research existing methods used in prior studies.

☑Confirm that your methods are ethical and safe

☑Revise your plan based on preliminary results

Conduct preliminary experiments /surveys to finalize methods

★**If you don't thoroughly review previous research, you might end up doing exactly the same study!!**

Conducting experiments and survey

☑Conduct experiments / surveys according to your plan

☑Record all experimental details in a lab notebook

☑Do not falsify or fabricate data

- All team members must read and review the "Nawate Guidelines"
- Submit an Off-campus Activity Plan if conducting activities outside of school
- Always communicate and report to your supervisor!

Return to Step 3 and repeat the same process based on a new research question (RQ)

ZONE 2 Summarizing Experiments and Surveys

Step 6 Presenting Results Clearly and Specifically

Use appropriate and easy-to-understand visuals (graphs, charts, etc.) to present research findings

Select the most appropriate visuals after considering several options

☑Summarize data qualitatively/quantitatively as appropriate

☑Follow conventions for writing graphs and tables

☑Present results aligned with research goals

Step 7 Validity of Research Result

Conclusions and discussions are clear and logical

Show how your findings connect to the research goals

☑Base your discussion on logical reasoning, not intuition

☑Read as many papers as possible and use suitable analysis methods

Propose new RQs based on your findings

☑Propose a new research question (RQ) based on your discussion and analysis

Avoid logical leaps when interpreting results

★**Inquiry Level-Up Tip★** By reading many papers and gaining knowledge of various experimental and survey methods, you can take on more suitable experiments and investigations, leveling up your skills!

ZONE 3 How to Present Your Research

Step 8 Presentation Techniques

Present confidently and naturally

Communicate clearly using easy-to-understand explanation

☑Present in your own words, not by reading a script

☑All team members should present and answer questions with consistent quality

☑Fit your presentation within the allocated time

Differentiate between spoken and written language in your presentation and materials.

Step 9 Presentation Design

Follow poster and slide design rules

Maintain a good balance between text and visuals (charts/graphs)

☑Include all required sections

☑Follow proper citation and referencing rules

☑Ensure the document is visually clear and free of errors

Step10 Research Paper

Follow the structure and formatting rules

Ensure the layout is neat and free from typos

☑Include all required sections

☑Maintain consistent style, define key terms clearly, and ensure logical flow

☑The paper should be well-structured and easy to read

Include additional research content in the paper that was not covered in the presentation.

★**Practicing your presentation will level you up!!**

★The depth of your research depends on how many times you can repeat ZONE 1 and 2. Make a well-planned schedule and aim to conduct as many experiments and investigations as possible!!

★**Inquiry Level-Up Tip★**
By reading many research papers and learning various analytical methods, your insights will deepen and your inquiry level will improve!