13 Detecting logical fallacies

Topics: **critical thinking, media literacy**

Recommended age group: 15+
Participant count: up to 20 participants
Activity duration: 60 minutes
Methods of education: discussion, group work, reflection
Aims of the activity:
- name and describe certain types of logical fallacies,
- give examples of certain types,
- note their use in communication,
- discuss reactions to them,
- know one's own motives and thought processes in argumentation.

Equipment:
- logical fallacies: characteristics (Annex 1), pictures (Annex 2) - print and cut for each group,
- themes and titles (Annex 3) - printed and cut only once,
- handout for each participant.

Keywords: communication, critical thinking, sources of information, argument, argumentation, logical fallacies

Topics

Age category

15+

Group size

up to 20

Time

60 minutes

Activity process:

1. We introduce the participants to the topic of the activity- logical fallacies**.** In the discussion we find out what they understand by the topic and how they perceive it:

- *What is implied by the term logical fallacy?*
- *Where do you get information about what is happening in the world? (social networks, friends, media, family, internet, publications, etc.)*
- *What do you think is the hottest issue in society at the moment? We can create a mind map of the topics that are currently resonating the most in our society.*
- *Do you ever engage in discussions on these topics (whether through direct discussion or comments in the virtual world)?*

2. After the introductory discussion, we will look at mistakes made not only by us but also by the people around us, the media, celebrities and politicians. We will divide the participants into groups of 4 to 5 members. We give each group strips of paper with the characteristics of logical fallacies (Annex 1) and all pictograms

from Annex 2. The members of the group should try to solve the following task: to understand individual logical fallacies, discuss them and assign pictures with logical fallacies to the corresponding characteristic. It is possible that a certain characteristic will correspond to several pictures, as logical fallacies overlap in meaning to some extent. Groups have 15-20 minutes to complete the task. The lecturer observes the group work, explains ambiguities, and answers any questions raised.

3. When all groups have finished their work, we verify if the logical fallacies and their characteristics were correctly matched and discuss any ambiguities. Pictures and definitions can be glued on larger paper by the participants, which will serve as a basis for the next task. Or the lecturer can give the participants a prepared handout with logical fallacies and their description.

4. The participants return to their groups and draw two pieces of paper from each envelope offered to them by the lecturer. The envelopes and paper can be color-coded. One of the envelopes contains topics on which the groups will create logical fallacies, in the other are the names of logical fallacies (cut out Annex 3). Each group randomly pulls 1 - 2 pieces of paper from both envelopes. Their task is to come up with the best possible example of a given logical fallacy on a specific topic. If desired we can focus on a single topic and the participants will only draw one of the logical fallacies. Also, the tutor can come up with any other relevant topics. We can also use topics from the mind map, which was created in the introduction. When creating an example of a logical fallacy, participants have the possibility to refer to the definition of the example from the previous task or handout.

5. In a circle, the groups present their examples of logical fallacies. If necessary, other participants may add additional examples or reformulate a specific example to match the characteristics of the fallacy. We discuss the topic, fill in the missing information or summarize it with the help of participants.

Discussion questions:

- *Did you find some fallacies familiar? Where did you encounter them before?*
- *Do you know any other logical fallacies? What are they?*
- *Why are they called fallacies?*
- *How can we defend ourselves against such fallacies? How should we respond to them?*
- *Do you ever use logical fallacies (intentionally / unknowingly)? Which are the most common? In what situation?*

Final analysis:

- *Which of the assignments was most difficult for you to carry out? Assigning a fallacy to a characteristic or coming up with a logical fallacy? Why?*
- *What did you realize when performing group tasks?*
- *How will you use the information you have learned from this activity?*

Activity variations:

- Individual logical fallacies and their definitions can be placed in a visible place in the room and referred to in the case of multi-phase training. We can assign participants to carry examples of these fallacies (magazine clippings, newspapers, advertisements ...) during the week and place them in a reserved place for the relevant fallacy.

Source: ČAJKA, A., BIOLEK, J., a kol., *Komu patrí zem, Metodická príručka globálneho vzdelávania pre učiteľov*. Bratislava: Centrumenvironmentálnej a etickej výchovy Živica, 2019. ISBN 978-80-972962-5-4

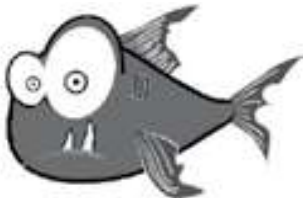
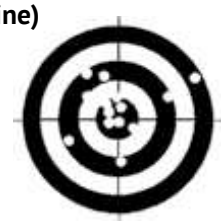
Annex 1

(cut)

The speaker is trying to gain support for their argument by making a claim that creates fear of the alternative.
The aim of this argumentative foul is to divert attention to another, unrelated topic. The name originates from a story in which smoked herring pulled through the hunting area redirected dogs to the wrong trail.
Replacing the opponent's argument with a new, distorted or exaggerated statement. The other party pretends to respond to your argument, but in fact moves it to an absurd position that you do not share.
A procedure where fact A is presented as the beginning of a sequence of events B, C, D ... and where the arguments show that A follows from D. It is an attempt to raise fear of a given sequence without the person concerned presenting evidence of the necessary connection between individual events.
Defending the claim with the fact that others, most or all of them agree with it or believe in its truthfulness. The fact that the claim is known does not have a significant correlation to its accuracy. This fallacy often refers to what everyone is saying. First of all, there is no evidence that everyone claims that, and even if everyone does, there is no proof that it is true.
Drawing general conclusions and assumptions from a very small and limited set of experiences, facts or cases.
The fallacy is that one works with the unspoken assumption that everything rooted in the past is good or true. It also assumes that past reasons for introducing the traditions are still relevant today. However, just because something happened in the past doesn't mean it was right. Such an argument does not stand up in the discussion, it is necessary to evaluate the situation according to the current situation in the current context.
Instead of arguing, the other party attacks the opponent, their characteristics, appearance, personal history ...
This foul deliberately divides the topic into two extremes without recognizing the possibility of a neutral opinion, but also other possibilities and compromises.
This combines the desired statement with a positive evaluation and gives the impression that by rejecting it, the opponent automatically belongs to the opposite group.

Annex 2 - Pictures with names of argumentation fallacies

(cut)

Appeal to fear 	**Appeal to tradition** 
Red herring 	**False dilemma** 
Strawman 	**Hasty generalization** 
Slippery slope 	**Appeal to society** 
Personal attack (ad homine) 	**Evaluation statement** 

Annex 3

(cut)

Topic	Argumentation fallacies
School should not start before 9am.	Hasty generalization
Climate change is not caused by humans.	Red herring
School attendance should be voluntary.	Appeal to society
Red versus green apples.	Slippery slope
The right to own a gun.	Appeal to fear
Living in the city is better than living in the country.	Strawman
Alcohol and cigarettes should be sold to those under 18.	Evaluation statement

Handout for participants

Argumentation fallacies (or delusions) are statements whose main goal is to defeat the opponent in a discussion, regardless of the truth or logic of the arguments offered. The essence of this argumentative foul is usually an inconspicuous violation of the rules of logical thinking, acting on emotions instead of reason, or both. When done intentionally and consciously, they are a popular part of propaganda and manipulation arguments, but they are often used unknowingly by each of us when defending our opinion and not paying enough attention.

Examples of argumentation fallacies:

Appeal to fear

The speaker tries to gain support for his argument by making a claim that creates fear of the alternative.

Example: *"Give me the map, because we'll get lost!"*

Red herring

The aim of this argumentative foul is to divert attention to another, unrelated topic. The name originated from a story in which smoked herring pulled through the hunting area redirected the dogs to a false trail.

Example: *"I can't understand why conservationists are bothered by the new dam, a lot of builders and their families will make a decent living from its construction."*

Strawman

Replacing the opponent's argument with a new, distorted or exaggerated statement. The other party pretends to respond to your argument, but in fact moves it to an absurd position that you do not share.

Example: *"You say that Israel should stop building new housing in the West Bank. So you say that Israel has no right to be a nation state? "*

Slippery slope

A process where fact A is presented as the beginning of a sequence of events B, C, D ... and where the arguments show that D automatically follows from A. This is an attempt to raise fear of a given sequence without the person presenting evidence of the connection between individual events.

Example: *"If we allow dogs to run freely in the parks, people will take them without muzzles on buses and then on board planes, and from there it is only a matter of time until one bites the pilot and causes an air disaster."*

Appeal to society

Defending an assertion by the fact that others, the majority or all of them agree with it, or believe in its truthfulness. The fact that the assertion is known does not bear any significance on its accuracy. This fallacy often refers to what everyone is saying. First of all, there is no evidence that everyone claims it, and even if everyone does, this is not proof that it is true.

Example: *"God exists, everyone knows that."*

Hasty generalization

Drawing general conclusions and assumptions from a very small and limited set of experiences, facts or cases.

Example: "*Economists cannot type with ten fingers. I knew one, and he almost broke his arms. "*

Appeal to tradition

This fallacy is that one works with the unspoken assumption that everything rooted in the past is good or true. They also assume that past reasons for introducing given traditions are still relevant in the present. However, just because something happened in the past doesn't mean it was right. Such an argument does not stand up in the discussion, it is necessary to evaluate the situation according to the current situation in the current context.

Example: *"If it has been working for five years, it must be good. Nothing will happen if we continue to do so. "*

Personal attack (ad homine)

Instead of arguing, the other party attacks the opponent, their characteristics, appearance, personal history ...

Example: *"All I have to do is look at the photo on your profile and it's clear to me why you're saying such nonsense."*

False dilemma

This foul deliberately divides the topic into two extremes without recognizing the possibility of a neutral opinion, but also other possibilities and compromises.

Example: *"He who does not support me is my enemy."* (There are also people who do not care.)

Evaluation statement

This combines the desired statement with a positive evaluation and gives the impression that by rejecting it, the opponent automatically belongs to the opposite group.

Example: *"Claudia is the most beautiful woman in the world."* (the statement seems to express objective reality instead of personal opinion)