Assignment:

What are clear research questions?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Unit 2:** In this assignment is to practice with dissecting research questions into units of analysis, variables and a setting. | | | | |
|  | Different types of [Research](https://vimeo.com/user29453510/review/132531676/39450d6db7) Questions  [Developing empirical research questions](https://vimeo.com/user29453510/review/198331830/9a88c54569)  [Units and Variables in Empirical Research questions](https://vimeo.com/user29453510/review/132531678/e3ae80c097) |  | Research question; Normative; Empirical; Explanatory; Descriptive; Unit (of analysis); Variable (attributes / values); Setting; Induction; Deduction | | |
|  | Babbie, Ch. 1 p. 14-28  Babbie, Ch. 4 p. 89-93 |  | Form groups of 4 (max), face each other. |  | Preparation: 60 minutes |
|  | Read this assignment carefully and answer the questions before coming to class.  Bring either a print or a digital version. | | | | |

1. We distinguish between different types of research questions; normative, conceptual and empirical research questions. These types of RQs are closely related to the process needed to answer them. Therefore, it is important to be able to distinguish between these types of research questions.
   1. Select a topic of your choice, related to your study program.

**Example: gun violence**

* 1. What are the differences between the different types of questions? Discuss how you can identify each type (fill out in the table below).
  2. Give an example of all three general types of research questions, related to the topic selected under a (fill out in the table below).

|  |  |  |
| --- | --- | --- |
|  | b. What are the main characteristics of this general type? | c. Example related to the selected topic. |
| Normative | Is about what should and should not be the case, about what is justifiable. | Should the government limit the private possession of guns? |
| Conceptual | Is about the meaning of concepts (words), NOT about how they are actually being used, but how they are related to other words | What is a ‘gun’?  (is an atomic bomb a gun?) |
| Empirical | Is a question which can (only) be answered using thinking and observations. | Is the level of gun control affecting the level of crime in a country? |

1. The following table contains several research questions. Indicate for each case, which type of research question it is. If it is empirical, indicate whether it is descriptive or explanatory.

|  |  |  |
| --- | --- | --- |
|  | Normative, conceptual or empirical? | If empirical. Descriptive or explanatory? |
| Should people play computer games for more than 30 minutes a day? | Normative (but ill phrased and easily interpreted as a causal question about the effects of playing computer games) |  |
| Should the government put more effort into stimulating children to play outside? | Normative |  |
| How many minutes do students of the UT in 2017 play computer games during weekdays. | Empirical | Descriptive |
| Why do some students of the UT in 2017 play computer games for more than 30 minutes a day (while others play less)? | Empirical | Explanatory |
| What is healthy behavior (of children)? | Conceptual |  |
| How many students at the UT in 2017 played computer games longer than 30 minutes? | Empirical | Descriptive |
| Is drinking more than 2 liters of water per day advisable? | Normative (but ill phrased an easily interpreted as a causal question about the effects of drinking water) |  |
| What is the effect of playing computer games on study results of UT students in 2017? | Empirical | Explanatory |

1. There are several criteria that make up a clear empirical research question. List these criteria. A clear empirical research question has at least …

Variable(s)

Unit(s)

Setting (time and place)

(in addition: answerable … etc…, clearly either descriptive or causal).

4. Identify the variables and the unit of analysis in the following research questions.

|  |  |  |
| --- | --- | --- |
| **Research question** | **Variable(s)?** | **Unit(s) of analysis?** |
| Do Dutch high school students in 2017 score better on a computerized summative reading task or on a paper-and-pencil summative reading task? | Two variables:  Scoring on a computerized reading tasks.  Scoring on a paper-pencil reading task | Dutch high school students |
| What are the effects of three alcoholic drinks on driving a bicycle among people between the age 65 en 75 in Germany? | Two variables:  Drinking behaviour (less or more than 3 drinks)  Quality of driving behaviour (bike) | People between 65 and 75 |
| Does the smell of chocolate, during a cognitive test, make women more craving to chocolate after the test? | Two variables:  (Not) smelling chocolate  (Not) craving for chocolate | Women |
| Do people shopping spend more money when they hear music during shopping? | Two variables:  (Not) hearing music  Amount of spending | Shopping public |
| Does medicine A has less sides-effect than medicine B for boys between 10 and 20 year old with severe acne and do the side-effects increase when sitting in the sun? | Three variables:  Getting medicine A or B.  Side effects (unspecified)  (Not) sitting in the sun | Boys between 10 and 20 |

5. The following variables can be used in research questions. What are the attributes/values of these variables?

|  |  |
| --- | --- |
| **Variable** | **What are the attributes/values?** |
| Gender | Female, male |
| High school level (NL) | VMBO (B, K, T); Havo; VWO (maybe some more) |
| Religion | Protestant; Catholic; Jewish; Muslim; Hinduism, other … |
| Dutch Bike Brand | Gazelle; Batavus; Giant; Koga; etc… |
| Relationship status | Single; Living together; Married; Widower … |
| Music genre | Rock; Pop; R&B; etc.. |

6. Which element is missing/unclear in the following research questions?

7. Write down a better version of the research question, based on the critique you formulated

|  |  |  |
| --- | --- | --- |
| **Research question** | 6. Is something missing? | 7. Better version |
| Do German teenagers aged 16 to 19 on average play more hours computer games per week than Dutch teenagers of the same age? | Setting (time) is missing. | Do, in 2017, German teenagers aged 16 to 19 on average play more hours computer games per week than Dutch teenagers of the same age? |
| Are people above the age of 30 in general more self-compassionate? | Units is very broad (people)  Setting (place and time) is missing. | Are contemporary Europeans above the age of 30 in general more self-compassionate than Europeans up until 30? |
| Did the intervention we introduced increase the number of first year UT students buying their textbooks? | Independent variable unclear.  Setting (time) unclear. | Did the measure introduced in 2017 to ask UT students to bring their textbooks to class, increase the number of students actually buying their textbooks? |
| How often do busdrivers ignore stop signals? | Setting (place and time) unclear,  the variable is underspecified; how often? per day? | How often per full working day of 8 hours do busdrivers in Enschede ignore stop signals from traffic lights? |
| Do people wash their hands after a toilet visit? | People is a very broad category.  Setting (Place and time) unclear.  (This is about one variable only). | How often do doctors working at the MST wash their hands after a toilet visit? (implicitly you refer to ‘now’) |
| Did the intervention the UT introduced increase separating garbage? | Which intervention? Independent variable unclear. | Did the measure to introduce garbage cans with separate holes at the University of Twente in 2017 increase separating garbage? |