By the end of this section you will be able to ask critical questions of your evidence base.

To extend your learning, complete an information sheet which clearly and concisely outlines the scope of your project.

To apply your learning, review the case study to help you consider a ‘real life’ example associated to the content of this section.

**How critical are you?**

If you can, take some time to think about your own critical thinking before you apply this to your evidence base. Explore the 10 statements below which argue a particular position. Do these sentences make sense? Please discuss – which are true, false or contested? You can find possible answers and a critical rationale explaining the reasons for those answers at the end of this section. Have a go first!

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
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</tbody>
</table>
What critical questions should you ask of evidence?

- Do you have an evidence-informed rationale for your project?
- Do you have a question which your evidence will aim to answer?
- Have you assessed the politics and governance of your project and the potential for conflict of interest, bias or restricted access to data sources?
- Do you need formal ethical approval for your project?
- Have you been strategic about your design, accepting any restrictions on your time and capacity?
- Can you outline the strengths and limitations of your methods and/or the methods used by others?
- Can you defend the appropriateness, accuracy and quality of your findings?
- Have you attempted to triangulate your findings with others sources of data to generate your evidence base, including those used in your rationale?

The following content and resources might help you to answer some of these questions.

Ethical dilemmas

It is important to ask ethical questions of your proposed project at the beginning of the process. This applies to projects which are accessing secondary sources or collecting primary data.

If you are collecting primary data with research participants you will need a clear information sheet and a consent form that can be signed and returned. Writing an information sheet is a good way of re-phrasing and simplifying your ideas for a more general audience.

If you are using data collected by others you should attempt to find out how ethical practice was ensured during data collection. You can use the following templates to guide you:
<table>
<thead>
<tr>
<th>What should you be asking yourself?</th>
<th>What should you have in your information sheet?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have research participants provided <strong>informed consent</strong> to have their <strong>data</strong> analysed for this purpose?</td>
<td>What’s this about? We would like to work with you to ...</td>
</tr>
<tr>
<td></td>
<td>What will happen? We will ask you to ...</td>
</tr>
<tr>
<td></td>
<td>How long will it take? Data collection will take ...</td>
</tr>
<tr>
<td></td>
<td>Consent If you agree to these conditions, please complete and return the attached consent form</td>
</tr>
<tr>
<td>Do research participants understand the rationale and process involved, including how their data will be used and the boundaries of <strong>confidentiality</strong> and <strong>anonymity</strong>? Have you provided research participants with a time bound right to withdraw?</td>
<td>Your rights You do not have to discuss anything that you feel uncomfortable with. You will remain anonymous/your data will be anonymised by ... You do not have to take part in this project, the process is entirely voluntary and you can withdraw from it within [add time limit] of data collection without giving us an explanation</td>
</tr>
<tr>
<td>Are you <strong>GDPR</strong> compliant in relation privacy and data storage?</td>
<td>In line with new Guidelines for Data Protection Regulation, this research adheres to the Privacy Notice to Research Participants which can be accessed [insert link]</td>
</tr>
<tr>
<td>Have you fully considered and mitigated for any possible harm that could arise from participation in this research?</td>
<td>Risks? You may find discussing some of your experiences upsetting, and if you wish to withdraw from the data collection you can do so at any point without giving a reason why. Staff will be able to signpost you onto necessary support services, or access the links below [insert link]</td>
</tr>
<tr>
<td>Are you offering any incentives for participation?</td>
<td>Benefits? In return for your participation we will be offering .....</td>
</tr>
<tr>
<td>How can participants contact the research team for queries and concerns?</td>
<td>For further information For further information or to ask any questions regarding this project please contact [insert name and contact details]</td>
</tr>
<tr>
<td>How are participants ensured of ethical scrutiny?</td>
<td>All university research is reviewed to ensure that participants are treated appropriately and their rights respected. This study was approved by [insert committee], number [insert reference number]. Further information at [insert link]</td>
</tr>
</tbody>
</table>
Yes | No
--- | ---
1. I have read the Information Sheet for this study and have had details of the study explained to me. |  |
2. My questions about the study have been answered to my satisfaction and I understand that I may ask further questions at any point. |  |
3. I understand that I am free to withdraw from the study within the time limits outlined in the Information Sheet, without giving a reason for my withdrawal without any consequences. |  |
4. I wish to participate in the study under the conditions set out in the Information Sheet. |  |
5. I consent to my anonymised data/data anonymised once analysed [delete as appropriate] being used as follows:
   a) shared with ________
   b) viewed by ________
   c) used for ________

Here is some useful further reading on ethics in higher education research:

- Code of Practice for Learning Analytics – using student data as a basis for action/intervention
  [www.jisc.ac.uk/guides/code-of-practice-for-learning-analytics](http://www.jisc.ac.uk/guides/code-of-practice-for-learning-analytics)

- Ethical Guidelines for Educational Research
  [www.bera.ac.uk/researchers-resources/publications/ethical-guidelines-for-educational-research-2018](http://www.bera.ac.uk/researchers-resources/publications/ethical-guidelines-for-educational-research-2018)

- The Research Ethics Guidebook: A Guide for Social Scientists
  [www.ethicsguidebook.ac.uk](http://www.ethicsguidebook.ac.uk)

- Institutional Research and Evaluation Typology – conditions for formal ethical approval
Factors affecting the validity and reliability/trustworthiness and authenticity of evidence

It is important to ask ethical questions of your proposed project at the beginning. If you are collecting your own data it is important to consider the factors that may affect your ability to report your findings with confidence. If you are using data collected by others, you will be unable to change the inherited design and your appraisal will determine whether the identified data becomes part of your evidence base.

### 1. Problem: The research instrument is not measuring what it was designed to measure as the questions are not aligned to the objectives of the project.

**Example:** Your aim was to find out about academic writing needs but the questionnaire is finding out what attitudes respondents have towards library services.

**Considerations:** Develop an adequate evidence base to help design the instrument and if possible, test it via a pilot study. Remember that these can be subjective judgements about definitions, constructs and measures; there is no ‘right’ approach only a ‘defensible’ approach which shows that action has been taken to mitigate risk. Sometimes a funder, sponsor or gatekeeper will ask for questions to be added to a questionnaire for other purposes. In these circumstances you will need to balance methodological rigour with the feasibility of the project’s success. If the data is from a secondary source (not collected by you as researcher), consider whether it is appropriate to use.

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### 2. Problem: The quality of the data gathered across five focus groups is variable.

**Example:** A research team of five Student Representatives each conduct a focus group with students on their course to discuss the use of their Virtual Learning Environment. Some focus groups last 15 minutes and some last for 45 minutes.

**Considerations:** The physical setting, participant mood, interviewer mood, confidence, skills and presentation, group dynamics and incentives can all affect the reliability of data collection. To mitigate, pilot the data collection process as a research team, attempt to ensure some consistency, and keep reflective diaries which describe any factors affecting the set and setting which can be reported alongside your findings.

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1 Some of the following has been adapted from Kumar (2011: p182)
3. Problem: The researcher is unsure whether the data collected in an interview can be trusted.

Example: During a series of 10 interviews with Programme Leaders about the importance of work experience for students, one participant stood out as contradicting the collective view of the others.

Considerations: Not all data will lead you to the same conclusion. You could explore the reason for this difference of opinion in more detail (was it caused by the research process – see Problem 2 – or something else?). You may conclude that this participant is an outlier. You could also actively explore the trustworthiness of the data by reviewing and confirming the transcript with the respondent and triangulating the data with other sources.

Have you had an experience like this? What questions did you ask and what decision did you make?

Critical thinking will develop alongside your confidence at navigating the data landscape. You will be required to make some tough decisions about what you can realistically achieve. You will need to scrutinise processes and defend your judgements. You will need to assess best practice and modify for your own context. Be open and honest in sharing what’s worked and what hasn’t. This will help those students who begin this journey after you.
<table>
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| 1. Students eat fruit. Vegetarians also eat fruit. All students are therefore vegetarian.  
This is a spurious association. The wrong connection is made between two independent phenomena. Students’ dietary choices are not governed by those who are vegetarian. |      |       | X          |
| 2. I know that I can give 110% to this assessment task.  
This is inaccurate logic. By its very definition, ‘100%’ is a finite and absolute entity, therefore it cannot be extended. There is a possible argument for using an over-extended absolute (in this case 110%) which, although illogical, is being used euphemistically to exaggerate the point. |      | X     |            |
| 3. This course contains some small-scale exams but really it is virtually exam-free.  
This is limited absolutism – it misses the point. The language used here doesn’t help. If the course contains exams, it can’t be ‘exam free’, virtually or otherwise. |      |       | X          |
| 4. All Students’ Association hoodies are grey until you see a red one.  
This is false empiricism. Just because you have observed something consistently within your own context, this doesn’t mean that alternatives don’t exist elsewhere which then make the statement invalid. |      |       | X          |
| 5. In a previous life, I would have studied law.  
This is false hindsight. You can’t know what would have happened retrospectively as all kinds of contexts might have affected decisions made at the time. |      | X     |            |
| 6. All students want to be satisfied. When they are dissatisfied it is because they have either a) not understood what really makes them satisfied or b) they are just unwilling to look at situations positively.  
These are inaccurate assumptions and inferences. The problem here concerns the assumption that all students want to be satisfied. In this statement, ‘satisfied’ is treated as a unitary concept, i.e. one which has the same meaning for all. Yet we have no idea whether this is the case beyond speculation. Therefore, the inference (a conclusion reached on the basis of evidence and reasoning) is also speculative and potentially inaccurate. |      |       | X          |
| 7. Charging students fees for higher education is morally unacceptable as a recent poll shows that 54% of the UK population thinks so.  
This is an Ad populum fallacy (meaning ‘appeal to the people’). Using the idea of the greatest number agreeing in order to justify an opinion does not necessarily make the opinion more accurate. |      |       | X          |
| 8. Dr Know–All is a Nobel prize–winning scientist who insists that learning quantum mechanics is not that difficult. If students’ learning is scaffolded appropriately. That’s easy for her to say as she is obviously gifted, so you should pay no attention to her ideas.  
This is an Ad hominem fallacy (meaning ‘to the man’ or personalising the argument). This way of thinking mixes up assumptions about evidence that are known (i.e. Dr Know–All is uncontestably a Nobel prize holder) with evidence that is really opinion about the person dressed as ‘fact’ (i.e. personal qualities that Dr Know–All may, or may not, have). |      | X     |            |
| 9. An unemployed careers advisor gave me advice on how to get a job. As if I am going to take any notice of their opinion!  
This is a Tu quoque fallacy (meaning ‘you too’ or turning the critique back against the proposer). Confusion displayed here about the personal status and context of an individual and their ability to be able to act in a professional capacity to offer appropriate advice. |      |       | X          |
| 10. Always telling the truth with your friendship group is the right thing to do as people have a right to total honesty.  
This is equivocation (ambiguous meaning(s) or specifically relating to misinterpretation of words). Mix up between rights conferred in law (e.g. human rights) and the right moral action to take, which in this case is really about meeting desirable behaviours and expectations. |      | X     |            |
To apply your learning, review the case study below and answer the questions to help you consider a ‘real life’ example associated to the content of this section.

**Drew, President of the Students’ Association at Nudge University**

Drew, the newly-elected President of the Students’ Association, has been invited to meet with Chris, the Director of Learning and Teaching Enhancement at Nudge. Chris has called the meeting to ensure that the Students’ Association is ‘on board’ with the newly proposed learner analytics framework, an outline of which will be presented at the forthcoming University Court.

At the one-to-one meeting, Chris appears very excited about the proposed framework saying that if implemented, it will provide Nudge with a step change process for understanding about our more vulnerable students and allow us to intervene early in offering appropriate skills development and monitoring of specific student demographics.

Drew feels somewhat uneasy about these ideas but can’t immediately articulate why. The meeting continues.

Chris discusses managing the proposal at Court and how it would be great if this could be a joint presentation between the University and Students’ Association, especially as it would be much easier to get their approval if this has resulted from some partnership working between us around learner analytics.

A draft paper is then given to Drew and Chris outlines some sections in which the Students’ Association could lead the discussion at Court.

For the final part of the meeting, Chris leads on the production of a presentation for Court, drawing on elements within the paper. Drew is invited to comment whilst Chris begins to edit the key points into a coherent set of slides.

Chris is thrilled that this co-created paper will be presented at Court. As Chris has to go to another meeting and needs to lock the office, they agree that Chris will finish the materials in due course and send to Drew for any further minor amendments.

As they leave Chris’s office, Drew feels bamboozled by this interaction but has neither the time nor confidence to challenge what has just occurred in the meeting as they hurry off.
Consider the following questions and then see if you can reconstruct this case to have some improved outcomes for Drew. There is an alternative, refashioned version in Appendix A which provides one approach to producing an evidence informed enhancement of this situation. Before accessing this alternative, see if you can do any better.

- What are your immediate thoughts about this case study? Why does Drew feel bamboozled?
- How could Drew have prepared more effectively for this interaction?
- What are Chris’s assumptions about a) the use of learner analytics as a robust form of evidence? and b) the role of the Students’ Association in this interaction?
- Should this be challenged, and if so, how and by whom?
- How could Drew have manipulated the obvious power dynamics within this situation more positively?
- What could Drew now do, post-meeting, to take back some control?

**References and Further Reading**

JISC (2018) Code of Practice for Learning Analytics  
[www.jisc.ac.uk/guides/code-of-practice-for-learning-analytics](http://www.jisc.ac.uk/guides/code-of-practice-for-learning-analytics)


Lumby, J (2015) In the wings and backstage: exploring the micropolitics of leadership in higher education London: Leadership Foundation for Higher Education.

sparqs (ND) Supporting Students  
[www.sparqs.ac.uk/support-students.php](http://www.sparqs.ac.uk/support-students.php)

[www.sparqs.ac.uk/upfiles/SEFScotland.pdf](http://www.sparqs.ac.uk/upfiles/SEFScotland.pdf)


**Digital glossary for this section**

- **Anonymity**
- **Confidentiality**
- **Critical thinking**
- **Data**
- **Gatekeeper**
- **GDPR**
- **Informed Consent**
- **Research**
- **Pilot**
- **Validity/Reliability**
- **Authenticity/Trustworthiness**