



The Audience Response System

Interactive Teaching and Learning with the Audience Quiz

Ass.Prof. PD Dr. Daniela A. Fux

Lecture



Henry of Germany; University of Bologna, 1233

*„one is talking –
the others are listening“*



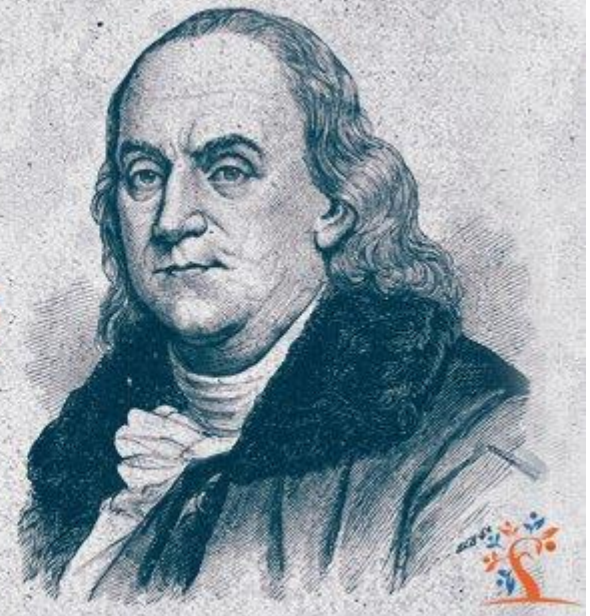
Lecture problems

- **Low learning outcome**
- Loss of attention (listen for 15-20 min without break)
- Students diversity (interests, prior knowledge, deficits)
- Low motivation
- Lack of feedback



**TELL ME
AND I FORGET
TEACH ME
AND I MAY REMEMBER
INVOLVE ME
AND I LEARN.**

BENJAMIN FRANKLIN



Problems when asking the audience

- asking every student is highly time consuming
- large groups: not every student can respond
- always the same students reply
- students do not dare to respond

ARS helps to solve these issues



© Can Stock Photo



© Can Stock Photo

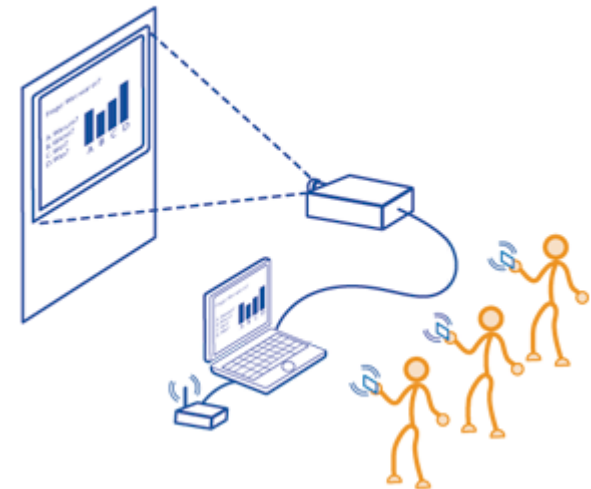
Audience Response System

ARS follows the quiz show concept of
“Who wants to be a millionaire”

- Pose of questions to students
- Students submit an answer using transmitter
- Answers are collected and presented to the audience by software



- increases engagement
- increases participation
- enables involvement of all students
- allows students to answer anonymously



Types of activity

▪ Formative Assessment

Recall questions

- prior knowledge
- refresh facts from last lecture
- testing homework/prepared material



Types of activity

- **Concept test / Contingent teaching**



Types of activity

■ Interactive Demonstration of Experiments



Types of activity

■ Peer Instruction

Students discuss about answer options



Types of activity

■ Discussion Warm-up

Do we need the time change?



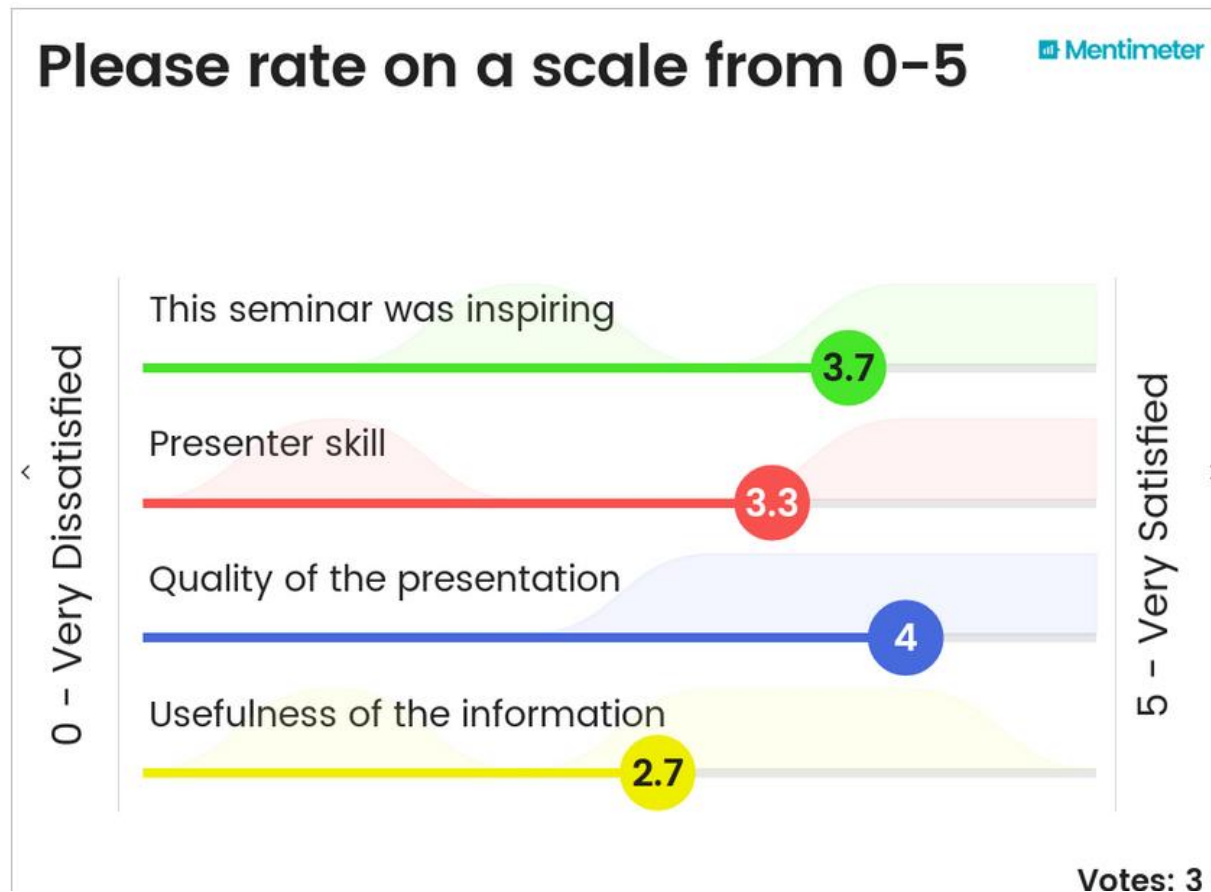
Summer Time



Standard Time #20986261

Types of activity

■ Evaluation



Audience Response System

Hardware based System



Online based System



Hardware based system

Hardware based System

Response cards („Clickers“)

- with
- without display

Receiver



PC/Laptop Beamer



Hardware based System

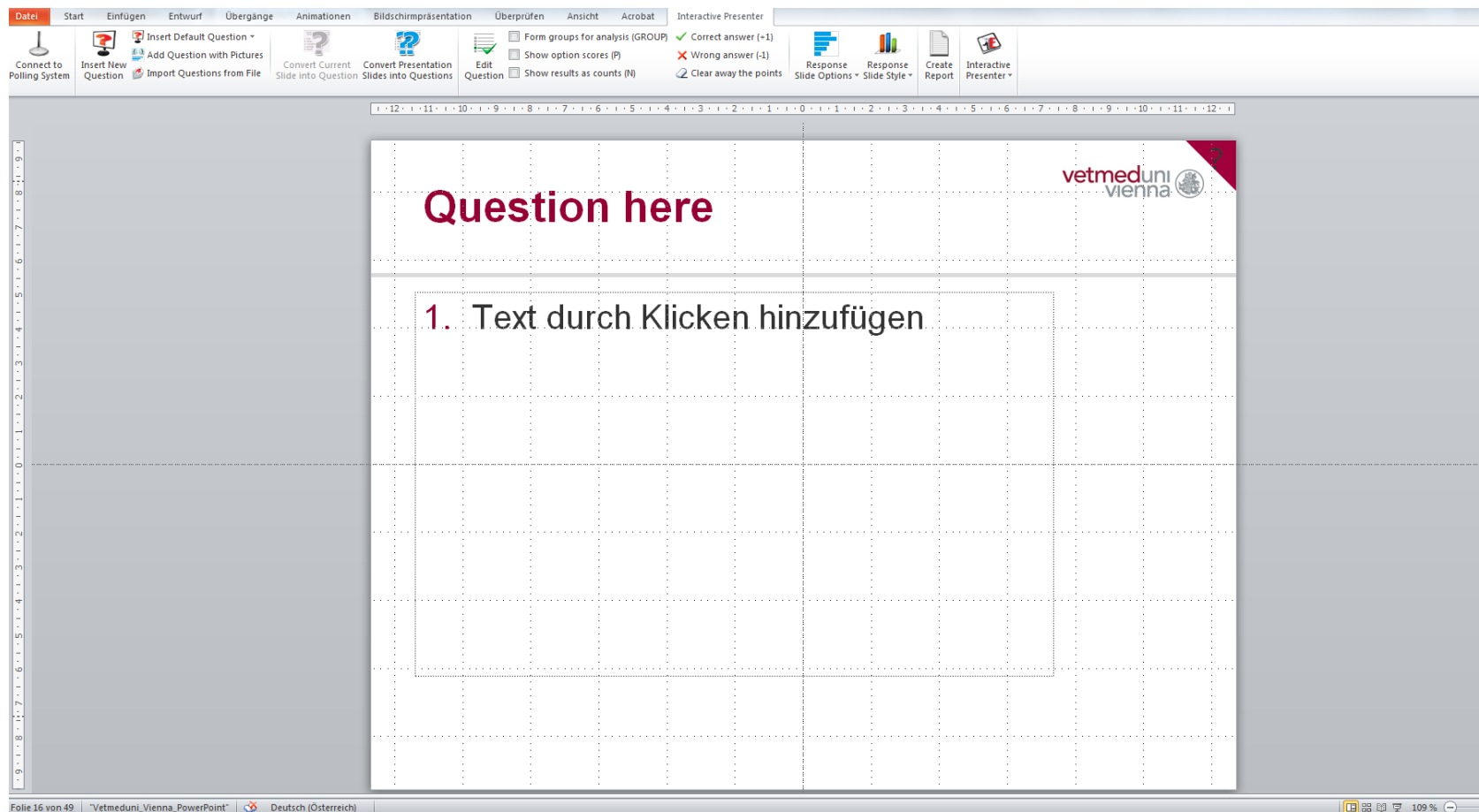
Software: *Dolphin Interactive Presenter*

Which of the following is true of Psoriasis pathogenesis?

- 1 Psoriasis is an autoimmune disease 10,0%
- 2 Psoriasis is inherited 20,0%
- 3 Psoriasis is strongly linked to HLA B27 30,0%
- 4 Psoriasis is caused by infection 40,0%

Hardware based System

Software: *Dolphin Interactive Presenter* (Power Point Add In)



The screenshot displays the Dolphin Interactive Presenter software interface. The ribbon menu includes tabs for 'Datei', 'Start', 'Einfügen', 'Entwurf', 'Übergänge', 'Animationen', 'Bildschirmpräsentation', 'Überprüfen', 'Ansicht', 'Acrobat', and 'Interactive Presenter'. The 'Interactive Presenter' tab is active, showing options like 'Form groups for analysis (GROUP)', 'Correct answer (+1)', 'Wrong answer (-1)', 'Clear away the points', 'Response Slide Options', 'Response Slide Style', 'Create Report', and 'Interactive Presenter'. The main workspace displays a slide with a grid background. The slide content includes the text 'Question here' in red, the 'vetmeduni vienna' logo in the top right corner, and a numbered list item '1. Text durch Klicken hinzufügen' inside a dashed rectangular box. The status bar at the bottom shows 'Folie 16 von 49', the file name 'vetmeduni_Vienna_PowerPoint', the language 'Deutsch (Österreich)', and a zoom level of '109%'.

Hardware based System

Question types

- One-option/multi-option questions

Where can you visit this church?



1. Vienna
2. Rome
3. Paris
4. Berlin
5. Madrid

Where can you visit this church?



- | | | |
|----|---------------|---------|
| 1. | <u>Vienna</u> | √ 56,1% |
| 2. | <u>Rome</u> | 9,8% |
| 3. | <u>Paris</u> | 4,9% |
| 4. | <u>Berlin</u> | 9,8% |
| 5. | <u>Madrid</u> | 19,5% |

Hardware based System

Question types

- One-option/multi-option questions
- Rating question

How often did you engage the following activities in the last month?

4= frequently, 3= often, 2= seldom, 1=never

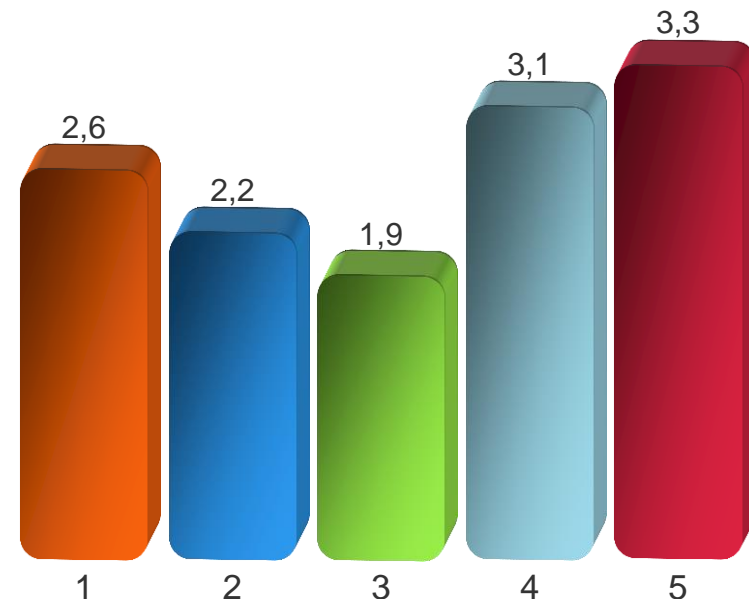
1. Watching TV
2. Reading magazines for pleasure
3. Going to movies
4. Listening to the radio
5. Surfing in the web

Columns

How often did you engage the following activities in the last month?

4= frequently, 3= often, 2= seldom, 1=never

1. Watching TV
2. Reading magazines for pleasure
3. Going to movies
4. Listening to the radio
5. Surfing in the web



Hardware based System

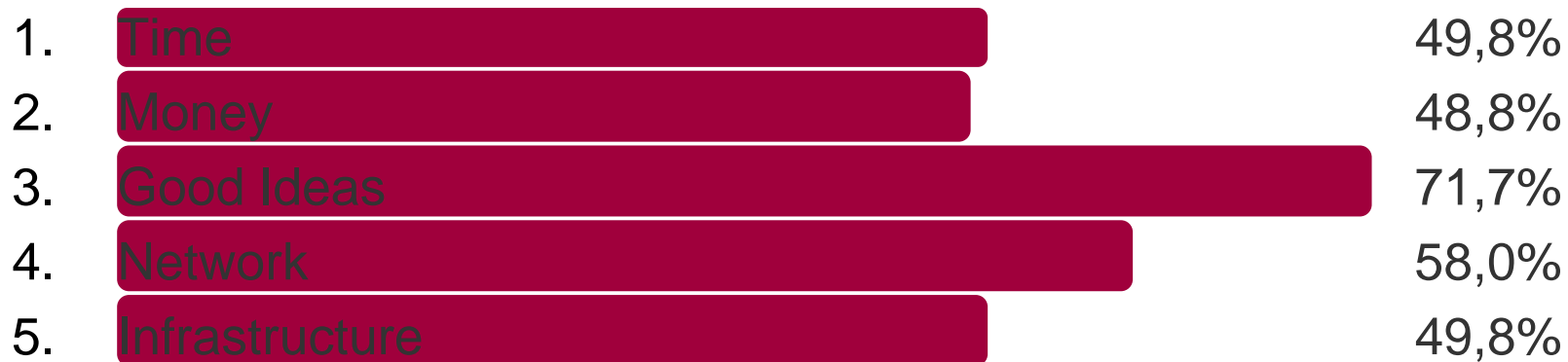
Question types

- One-option/multi-option questions
- Rating question
- Order type/Ranking question

Select in priority order the facts improving science efficiency?

1. Time
2. Money
3. Good Ideas
4. Network
5. Infrastructure

Select in priority order the facts improving science efficiency?



Hardware based System

Create Report

Open... Save... Choose Report Options

Show Results n/% Show Points and Scoring Basic Results Divide Results by Groups Classification by ID Sum up Repeated Questions

Q1 30.03.2016 17:14

IPQuestionSlide2(order)

Select in priority order the factsimproving science efficiency?

(n)	(%)	
27	54%	Time
27	54%	Money
30	60%	Good Ideas
31	62%	Network
23	46%	Infrastructure
138	100%	(N / %)

Copy to Excel OK Cancel

Hardware based System

Additional functions









- Timer
- Participants: absolute numbers/percentage
- Results can be hidden
- Quiz with point award
- Quiz with teams

Online based system

Online based system


■ www.mentimeter.com


Please note This question has votes and editing it may affect the results.












Question type


Choose which type of question to ask your audience.



 Multiple choice



 Word cloud


 Scales


 Open ended


 100 points


 2 by 2 Matrix


 Who will win?

Your question

Enter the question you want to ask your audience (max 100 characters).

Which season is your favorite?

[Add optional description](#)

Alternatives

Enter the alternatives that your audience can vote on.




↑	Winter	🗑️
↑	Spring	🗑️
↑	Summer	🗑️
↑	Fall	🗑️


+ Add alternative

Extras

Show results in % as default for this question ?

Allow audience to vote on more than one alternative ?



www.mentimeter.com

Go to **www.govote.at** and use the code **38 37 42**

We created a question so you can try voting

This is the presentation where you show the results to the audience.

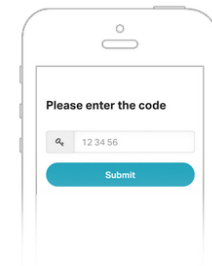


1 Grab your phone

www.govote.at|

2 Go to **www.govote.at**

Or create your own question



3 Enter the code
38 37 42 and vote!



Which of the following local anesthetics are ester?

You can choose up to 3 alternatives.

cocain

lidocain

procain

bupivacain

tetracain

3 choices left

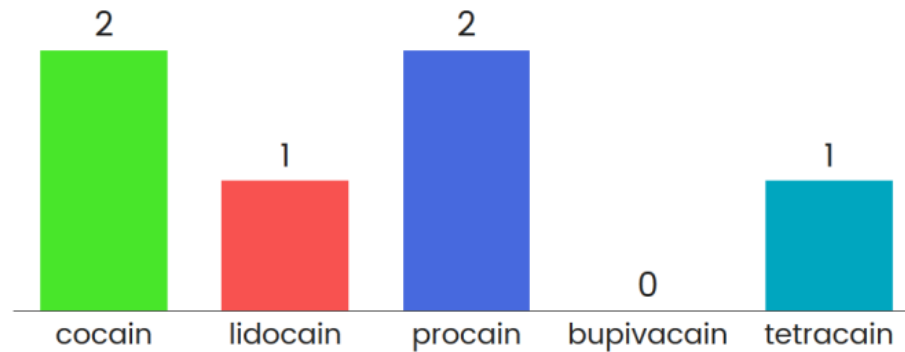
Submit

www.mentimeter.com

Go to www.govote.at and use the code **34 34 29**

Which of the following local anesthetics are ester?

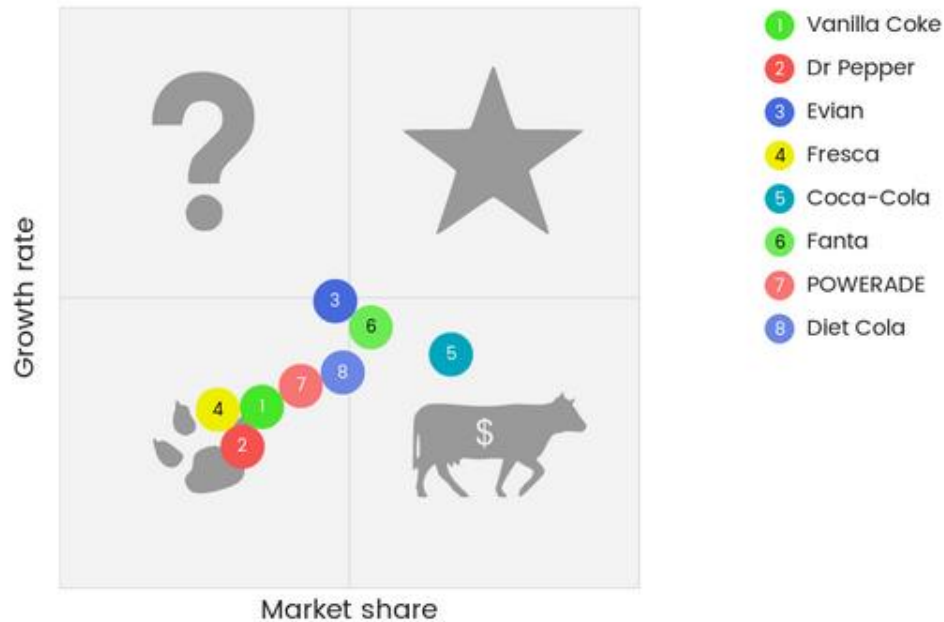
 Mentimeter



00:56 Until poll closes ✕


Votes: 2

Rate these Coca-Cola products in the BCG matrix 



Votes: 38

Feedback & Interaktion



Europa-Server



Dozent/in



Student/in



Anleitung



Blog




Datenschutz




Impressum

Sessions




Neue Session anlegen




Import

Als Student/in besuchte Sessions


 Demo & Evaluation of ARSnova (71073692) 15 >

Bedeutung der Farben


Offene Session




System



Anleitung



Datenschutz



Impressum

Use Cases

Welche Frageformate und Funktionen brauchen Sie für Ihre Session?

- Nur die Publikumsfrage à la Günther Jauch: A|B|C|D ohne Fragetext
- Nur Quizfragen in den Formaten Multiple- und Single-Choice, Ja|Nein
- Nur Zwischenfragen (Kummerkasten)
- Nur Live Feedback (Verständnisbarometer)
- Nur Twitter Wall
- Nur Evaluationsfragen mit 5-stufiger Likert-Skala und Auswertung
- Nur Lernkarten fürs Selbststudium: Session als Lernkartei
- ARSnova total: alle Frageformate und alle Funktionen
- Eigene Auswahl

[Session anlegen](#)

[System](#) [Anleitung](#) [Datenschutz](#) [Impressum](#)

Question formates and functions

Use Cases

Welche Frageformate und Funktionen brauchen Sie für Ihre Session?

- Nur die Publikumsfrage à la Günther Jauch: A|B|C|D ohne Fragetext
- Nur Quizfragen in den Formaten Multiple- und Single-Choice, Ja|Nein
- Nur Zwischenfragen (Kummerkasten)
- Nur Live Feedback (Verständnisbarometer)
- Nur Twitter Wall
- Nur Evaluationsfragen mit 5-stufiger Likert-Skala und Auswertung
- Nur Lernkarten fürs Selbststudium: Session als Lernkartei
- ARSnova total: alle Frageformate und alle Funktionen
- Eigene Auswahl

[Session anlegen](#)

[System](#) [Anleitung](#) [Datenschutz](#) [Impressum](#)

Session ID: 69728659

Es wurde der Zugangsschlüssel
«69728659» für Ihre Session erzeugt.
Dieser kann jederzeit auf der Session-
Übersicht eingesehen werden. Bitte teilen
Sie ihn Ihren Studierenden mit.

[Weiter](#)

Session ID

Multiple-Choice-Frage (Mehrfachauswahl)

MC-Frage SC-Frage Ja|Nein Freitext Evaluation Benotung Lernkarte Hot Spots

Thema

Text

Antwortoptionen

Anzahl	4	-	+
<input checked="" type="checkbox"/>	Antwortoption 1		
<input checked="" type="checkbox"/>	Antwortoption 2		
<input checked="" type="checkbox"/>	Antwortoption 3		
<input checked="" type="checkbox"/>	Antwortoption 4		

Start Feedback Fragen System Anleitung

C: Didactic Concepts

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

C2: Just-in-Time Teaching (JiTT) is a pedagogical strategy that uses feedback between classroom activities and work that students do at home, in preparation for the classroom meeting. The goals are to increase learning during classroom time, to enhance student motivation, to encourage students to prepare for class, and to allow the instructor to fine-tune the classroom activities to best meet students' needs. ([Wikipedia](#))



What can you test with a JITT question?

- Whether students have done prep work
- Whether students have problems with the prep material
- Whether the video has been watched
- Whether students are sufficiently prepared for class

Speichern

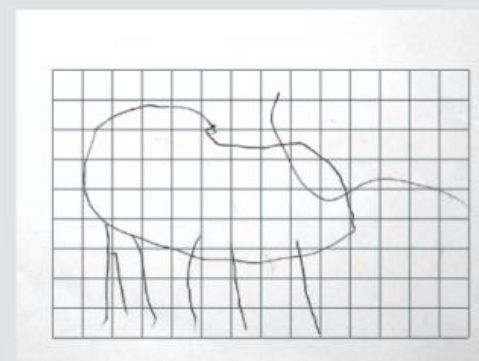
Enthaltung



B: Picture Question

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

B2: Mark the line that in your opinion identifies the symbol in Hans' conceptual scribble.



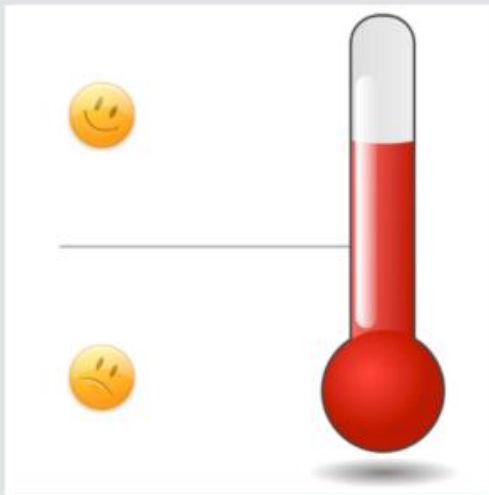
Speichern



E: Feedback to the Developers



E4: Please tell us whether this demo session with its different question types could warm you up a little bit for the use of an audience response system in class . Place a dot!



Verbleibende Klebepunkte: 1



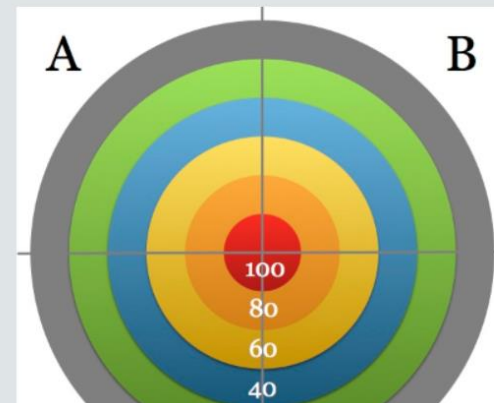
E: Feedback to the Developers



E5: The very last show case of a hot-spot picture question, we promise:

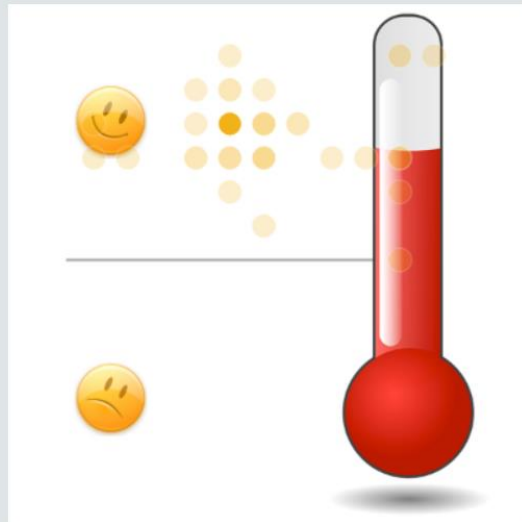
You have 4 sticky dots to state your opinion on four aspects of ARSnova (100 is best):

- **A:** Design
- **B:** Functions
- **C:** Usability
- **D:** Impact (As a teacher, would you use ARSnova next time in class?)



E: Feedback to the Developers

E4: Please tell us whether this demo session with its different question types could warm you up a little bit for the use of an audience response system in class . Place a dot!



Zeige Anzahl der Markierungen:

absolut

prozentual

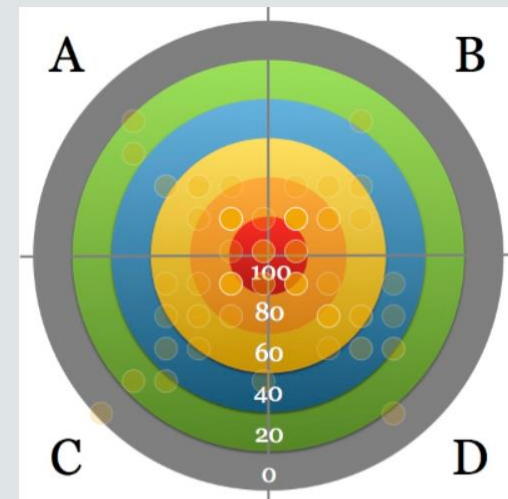
verborgen

E: Feedback to the Developers


E5: The very last show case of a hot-spot picture question, we promise:


You have 4 sticky dots to state your opinion on four aspects of ARSNova (100 is best):


- **A:** Design
- **B:** Functions
- **C:** Usability
- **D:** Impact (As a teacher, would you use ARSNova next time in class?)




LA

Session: 69 72 86 59 

 Frage präsentieren





 Neue Frage anlegen






 Rolle wechseln

- Fragen der Studierenden 1 1 >
- Hörsaalfragen 1 1 >
- Vorbereitungsaufgaben** >
- Live Feedback >
- Lernstand des Kurses >

Bedeutung der Farben

Fragen der Studierenden Ungelesene Fragen Fragen Antworten


 1  1  1  

Start Fragen Feedback System Anleitung

 Ich habe eine Frage

 Feedback geben

- Hörsaalfragen 13 215 >
- Vorbereitungsaufgaben 83 >
- Meine Fragen >
- Mein Lernstand 100% vs. 15% >



 2    

Start Fragen Feedback System Anleitung

Online based system

www.mentimeter

- basic function for free
-> 2 questions/session
- Fee-based upgrade for more functions
- Power Point Add-In
- Registration
- Easy to use

www.arsnova.thm.de

- for free
- many interactive functions and question styles (incl. student feedback/question)
- without registration
- Easy to use

Benefits of using ARS

- Maintains students attention during the lecture
- Promotes active student engagement
- Supports active thinking
- Promotes discussion and exchange between students
- Encourages participation from each and every student
- Provides safe environment for shy and unsure students
- Ability to immediately check the students' understanding
- Correct answers are positive feedback – that's motivation for both sides!

Challenges in using ARS

- Equipment (access to internet / keypads, receiver)
- Creating effective questions
- Technical problems
- Getting started takes some time
- Leading class-wide discussions



<http://connectedfamilies.org/2015/04/13/the-art-of-asking-good-questions/>



<http://www.tmtechng.com/2015/09/solve-your-tech-problems-now.html>

Please Turn on Your Clickers

