

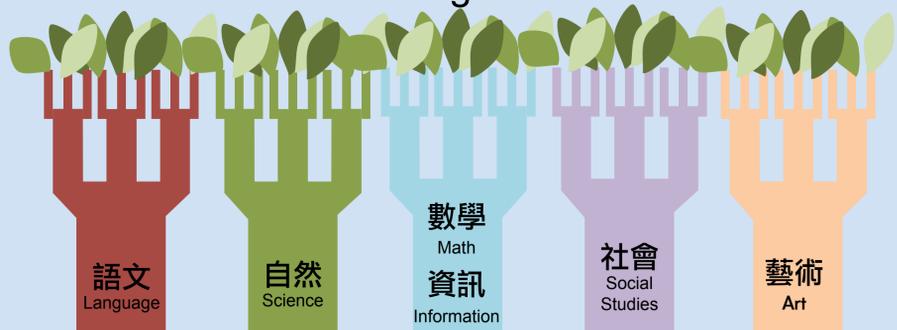
麗山高中研究方法與專題研究課程

Research Methods & Object Study course of LiShan High School

吳明德 繪
張舒涵 譯 2014年 9月20日

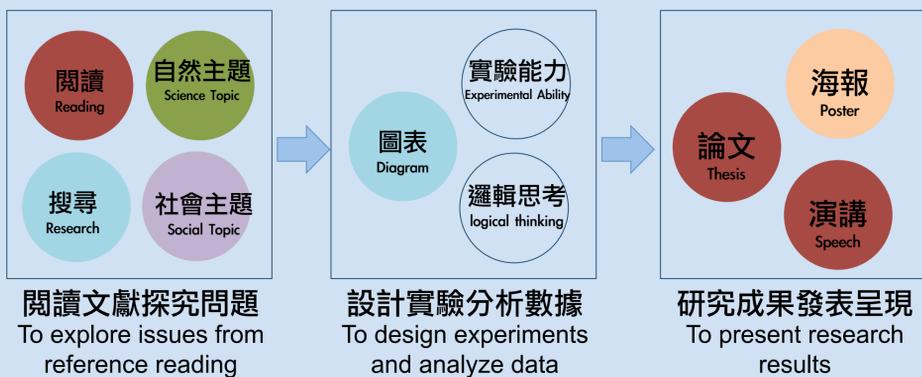
研方專題與一般課程差異？

What is the difference between Research Methods courses and regular courses?



傳統分科教育，各科獨立成為不同知識體系，學生學習過程中欠缺運用知識解決問題機會。

The traditional teaching method separates subjects into different independent knowledge systems. Student learning processes lack the opportunity to apply individual knowledge to solve problems.

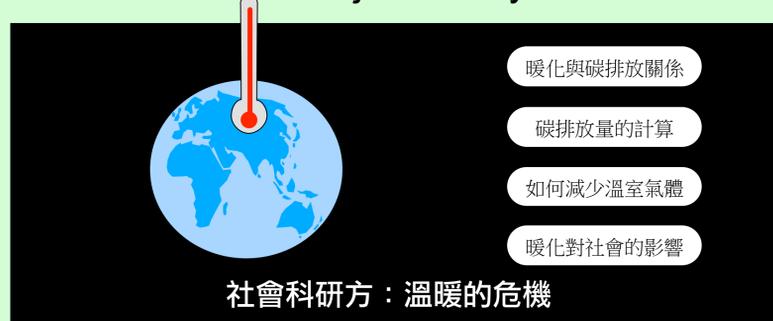


研方專題課程採主題式教學藉閱讀文獻、問題假設、實驗設計、數據分析、圖表呈現及表達等探究能力。

Research Methods and Object Study courses are delivered as theme lessons by reference reading, experiment design, data analysis, diagram presenting, presentation skills...etc.

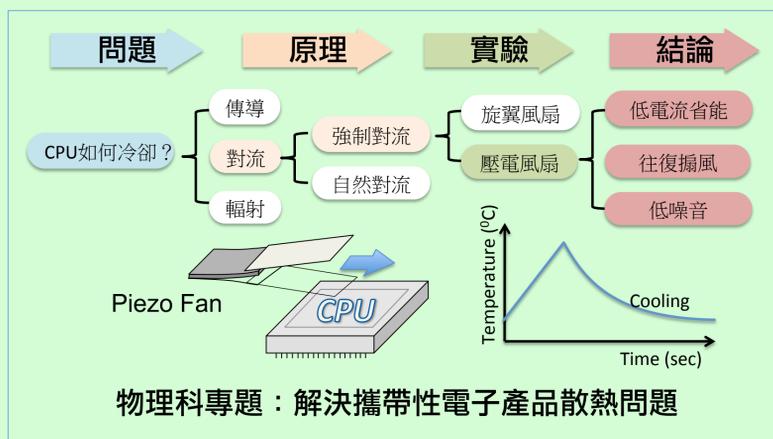
研方與專題有何不同？

What is the difference between Research Methods Courses and Object Study courses?



研究方法強調同學研究能力養成，藉討論共同主題，以集體教學與作業達到目的。

The research method emphasizes the importance on developing student research capacities through discussion of common topics and group activities to achieve objectives.



模型假設、執行實驗與成果報告。

The Object Study course emphasizes on developing the independent research ability of the group; from topic choice, model assumptions, experiment execution to result reporting.

研方專題的重要工具

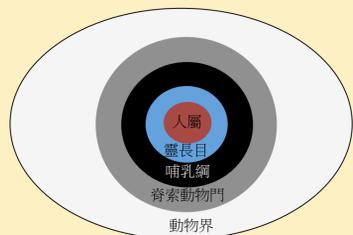
Important tools for the courses

文獻 Reference



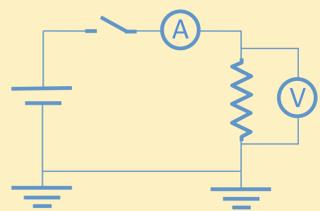
搜尋前人足跡

知識架構 Knowledge structure



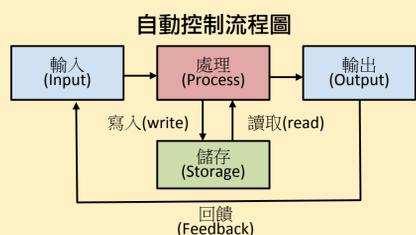
科學常將知識加以分門別類

示意圖 Schematic diagram



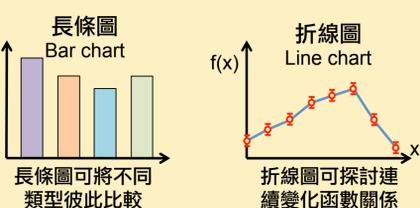
將腦海所想像事物具體化

流程圖 Flowchart



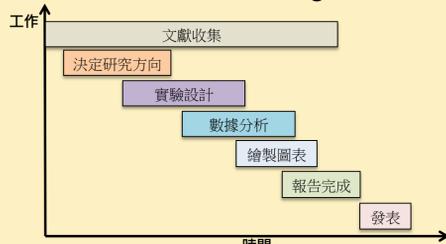
流程圖可決定實驗取樣條件

圖表 Charts



利用圖表讓數據說出真相

甘特圖 Gantt diagram



從發表日期規劃研究進度

研方專題與申請推甄

School Application

- 八月 August
- 九月 September
- 十月 October
- 十一月 November
- 十二月 December
- 一月 January
- 二月 February
- 三月 March
- 四月 April
- 五月 May
- 六月 June
- 七月 July

專題作品集

申請資料準備

決定申請科系

如果沒有證據！憑什麼說對這個科系有興趣？而證據之一是專題作品

學測考試

準備面試

參加指考

你對此科系瞭解嗎？

為什麼要唸此科系？

有什麼相關經歷證據？

未來讀書計畫

請你簡單敘述幾個科學原理？

你參加過哪幾個科學活動？

能不能簡介你的專題作品？

專題如何提昇你的研究能力？

呈現認真執行的專題作品，讓面試教授印象深刻，對申請推甄面試有加分效果。

Presenting great research to the interviewing professor will increase the effectiveness of your application.