# Plan Overview

A Data Management Plan created using DMPonline

Title: Giving the game away: A qualitative study exploring the hidden curriculum in medical education using a playful intervention

Creator:Mayra Salazar Volkmann

Principal Investigator: Mayra

Data Manager: Data managers

Project Administrator: Maaike Boersma, Maaike Boersma

Affiliation: UMC Utrecht

Template: UMC Utrecht DMP with DPIA V.4.0

ORCID iD: 0009-0003-0320-3743

Project abstract:

Medical education is riddled with implicit norms, values and expectations that influence the educational success of students. This implicit learning falls under the umbrella term of the 'hidden curriculum', which is everything that is taught and learned aside from the formal curriculum, as part of the social community of an educational institution (Hafferty, 1998, Bennett et al., 2024). The issue with the hidden curriculum is that it is not consistently, clearly or explicitly articulated to students, leaving certain students to fall into the cracks, especially those from marginalised backgrounds or with limited support systems (Oron-Semper and Blasco, 2018). It's implicit nature, and occasional mismatch to the formal curriculum, can lead to unprofessional behaviour, poor study outcomes and delays, a deteriorating mental wellbeing, and educational injustice.

The hidden curriculum tends to fluctuate and be local, requiring a context-specific approach to exposing it (Haidet and Teal, 2015). In our research project therefore, we want to know what the hidden curriculum is for medical students, within the context of the UMC Utrecht specifically. To do so, we want to explore whether playful interventions may offer a useful dialogue tool by which to identify, reflect and discuss the hidden curriculum, and make the first steps to improving its more negative impacts.

References

Bennett, N. et al. (2004) 'Hidden curriculum in continuing medical education', The Journal of Continuing Education in the Health Professions, 24(3), pp. 145–152. Available at: https://doi.org/10.1002/chp.1340240305.

Hafferty, F.W. (1998) 'Beyond curriculum reform: confronting medicine's hidden curriculum', Academic Medicine, 73(4), p. 403.

Haidet, P. and Teal, C.R. (2015) 'Organizing chaos: A conceptual framework for assessing hidden curricula in medical education', The Hidden Curric. In Health Professional Education. Dartmouth College Press, pp. 84–95. Available at: https://www.scopus.com/inward/record.uri?eid=2-s2.0-84951791574&partnerID=40&md5=875201896021801a86ae8ea25e20574e. Orón Semper, J.V. and Blasco, M. (2018) 'Revealing the Hidden Curriculum in Higher Education', Studies in Philosophy and Education, 37(5), pp. 481–498. Available at: https://doi.org/10.1007/s11217-018-9608-5.

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# Giving the game away: A qualitative study exploring the hidden curriculum in medical education using a playful intervention

## 1. General features

### 1.1. Acronym / Short study title

Giving the game away

### 1.2 What is the name of the UMC Utrecht Principal Investigator (PI)? Put only 1 name.

Mayra Salazar Volkmann

### 1.3 Department

Onderwijscentrum UMCU

### 1.4 Path of the Research Folder

\\ds\data\DOO\Onderzoek\

### 1.5 WMO/DEC

- non-WMO

### 1.6 Research type(s)

- Qualitative

### 1.7 Research design(s)

- Interventional
- Other

Playful intervention workshop, and semi structured interviews thereafter.

### 1.8 Mono or multicenter study (one choice)

- Monocenter

1.10 Is the funder NWO or ZonMw?

- No

1.12 Name of datamanager consulted (to be filled in by datamanagement):

OWC Datamanager, Annelies Pieterman - approved

1.13 Last check date by datamanager (to be filled in by datamanagement):

2026-08-31

1.14 Indicate which laws and regulations are applicable for the project. Please check all that apply.

- Algemene Verordening Gegevensbescherming (AVG) or General Data Protection Regulation (GDPR)
- Nederlandse gedragscode wetenschappelijke integriteit
- Richtlijn Kwaliteitsborging Mensgebonden Onderzoek (Quality Assurance for Research Involving Human Subjects)

## 2. Data Collection

2.1 Give a short description of the research data.

| Subjects | Volume | Data Source | Data Capture Tool | File Type | Format | Personal data involved? |
|---|---|---|---|---|---|---|
| Human | 20 medical students in a workshop | Textual data from workshop | Photographs of workshop outputs made on paper. | Qualitative (text document) | .pdf | No |
| Human | 20 medical students, one per interview | Semi-structured interview data (Audio recording and transcripts) | Audio-recording using Olympus-Om system digital recorder and UMC laptop as backup, and transcripts of these. | Qualitative | MP3, .csv, DOC | Yes |
| | | | | | | |

2.2 Describe the flow of the data (name systems used and / or third parties, recipients). Add link to location where the diagram is stored in RFS.

1) Collection

A) Textual data is collected at a playful intervention workshop. Students asked to work in groups to brainstorm results coming from the workshop onto a piece of paper. This paper is collected and photographed at the end of the session. Paper versions are destroyed once photographed versions are uploaded to UMC storage system.

B) Interview data is collected in a one-on-one in person semi-structured interview at the UMC Utrecht. Audio recordings are made using Olympus OM system digital voice recorder and a back up is recorded using the UMC laptop. Any cloud synchronization options in recording software is turned off during this process

2) Storage

Both pseudonymised interview data (audio and transcripts) and textual data (photographs) is stored on encrypted UMC cloud service, only accessible to researcher. Raw data destroyed once transcripts are complete. Transcripts and textual data stored for 10 years.

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3) Transfer

Audio recordings deleted from audio recorder and laptop once uploading is complete to UMC encrypted storage via lead researchers laptop. No other transfer is expected to occur to any other parties outside of research team.

4) Analysis

Atlas.ti will be used to analyse all data (both textual/interview data) by the lead investigator.

5) Processed

Audio recordings are converted into transcripts using Amberscript on the leader researcher's personal UMC laptop with access to the protected research folder.

Translations of transcripts from Dutch to English may occur, and this will take place with DeepL.

Translation will be supported with the help of a student assistant, with restricted access to the complete data set (I.e. only translation of necessary and anonymous transcripts and recordings).

6) Shared

Output will be shared in the form of a scientific journal article publication, and presentations at conferences.

7) Flow

INPUT: Workshop (anonymous textual data on paper)---> papers photographed---> photographs uploaded to UMC storage system, raw papers destroyed. ----> textual analysis occurs----> OUTPUT: Final publication

INPUT: Interviews (recordings)----> uploaded to UMC drive, raw recordings deleted from recording devices----> recordings translated (Via DeepL) and transcribed using Amberscript--> final transcripts also stored on UMC drive, raw recordings thereafter deleted---> transcripts stored for 10 years--> transcripts undergo data analysis---> OUTPUT: final publication

2.3 Estimated storage space for your project:

- < 1 TB (e.g. questionnaires, datasets, text files, audio files, video files)

2.4 Can you reuse existing data? If so, list the data source(s).

- No, please specify below.

New data will be generated coming from the intervention workshop and interviews.

2.5 Describe how you will take care of good data quality.

1= we use a GSCP compliant audio recorder
5= members of research team may check data
7= raw audio recordings kept untill transcripts complete; transcripts kept for 10 years
8= reflexive memos and logbook held during research process and analysis

| # | Question | Yes | No | N/A |
|---|---|---|---|---|
| 1. | Do you use a GCP-compliant Data Capture Tool or Electronic Lab Notebook? | X | | |
| 2. | Have you built in skips and validation checks? | | | x |
| 3. | Do you perform repeated measurements? | | | x |
| 4. | Are your devices calibrated? | | | x |
| 5. | Are your data (partially) checked by others (4 eyes principle)? | x | | |
| 6. | Are your data fully up to date? | | | x |
| 7. | Do you lock your raw data (frozen dataset) | x | | |
| 8. | Do you keep a logging (audit trail) of all changes? | x | | |
| 9. | Do you have a policy for handling missing data? | | | x |
| 10. | Do you have a policy for handling outliers? | | | x |
| 11. | Do you use the database closure procedure? | | | x |

2.7 Provide more detailed information about the other centers and organizations involved. Describe the specific roles they play: what research activities does the organisation carry out in relation to the study and the data? In addition, indicate which contracts are in place with these parties.

No other centres or organisations involved.

2.8 State how ownership of the data and intellectual property rights (IPR) to the data will be managed.

- UMC Utrecht is and remains the owner of all collected data for this study.
- In case of change of PI or researcher, I will assign another person who is responsible this dataset.

2.9 Use of new technology. Does your study involve in the implementation or use of a technology that has not been used before at UMC Utrecht?

- No

2.11 Will the study need / use personal data? Personal data refers to any information related to a participant, such as contact details for participant recruitment, demographics, data from the Electronic Patient Dossier (e.g. HiX).

- Yes. You have indicated that you are using personal data in your project. The following chapter is the Data Protection Impact Assessment (DPIA) for research data. It is derived from the full DPIA, in accordance with the privacy office of UMC Utrecht. Answering questions in this chapter helps to determine the risk of processing the personal data and what measures to take to minimize these risks.

## 3. Data Protection Impact Assessment (DPIA)

3.1 Describe the recipients outside the UMC Utrecht to whom the personal data are provided, what their role is (controller or processor) and where they are located. Important: all recipients must also be listed in questions 2.1 and 2.2.

- All systems and service providers I use are already contracted by UMC Utrecht. I do not share personal data with any

other external organisations.

3.4 What type of sensitive personal data will be used?

- Racial or ethnic background
- Data about a person's sexual life or preference
- Health data
- Religious or philosophical beliefs
- Political opinions

Interviews will be conducted. Because the project's focus is on diversity, participants are asked to optionally provide information on their gender, sexuality, ethnicity, migration background, family education and study support needs. Due to the nature of the study (related to themes in diversity and inclusion at the university), religious, philosophical or political opinions may come up. As we are discussing the student experience at university and study support needs, some health information may come up (i.e. neurodivergence).

3.5 What type of directly or indirectly identifying personal data will be used? Indicate why you need this data. Is this truly necessary?

Interviews will be conducted. Because the project's focus is on diversity, participants are asked to optionally provide information on their gender, sexuality, ethnicity, migration background, family education and study support needs. Due to the nature of the study (related to themes in diversity and inclusion at the university), religious, philosophical or political opinions may come up, as they inform the intersectional experiences and challenges students encounter with the cultural environment of university. As we are discussing the student experience at university and study support needs, some health information may come up (i.e. neurodivergence).
We also collect names and emails for initial contact and follow ups. These are later deleted. Names are not connected to research data (it's made untraceable and any identifiable information removed).

3.6 Select any vulnerable groups from which you will collect data.

- Other, please describe below.

Medical students

3.7 Which legally prescribed personal number will be used? Note: it is NOT allowed to use BSN (or its international counterpart) for scientific research purposes.

- None

3.8 Can the purpose of the study be achieved with anonymous or pseudonymized data?

- Yes, I will conduct interviews and will pseudonymize all data after the interviews. The analyzed dataset will be pseudonymized.

Participants of the semi-structured interviews will be able to choose their own pseudonym from a list of options. They will fill in a sheet of information at the start of the interview with relevant demographic information, and place their pseudonym at the top. Demographic information is optional to fill in, aside from age, year in medical education and gender identity. This is to have some measure of aggregating and accounting for diversity in data, but without asking for any more information than what participants feel comfortable or relevant to share.

3.9 Which measures are taken to prevent the data from being traceable to the natural person? Also consider the measures taken to prevent data breaches.

- Pseudonymization of data
- Aggregation of data
- Clear retention period(s)
- Role specific access to identifying data
- 2FA / MFA before access to (health) data
- Parties have ISO27001 and / or NEN7510 certification(s)*
- Logging and monitoring on access to personal data
- Minimization of collected data points

3.10 Does the reuse of the data fit within the purpose for which they were originally collected?

- Not applicable. We will not reuse data.

3.11 Are data subjects contacted and included only after informed consent?

- Yes, we ask study-specific or other type of Informed consent (e.g. broad consent, deferred consent).

3.16 What type of consent for using personal data is obtained?

- Study-specific or other type of Informed consent (e.g. broad consent, deferred consent, explain).

3.17 How will you obtain consent?

- E-consent
- Paper

3.18 Is there a dispute settlement or a party where the subject can go to with questions or complaints about the processing of personal data?

- Subjects are provided contact information whom and how to contact the study team via the PIF. Also, subjects are informed about their possibility to contact the data protection officer (DPO) or supervisory authority (Autoriteit Persoonsgegevens).

3.19 Describe how you manage your data to comply to the rights of study participants.

- We inform the subjects about their rights of access, rectification and deletion of their data. In the information provision

we describe the contact information in case a subject wants to exercise their rights.
- A subject can object to processing of their personal data or withdraw consent.

3.20 Does the data collected concern data from which behavior, presence or performance (profiling) can be measured when this is not the purpose of the research?

- No

3.21 Are automated (i.e. without any human intervention) decisions made about the subjects based on the data?

- No

3.22 Describe the tools, procedures and transport methods that you use to ensure that only authorized people have access to personal data.

- We use the secured Research Folder Structure that ensures that only authorized personnel has access to personal data, including the key table that links personal data to the pseudoID.

Authorised personnel includes the leader researcher (Mayra), research team supervisors (Gisela van der Velden, Jasper van Vught) and LSER data managers. Restricted access is provided to the rest of the research team and student assistants (only given access to relevant documents).

3.23 Describe who will have access to which data during your study. The table can be edited.

| | Direct identifying personal data | Key table linking study specific IDS to pseudonyms | Pseudonymized raw data | Transcripts and textual data | Other study information |
|---|---|---|---|---|---|
| Who has access | | | | | |
| Principal investigator | Mayra Salazar Volkmann | Mayra Salazar Volkmann | Mayra Salazar Volkmann | Mayra Salazar Volkmann | Mayra Salazar Volkmann |
| Research team members | Gisela van der Velden<br>Jasper van Vught | Gisela van der Velden<br>Jasper van Vught | Gisela van der Velden<br>Jasper van Vught | Gisela van der Velden<br>Jasper van Vught<br>Jeroen Janssen<br>Gönül Dilaver | Gisela van der Velden<br>Jasper van Vught<br>Jeroen Janssen<br>Gönül Dilaver |
| Student assistant | | | Restricted access for translation and transcription. | Restricted access. | Restricted access. |
| Datamanager | OWC Datamanagers | OWC Datamanagers | OWC Datamanagers | OWC Datamanagers | OWC Datamanagers |
| | | | | | |
| | | | | | |
| | | | | | |

3.24 Indicate the ISO who was consulted for this DPIA and what advice follows from this? (To be filled in by the ISO / PrivO.)

- Positive, conditional. Please describe below.

To use DeepL, a contract, including appropriate agreements on the protection of personal data, must be in place with the provider of this service. If such an agreement is not in place, translations cannot be carried out using this service, and an alternative solution must be found.

## 4. Data Storage and Backup

4.1 Describe where you will store your data and documentation during the research.

- We use the secured Research Folder Structure.

4.2 Describe your backup strategy or the automated backup strategy of your storage locations.

- All (research) data is stored in the RFS on UMC Utrecht networked drives from which backups are made automatically twice a day by the division IT (dIT).

## 5. Metadata and Documentation

5.1 Select the metadata that you will collect and which standards you use.

- Other, please describe below.

Metadata does not form part of the analysis in this study.
Relevant meta data that will be recorded for planning and transparency purposes includes a data dictionary, codebook and a logbook of choices made during different phases of the research process (e.g. procedural data, data collection (e.g. interview and workshop settings and audio recording time stamps), analysis (i.e. code book memoes), writing of manuscript etc.).

5.2 Select your version control and file naming standards.

- We will distinguish versions by indicating the version in the filename of the master copy by adding a code after each edit, for example V1.1 (first number for major versions, last for minor versions). The most recent copy at the master location is always used as the source, and before any editing, this file is saved with the new version code in the filename. The file with the highest code number is the most recent version and older versions are moved to a folder OLD. The major versions will be listed in a version document (projxVersDoc.txt), stating the distinguishing elements per listed version.

## 6. Data Analysis

6 Describe how you will make the data analysis procedure insightful for peers.

- It is anticipated that we are going to write a paper and publish it, which will make the research accessible to peers.
- I have written an analysis plan in which I state why I will use which data and which statistical analysis we plan to do in which software. The analysis plan is stored in the project folder, so it is findable for my peers.

## 7. Data Preservation and Archiving

7.1 Select which data and documents are needed to reproduce your findings.

- Other, please describe below.

Pseudonymised data can be made available upon request for a period up to 10 years (after which the transcripts are destroyed). Study protocol with methods and materials, and code book, is available via open science framework OSF.

7.2 Describe which archive or repository (include the link!) you will use for long-term archiving of your data and whether the repository is certified.

- After finishing the project, the data package will be stored at the UMC Utrecht Research Folder Structure and is under the responsibility of the Principal Investigator of the research group. The (meta)data will be published in DataverseNL, the preferred UMCU repository.

7.3 Give the Persistent Identifier (PID) that you will use as a permanent link to your published dataset.

- I will be using a DOI-code and will update this plan as soon as I have the code. The DOI-code can then be found in the additional comment area of this plan.

## 8. Data Sharing Statement

8.1 Select what reuse of your research data you intend or foresee, and what audience will be interested in your data.

- Other, please describe below.

Pseudonymised transcripts. Of interest to educational researchers and sociologists looking at the hidden curriculum in medical institutions, or game scholars interested in the impact of playful interventions on societal themes.

8.2 Are there any reasons to make part of the data NOT publicly available or to restrict access to the data once made publicly available?

- Other, please describe below.
- No, all data generated in this project will be made publicly available without any restrictions

Yes, as the data is privacy-sensitive, we make only the pseudonymised data available upon request (by sending an email to the corresponding author). In the event that peers like to reuse our data this can only be granted if the research question is in line with the original informed consent signed by the study participants. Every application therefore will be screened upon this requirement. If granted, a data usage agreement is signed by the receiving party.

8.3 Select which metadata will be available with the data and what methods or software tools are needed to reuse the data.

- The publication will be open assessable. The study protocol and this Data Management Plan will also be available.
- All data and documents in the data package mentioned in 7.1 will be available if the following conditions are met. Please describe below.

Procedural data (i.e. protocols, data management plan) and codebooks are open acess available via open science framework. Additional metadata is available upon request, with the exeption of any potentially sensitive data relating to participant identity (excluding aggregated or anonymous data).

8.4 Describe when and for how long the (meta)data will be available for reuse.

- (Meta)data will be available as soon as article is published.

8.5 Describe where you will make your data findable and available to others.

- Other, please describe below.

Data made available per request to corresponding author. Details of project visible via open access publication and open science framework project folder (pre-registered protocol, methods etc.).