

Developing research skills in undergraduate audiology students: Implementation of a hands-on approach at UCL Ear Institute

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BACKGROUND

- Research skills are important for audiologists as they promote critical thinking and evidence-based clinical decision-making [1,2].
- Audiologists can acquire research skills at different stages and in different ways [1,2]
- We describe the implementation of a research skills development program for BSc in audiology students at UCL Ear Institute >> ‘hands-on’ experience.

PROGRAM IMPLEMENTATION

Aim:

To promote active learning of research skills and scientific engagement in undergraduate audiology students

RESEARCH:

Evidence, experiments, data collection & analysis

Target skills:

IT & COMMUNICATION:

Gorilla®, Jamovi®, Excel®, search & citation

CRITICAL THINKING:

Significance, limitations, generalization of findings

Stages:

Year 1:

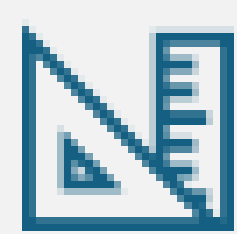
Science in Healthcare

Year 2:

Research Methods I-II

Year 3:

Research Project



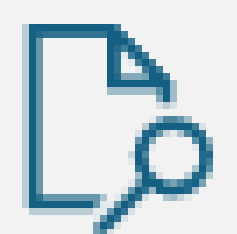
Formulate a research question and hypothesis



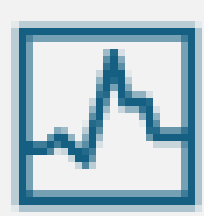
Discuss and interpret previous data



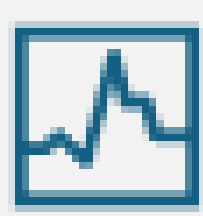
Replicate/extend a published research study using Gorilla



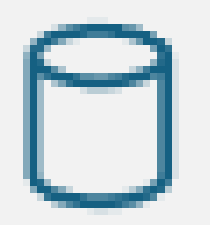
Perform a literature search, identifying gaps in knowledge



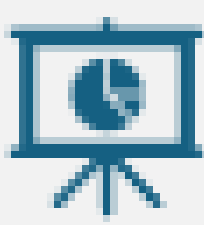
Collect and analyse data in groups, using Gorilla®, Excel ® and Jamovi®



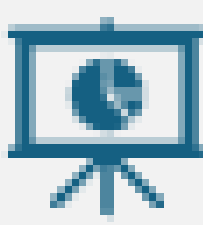
Collect and analyse data individually, using Gorilla®, Excel ® and Jamovi®



Discuss findings in the context of previous literature



Present results in groups through data visualisations and statistical analysis



Present results individually through data visualisations and statistical analysis



Write a 1500-word literature review (healthcare topic)



Write a 2000-word scientific report (own data)



Write a 5000-word scientific report (own data)

Transversal exercise (‘earplug’)



OUTCOMES

- First cohort (graduated in 2025): 13 out of 14 students successfully completed the research program (one interrupted)
- **What have you enjoyed the most about this module?** (Y2, 2024-25)

“The research and presentation is interesting”

“Learning how to build an experiment from scratch”

“Building up a Gorilla experiment”

“I have enjoyed the group work and in class group discussions which was interesting.”

“Group work was a great opportunity to learn from my peers and assist each other in tasks we found challenging”.

DISCUSSION & FUTURE STEPS



Positive student feedback

Next >> formal impact assessment



Challenge: Improve quality of research projects

Next >> Increase 1:1 support, refine design



Broader Ear Institute goals

Next >> Research-embedded education

References:

1. British Society of Audiology. Research — The BSA [Internet]. Reading (UK): British Society of Audiology; [cited 2025 Oct 30]. Available from: <https://www.thebsa.org.uk/research/>
2. Manchaiah V, Beukes EW, Roeser RJ. Evaluating and conducting research in Audiology. San Diego, CA: Plural Publishing. Inc; 2022.

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