Plan Overview

A Data Management Plan created using DMPonline

Title: What teaching strategies are used by Teachers of the Deaf and mainstream teachers to support deaf children's (KS1 and KS2) access to the science curriculum?

Creator: Maria Rafaela Michalopoulou

Principal Investigator: Maria Rafaela Michalopoulou

Data Manager: Maria Rafaela Michalopoulou

Affiliation: University of Manchester

Template: University of Manchester Generic Template

Project abstract:

Deaf learners' lack of incidental language and their delayed development of understanding of the world in their pre-school years (2-4 years old), compromises their academic process. The Early Years Foundation Stage figures of 2019 on deaf children's expected cognitive development were 40% compared to 77% for children with no identified SEN. Regarding science, research indicates lack of understanding of the world related to deaf learners' difficulty to structure science concepts and lower achievement for deaf pupils compared to their hearing peers. Nevertheless, there is lack of research showcasing if and how teachers support deaf pupils access to the science curriculum. This research aims to find out which strategies trainee teachers of the deaf, qualified ToDs and mainstream teachers use to make science accessible to primary deaf children (aged 5-11) in mainstream schools. Method A mixed-methods approach will be used A mixed-methods approach will be used for this study. Quantitative methods will be used to present the numbers of teachers taking part in the study and the percentages of teachers who employ the research-proposed strategies in their lessons. Qualitative methods will be used to elicit further information on the way teachers actually implement those strategies to support deaf pupils' access to science. Analysis Data will be analysed against the research to determine if and to what extent practice in science lessons are reflective of evidence-based practice outlined by research. A two-part interview has been designed for this study. Hypothesis The findings could show that there is no evidence of teachers using the research-proposed science effective strategies. Alternatively, the findings could show that all or some of the teachers use a certain number or all of the strategies identified as effective by the research. In the second case, the questions that this study will attempt to answer are: what is the teachers' understanding of science accessible strategies and how and which context they implement those strategies in their lesson. Keywords: science; Effective strategies; deafness; teaching; deaf pupils; accessible science;

ID: 50559

Last modified: 09-09-2020

Grant number / URL: N/A

Copyright information:

The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customise it as necessary. You do not need to credit the creator(s) as the source of the language used, but using any of the plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal

What teaching strategies are used by Teachers of the Deaf and mainstream teachers to support deaf children’s (KS1 and KS2) access to the science curriculum?

Manchester Data Management Outline

1. Will this project be reviewed by any of the following bodies (please select all that apply)?

- Ethics

2. Is The University of Manchester collaborating with other institutions on this project?

- No - only institution involved

3. What data will you use in this project (please select all that apply)?

- Acquire new data

• This is a mixed method study with interview design. The interview is broken into 2 parts.
• An interview has been designed for teachers who teach science to primary deaf pupils.
• For the first part of the interview, quantitative methods will be used to demonstrate the number of teachers taking part in the study, as well as the sets of strategies they use to support deaf pupils’ science understanding.
• Descriptive statistics are deemed appropriate to comment on the quantitative data due to the small sample. Also, descriptive statistics are considered more appropriate to summarise the basic features of this study.
• For the second part of the study, the questions will elicit further information on why and how the teachers implement their strategies.
• Qualitative methods and specifically, interpretative phenomenological analysis (IPA) will be used to analyse the participants’ answers on the second part of the interview. This method is considered more appropriate to examine participants’ experience for patterns to be identified and analysed.
• Separate interviews (lasting 20 minutes) with trainee teachers of the deaf, qualified ToDs and mainstream teachers will be held in privately on one-to-one basis
• Research of accessible science strategies has been carried out.
• Participants for the interview can be mainstream teachers, teachers of the deaf or trainee teachers of the deaf who work with KS1 and/or KS2 deaf students.
• The number of teachers who will take part in the study will be 10.
• Participants will be sent by email the participant information sheets and the consent forms 10 days before the starting date of data collection.
• As soon as the participant information sheets and the consent forms will be collected, the participants will be contacted to arrange a time for the interview to take place.
• The interviews will be completed over Zoom.
• During the interview, the participants will be asked to answer questions about specific strategies they use to make science accessible to their deaf students.
• The interviews will be audio-recorded in line with the University protocols. The audio files will be deleted from the service (Zoom) as soon as possible and will be stored on an encrypted device.
• The transcribed data will be saved on my P-drive in the University of Manchester network.
• It is anticipated that the time taken to administer and gather information from the interviews will be 2 months.

4. Where will the data be stored and backed-up during the project lifetime?

- P Drive (postgraduate researchers and students only)

5. If you will be using Research Data Storage, how much storage will you require?

- < 1 TB

6. Are you going to be working with a 3rd party data provider?

- No

7. How long do you intend to keep your data for after the end of your project (in years)?

- 5 - 10 years

Questions about personal information

Personal information, also known as personal data, relates to identifiable living individuals. Special category personal data is more sensitive information such as medical records, ethnic background, religious beliefs, political opinions, sexual orientation and criminal convictions or offences information. If you are not using personal data then you can skip the rest of this section.

Please note that in line with data protection law (the General Data Protection Regulation and Data Protection Act 2018), personal information should only be stored in an identifiable form for as long as is necessary for the project; it should be pseudonymised (partially de-identified) and/or anonymised (completely de—identified) as soon as practically possible. You must obtain the appropriate ethical approval in order to use identifiable personal data.

8. What type of personal information will you be processing (please select all that apply)?

- Pseudonymised personal data
- Audio and/or video recordings
- Personal information, including signed consent forms

The only personal information that is going to be asked is participants' email addresses, their Zoom account details and their names. However, at the point of the transcription, all names and identifiable features will be anonymised. Each participant will be given a unique participant number which will replace their name. In case participants disclose any sensitive data during the interview, these will be rempoved at the point of the transcription.

9. Please briefly outline how you plan to store, protect and ensure confidentiality of the participants' information.

• The interviews will be audio-recorded in line with the University protocols. The audio files will be deleted from the service (Zoom) as soon as possible following the completion of the data collection.
• The audio files will be stored on an encrypted device.
• The transcribed data will be saved on my P-drive in the University of Manchester network.
• All names and identifiable features will be anonymised. Each participant will be given a unique participant number which will replace their name.

10. If you are storing personal information (including contact details) will you need to keep it beyond the end of the project?

- Not applicable

11. Will the participants' information (personal and/or sensitive) be shared with or accessed by anyone outside of the University of Manchester?

- No

12. If you will be sharing personal information outside of the University of Manchester will the individual or organisation you are sharing with be outside the EEA?

- Not applicable

13. Are you planning to use the personal information for future purposes such as research?

- No

14. Who will act as the data custodian for this study, and so be responsible for the information involved?

Lindsey Jones, Lecturer in Deaf Education, The University of Manchester

15. Please provide the date on which this plan was last reviewed (dd/mm/yyyy).

2020-09-08

Project details

What is the purpose of your research project?

This study aims to investigate teaching strategies that Teachers of the Deaf, mainstream teachers and Trainee teachers of the deaf use to make science accessible to primary deaf pupils (aged 5 to 11). Teachers' methods will be considered in relation to strategies identified as effective from the research to find out where the actual practice in science classrooms coincide with evidence-based effective strategies for science understanding.

What policies and guidelines on data management, data sharing, and data security are relevant to your research project?

Information will be kept in accordance with the University's Retention Schedule, Zoom privacy policy and Research Data Management Plan.

Responsibilities and Resources

Who will be responsible for data management?

I will be responsible for data management in my capacity as principal investigator. There are no other investigators on the project.

What resources will you require to deliver your plan?

The cost implications for the study are shown on the table below.

Study resources			
A. Role	Rate per hour	Total required hours	Total cost
Researcher assistant	£16.21	10	£162.10
Supervisor	£32.87	15	£493.05
Cover teacher	£22.73	8	£181.84
Transcriber	£72.00	3.5	£252.00
Total			£1,088.99

Data Collection

What data will you collect or create?

This is a mixed-methods study, so both quantitative and qualitative data will be collected.

The data will be collected by a two-part interview. Separate interviews (lasting 20 minutes) with trainee teachers of the deaf, qualified ToDs and mainstream teachers will be held in private on the [Zoom] platform, on one-to-one basis.

Mixed-methods are going to be used to consider all the parameters needed to answer the research question.

For the first part of the interview, quantitative methods will be used to demonstrate the number of teachers taking part in the study, as well as the sets of strategies they use to support deaf pupils' science understanding.

Excel as well as visuals (graphs) will be used to present the acquired data (total of participants in relation to the percentages of teachers who use specific science effective strategies). Raw data (numbers of strategies employed by specific numbers of participants) will also be presented alongside the means (in percentages, e.g. '63% of the teachers use inquiry in their science class'). The quantitative data that derive from the first part of the study, will form a basis for the second part of the study which focuses on the way teachers implement these strategies.

Qualitative methods are going to be used to describe why and how the teachers implement their strategies. The interpretative phenomenological analysis (IPA) is the approach deemed more appropriate to examine participants' experience for patterns to be identified and analysed.

How will the data be collected or created?

The researcher will email/call participants directly and will provide sufficient information to enable informed consent. The researcher will maintain the anonymity and confidentiality of responders and non-responders. The participant information sheet and the conscent form will be emailed to the participants 10 days before the starting date of the data collection. As soon as the participant information sheets and the consent forms will be collected, the participants will be contacted to arrange a time for the interview to take place. The interviews will be completed over Zoom. During the interview, the participants will be asked to answer questions about specific strategies they use to make science accessible to their deaf students. The interviews will be audio-recorded in line with the University protocols and the audio files will be stored on an encrypted device. The audio files will be deleted from the service (Zoom) as soon as possible and will be stored on an encrypted device. The transcribed data will be stored on my P-drive in the University of Manchester network. It is anticipated that the time taken to administer and gather information from the interviews will be 2 months.

Documentation and Metadata

What documentation and metadata will accompany the data?

All data are saved and stored in Word Document format. Future users will need to be meet the following essential criteria in order to access and exploit the data:

1. An advanced and critical understanding of the uses of qualitative and quantitative research methodologies and methods in the field of education and the social sciences more broadly.
2. A good understanding of the policies and practices governing mainstream education (e.g. knowledge of the National Curriculum).
3. An advanced ability to appreciate and appropriately handle interview data, in-depth commentary on current conditions in the field of deaf education and implications for the improvement of the actual practice of the deaf education.

Ethics and Legal Compliance

How will you manage any ethical issues?

This is a low risk study with mainstream teachers and trainee Teachers of the Deaf and qualified Teachers of the Deaf.
• Participants will be advised that they should not identify individuals by name.
• They will also be advised not to name settings or services to ensure that there is anonymity.
• If any participant does disclose personal information, name individuals, services or settings then this will be removed by the researcher at the point of transcription.

How will you manage copyright and Intellectual Property Rights (IPR) issues?

I will own the copyright and IPR of all existing and future data whilst I am a student.

Storage and backup

How will the data be stored and backed up?

The documentary and interview data will be stored on my P-drive in the University of Manchester network.

How will you manage access and security?

The interview data will be saved and protected onto the university's P-drive. Each participant will be given a unique participant number which will replace their name. If any participant does disclose personal information, name individuals, services or settings, then this will be removed by the researcher at the point of transcription.The transcriptions will not contain neither personal information nor any identifiable details about the interviewees. All names and identifiable features will be anonymised.

Selection and Preservation

Which data should be retained, shared, and/or preserved?

The interview data should be retained, shared and preserved. The uses of these data include validating my research findings, brainstroming for new research projects/publications, providing an interview dataset for researchers interested in research on science accessible strategies for deaf pupils aged 5-11 years old.

What is the long-term preservation plan for the dataset?

The long-term plan will focus on constructing an archive for the project. The digital archive will be organised into different sections pertaining to each type of data (documentary and interview), and it will feature both general information regarding the history of the generation, analysis and
interpretation of the data and more specific suggestions regarding how the actual practice in deaf education could be enhanced.

Data Sharing

How will you share the data?

The outcomes of this research will be written up for my MSc dissertation. The results may also be published in an academic journal or associate magazine (BATOD).

Are any restrictions on data sharing required?

There are no restrictions required on data sharing.