

Activity → 90

Knowing about Epistemology and Ontology

STUDENT HANDOUT

When we next meet you will be asked to teach your fellow students about 'epistemology' and 'ontology'. You will be given 20 minutes for your teaching session, with a few minutes available for questions, if time permits. The focus of your teaching session is your choice and you can use any teaching methods, materials, software or props that you deem appropriate. You can decide, as a group, who and how many of you will teach the session.

Make your session as informative and interesting as possible. Epistemology and ontology are complex issues that can be difficult to grasp. Work hard to ensure that your fellow students understand what you are teaching them. This can be done by illustrating how epistemology and ontology are related to research design and methodology or how they have an influence on what you are being taught and what you know, for example.

Over the next week, work together in your group to plan your session and practise your delivery. Also, think about the questions that might be asked by fellow students and prepare some suitable answers.

Understanding Methodology

STUDENT HANDOUT

Over the next week produce a podcast (audio or video) with your group members that will help you and your fellow students understand what is meant by 'methodology'. You will need to upload your podcast so that we can build a useful resource that you and your fellow students can access when you need to develop or clarify your methodological thoughts. Therefore, try to produce a creative, imaginative and interesting podcast that is of educational value to your peers.

The focus of your podcast is a group choice. For example, you could decide to discuss the philosophy of methodology, the relationship between epistemology and methodology, a description of different methodologies or the influence of methodology on research methods. Alternatively, you could focus in on one particular methodology and describe in detail how this methodology guides the research process.

When you produce your podcast, be careful not to confuse methodology and methods: methodology is the overall framework that will guide your research, whereas methods are the actual tools that you will use to carry out your research.

Once you have produced your podcast, upload it using the digital platform that has been set up. Remember to review the podcasts that have been uploaded by your fellow students as this will help you to develop a greater understanding about methodological issues.

Reasoning Inductively and Deductively

STUDENT HANDOUT

This worksheet is on the topic of reasoning. Work through the following questions, providing a full and descriptive answer for each one.

- 1 Provide a definition of:
 - (i) inductive reasoning;
 - (ii) deductive reasoning;
 - (iii) abductive reasoning.
- 2 Discuss the strengths and weaknesses of each type of reasoning.
- 3 Find two research project reports (journal papers, monographs or theses, for example): one that uses inductive reasoning and one that uses deductive reasoning. Describe how reasoning has been used in each research project. You can choose any projects that you wish, but you might find it useful to choose studies that are related to your subject or area of research.
- 4 Describe the type(s) of reasoning that you intend to use in your own research project and explain why this is the best way to reason, given your research topic, design and methodology.

Hypothesizing and Theorizing

STUDENT HANDOUT

You have been invited by the principal (head teacher) of your local college to talk to a group of 16-18-year-old students about what is meant by 'hypothesizing' and 'theorizing'. All the students are hoping to go to university and some are thinking about careers as scientists or researchers. The principal thinks that it will be useful to invite in a group of students who are not too far removed in age, who can explain the issues in an interesting, creative and imaginative way that will inspire her students to think more about their future learning and careers.

Prepare a 20-minute teaching session, in your group, on the topic of 'hypothesizing and theorizing' that is suitable for college students aged 16-18. Try to be as creative and imaginative as possible. You must engage the students for 20 minutes, and you can do this in any way that you wish.

When we next meet you will be required to present your 20-minute teaching session to the rest of your classmates, who will be playing the role of college students. If time permits, there may be questions from the students, so think about what could be asked and prepare some suitable answers.

Generating Theory Inductively and Deductively

STUDENT HANDOUT

A 'debate' is a structured argument in which two sides speak for and against a particular contention. In this case one group is to argue for inductive theory generation and the other is to argue for deductive theory generation. You must prepare, in your group, your arguments ready for a debate in the next teaching session. Your group will be given two 10-minute slots in which to debate (alternating with your opponents). You will also need to prepare a rebuttal of the arguments presented by your opponents.

The following tips will help you to prepare for your debate:

- Use your time wisely: you will be given two 10-minute slots. Ensure that you have enough material to fill these slots and practise presenting your material within the allotted time. Divide your material and time between team mates so that you know who is speaking at what time and what they are going to say.
- Pay close attention to your introduction, main argument (and evidence to back up your argument) and conclusion. Define your topic.
- Take care to avoid factually, morally or logically flawed arguments.
- Think about and understand the key arguments that will be put forward by your opponents and prepare a suitable rebuttal. Ensure that you offer evidence for your rebuttal.
- Think about how your opponents will refute your arguments and prepare a defence. Don't use rhetorical questions as this will help your opponents to attack your arguments.
- During the debate, ensure that you argue as part of a team and take care not to contradict the arguments of your team members.
- Make good eye contact with team mates and with your opponents.
- Present your arguments in a confident and persuasive manner. Ensure that other students can understand what you are saying and vary your tone for interest. Don't shout or get annoyed. Keep all arguments on an academic level and avoid personal comments: attack the arguments, not the person.
- Use notes to help you to present your argument and take notes during the debate to help with your rebuttal.

