

Appendix 01:
A checklist to assist in ethical medical education digital scholarship

This checklist is based upon the information contain in the AMEE Guide to ethics in medical education digital scholarship. The recommendation is that the researchers should perform a self-check of these items to ensure that the basic ethical procedures have been met.

It is important to note that all researchers on a project should be responsible for checking these items.

Research Preparation

Ethics approval

- Are human subjects involved?
- Is ethics approval necessary?
- If so,
 - has ethics approval been obtained?
 - has a reference number been obtained?
- Has the study been conducted in terms of the Declaration of Helsinki?
- In the Ethics application (and in the manuscript), have you clearly stated the steps you intend taking (outlined in the sections below)?

Surveys (Electronic and other)

- Have appropriate language tests (through sites and software) been run on the informed consent form and the survey form?
- Does the informed consent form contain information about the data gathering (including cookies and tracking), encryption, anonymisation, sharing, and storage?
- Has informed consent been obtained in such a way that the respondent has to perform an action (check a box or sign) in order to proceed with the survey?
- Have steps been taken to reduce the risks of duplicate submission of forms, and survey completion from outside the designated population?

Data gathering and storage

- Have only required data been gathered?
- Have all gathered data been used in the paper? (If not, why not?)
- Are inferences about tools confined to those tools under the specific conditions of testing?
- Are Learning Analytics and other statistics judiciously used?
- When using any software, has all relevant information about the software (e.g. Name, version, development costs) been clearly stated?
- If any extra virtual or physical tracking services are being used, are the subjects fully aware of these before beginning?
- Do the researchers have ownership of the data, or have they obtained permission to publish the data from the owners?

- After the survey, has the survey form been closed, and all captured data removed from the survey site?
- Are the researchers aware of the relevant laws (e.g. *The Family Educational Rights and Privacy Act* (FERPA) and *General Data Protection Regulation* (GDPR)), and has the research been conducted in compliance with them?
- Has any monitoring outside of normal classroom systems (e.g. use of AI, or on social media) been conducted? If so,
 - has special permission been obtained and the appropriate guidelines followed?
 - do any of the external postings or systems explicitly or implicitly deny permission for research or request that permission first be sought? (If so, has this permission been obtained?)
- Have all data been encrypted with (at least) 256-bit encryption and long (at least 12 character) passwords?
- Are multiple copies of the data stored in different locations in order to prevent loss of data through fire or theft?
- If third parties will have access to the data, was this information in the Ethics application and on the consent form? Have steps been taken to ensure that those third parties are held to the same ethical standards?
- Have steps been taken to anonymises data (if required)?
 - In all documents, all meta-data such creator's name, last edited by, etc., removed, and contextual and background imagery de-identified?
 - Are all file names non-descript?
 - In databases, all names, id numbers, IP addresses (if gathered) removed?
 - In textual documents, all tracking (e.g. MS-Word's Track changes) and comments removed?
 - In all documents, especially in qualitative data and with image, video, and audio files, other data anonymisation procedures including references to non-subjects performed (e.g. blurring, editing, removal of Exif data)?
- Have all copies of old documents been completely removed from recycle bins, flash drives and email attachments?
- If third-parties are in other media files and possibly identifiable, has permission been granted?

Preparing the Manuscript

Writing one's own work

- Are all contributors correctly identified?
- Are all authors truly authors?
- If any form of external editing or reviewing has been obtained, has this been correctly acknowledged?

Data Usage

- Have data been used only for the purposes stated in the IRB application and the informed consent form?

Plagiarism

- Have passages lifted from other texts been correctly placed in quotation marks?
- Have other citations paraphrased rather than simply changed a few words?
- Have these instances been correctly cited and referenced?

Copyright

- Has required permission been obtained for the reproduction of all copyrighted material (Remember to keep all supporting documentation)?
- Has such material been correctly identified and referenced (Remember to find the actual source, and not the Bing or Google or Wikipedia page)?

Copies of electronic sites

- If you are referencing electronic sites, do you have copies or links to archived versions of the documents?

Read and citing

- Have the researchers read the actual texts (and not abstracts only) that are being cited to ensure that what is being said about those texts and their message is accurate?

Submission

- If you have submitted your ideas to other areas, such as public forums, mailing lists (“listservs”), or pre-print servers, and have received comments, have you acknowledged those comments?
- Have you selected a journal that:
 - Permits the widest possible accessibility?
 - Indicates that it is externally archived?
- If you intend to share data:
 - Do you have ethics approval for this?
 - Is this clearly stated on all informed consent forms?
 - Have the data owners (e.g. your institution) given approval?
 - Does the journal to which you wish to submit permit it?
 - Do you have a facility in which this can be done?