

# GAME-BASED LEARNING IN THE CLASSROOM

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Co-founder/Inventor/Researcher Kahoot!  
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# Transform unengaged students...



...to listening and  
engaged students





# Transforms passive students...



... to active in own  
learning





# From one-way communication

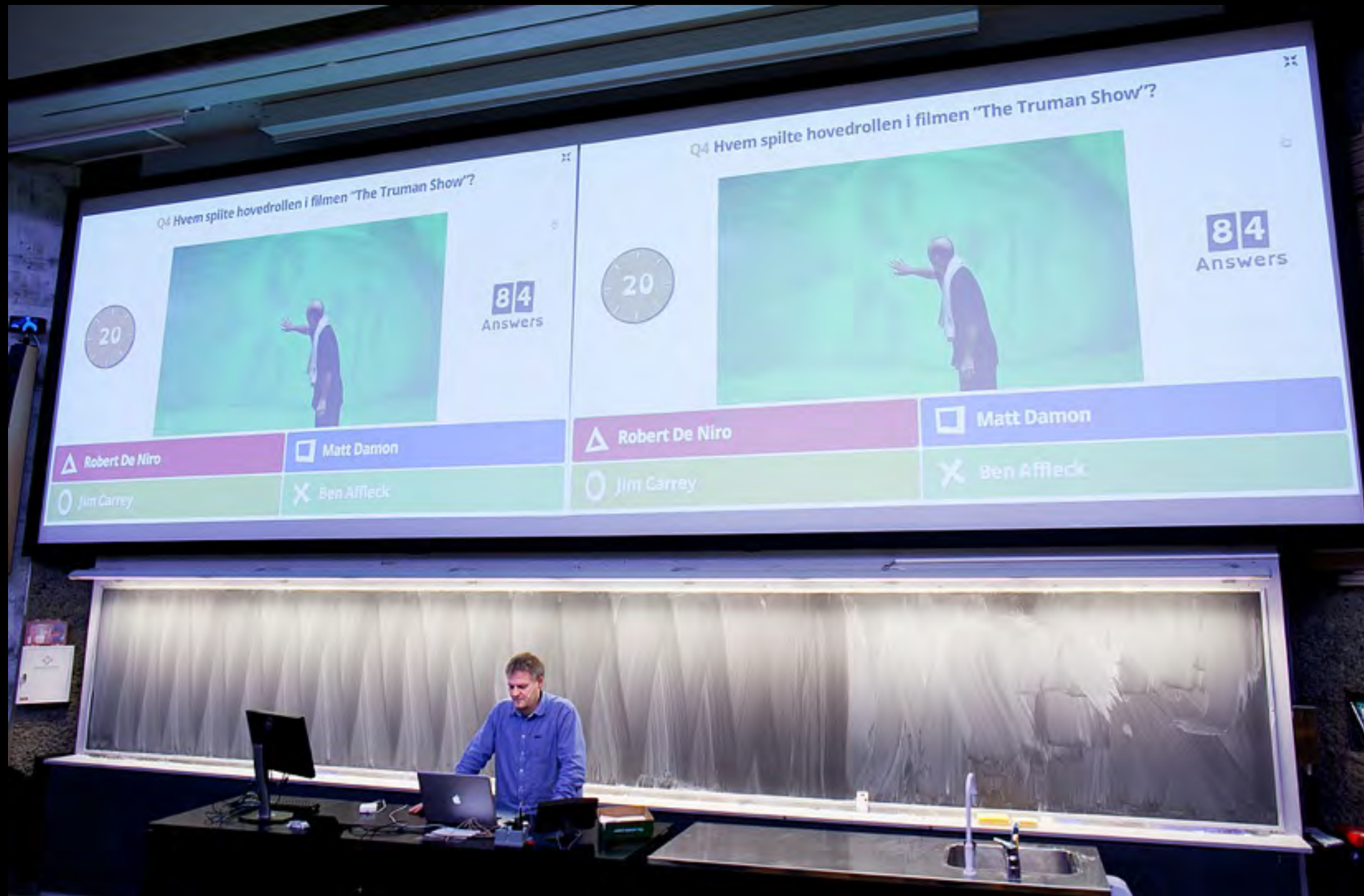


...to two-ways  
interaction





# Provide useful feedback to instructors





# Provide useful feedback about what you have learned



# Results in more positive attitude towards learning





# Kahoot! is a basically BYOD gameshow in the classroom



Q1 Who used the argument "I think, therefore I exist"?

18

Next ▶

0  
Answers



▲ Plato

⬡ Descartes

◻ Leibniz





# Research results: Wear-out effects

One-time event:

Using Kahoot! in motivation  
lecture on 206 students.

First time ever seen or used  
Kahoot!

VS.

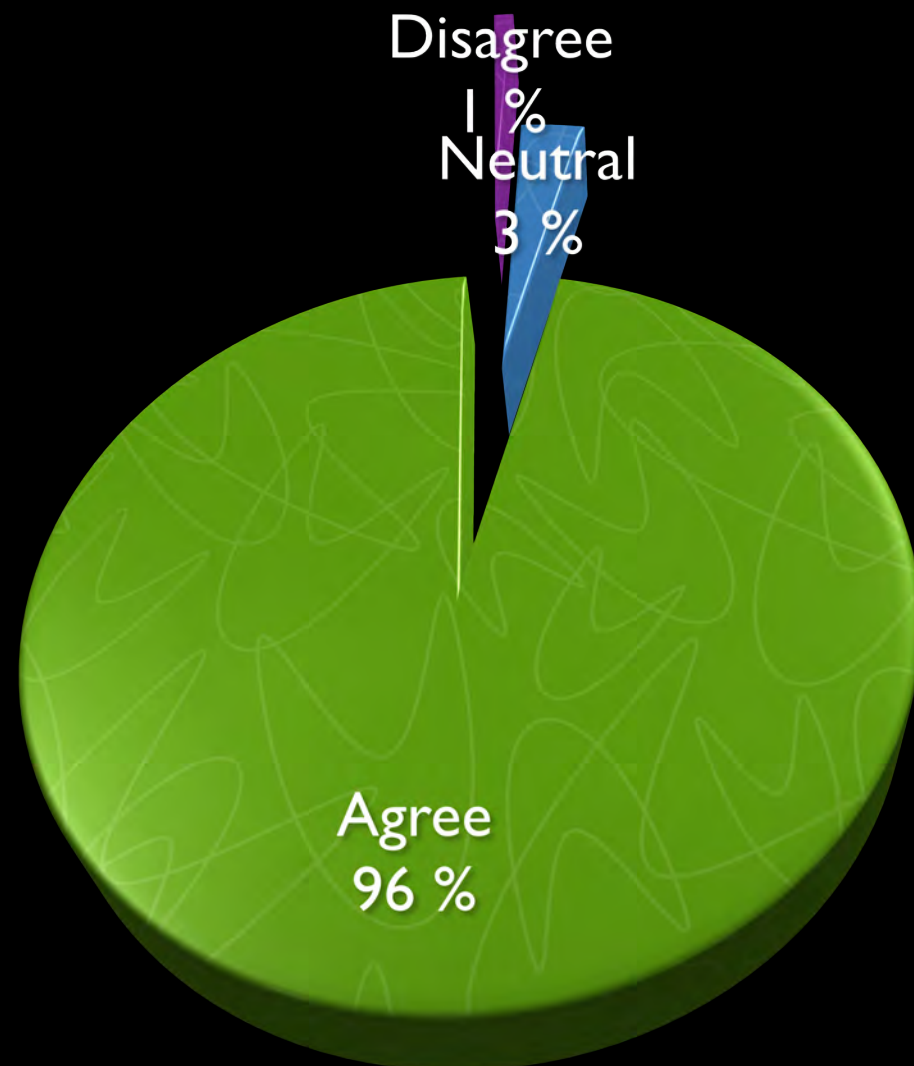
One semester:

Using Kahoot! through the  
spring semester on 45  
students.

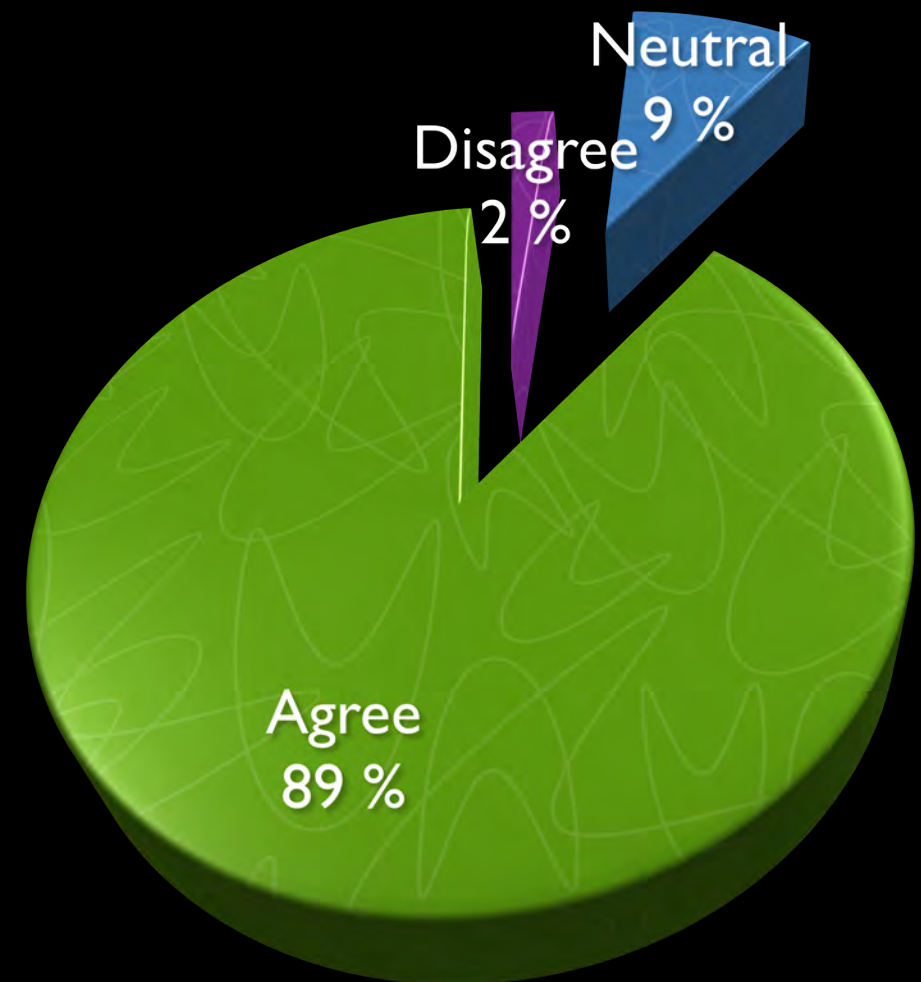
Kahoot! was used normally  
several times a week!

# I was engaged while playing Kahoot!

One-time event



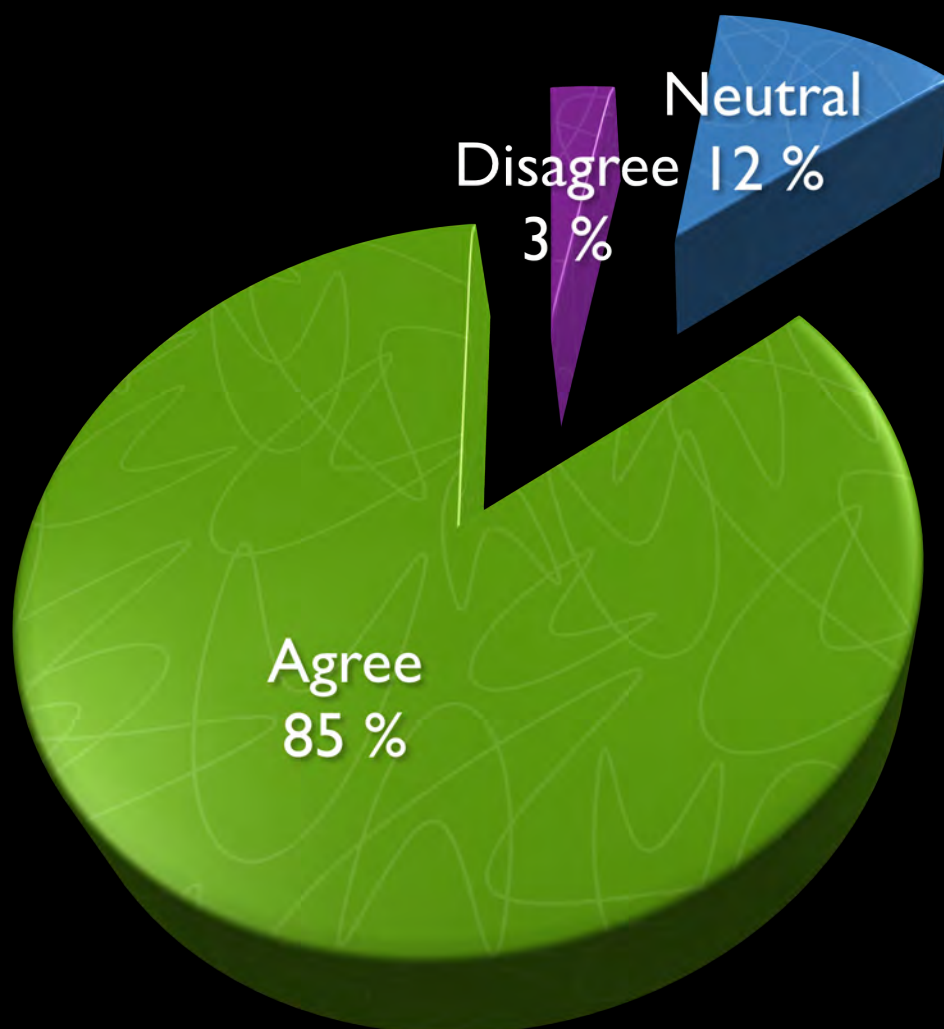
One semester



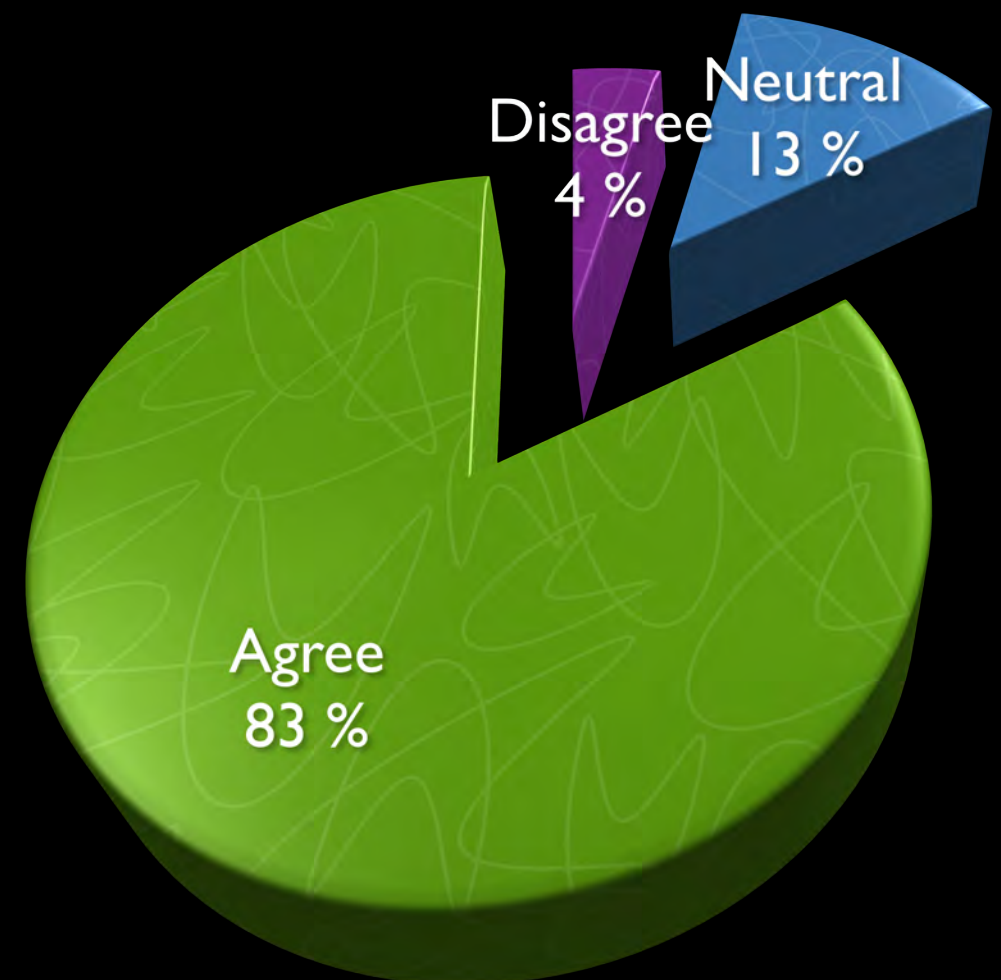


# I wish Kahoot! would be used in other classes

One-time event

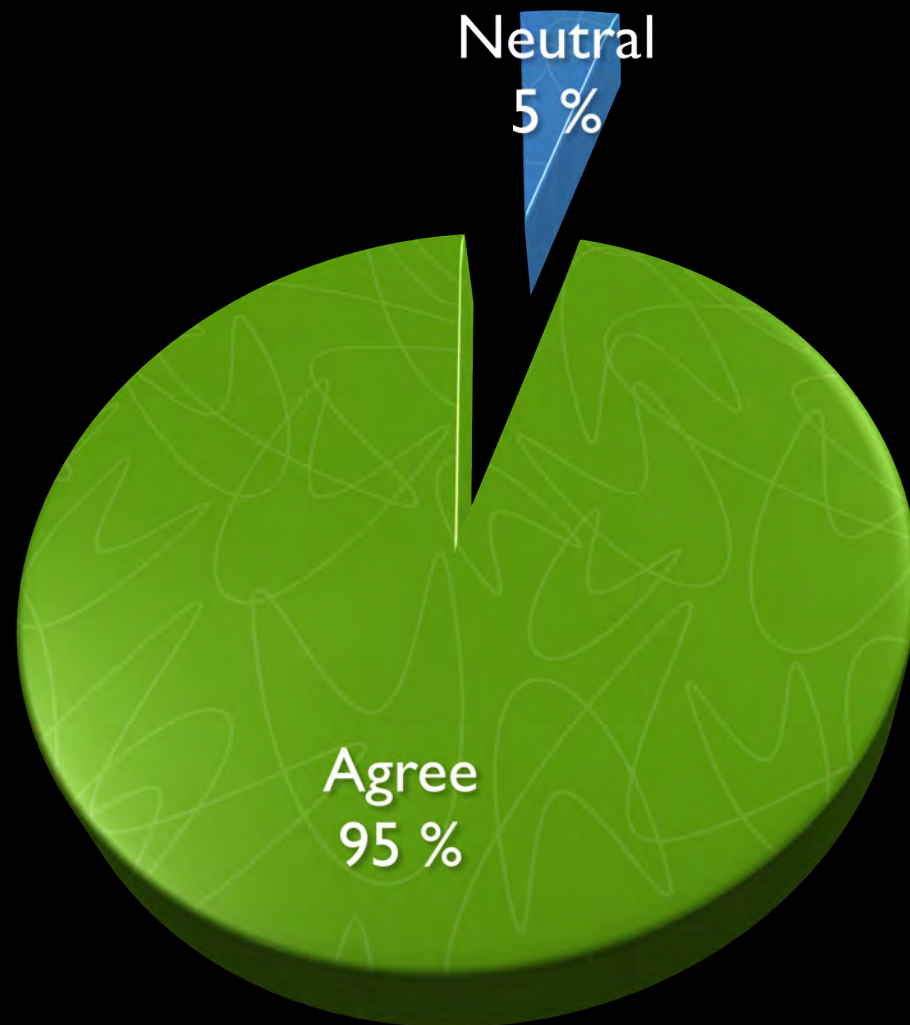


One semester

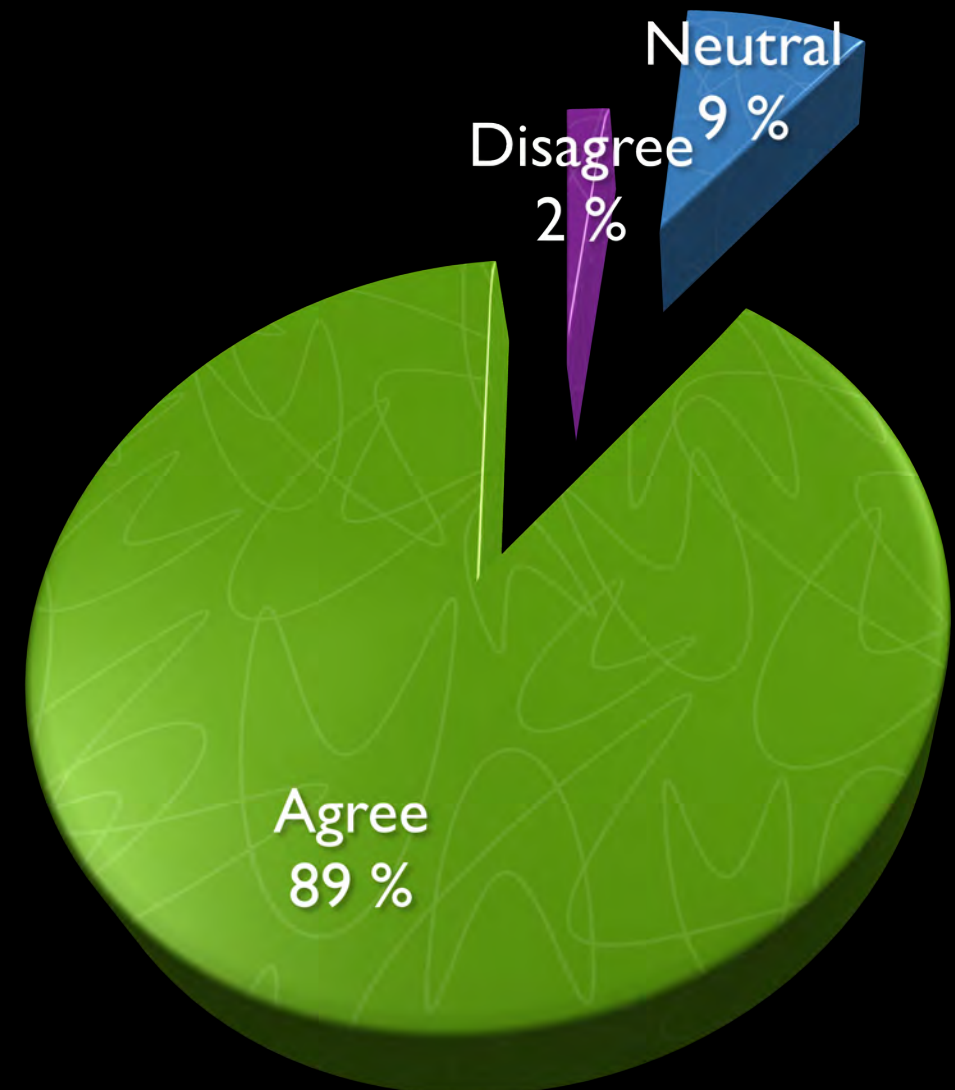


# It was fun to play Kahoot!

One-time event



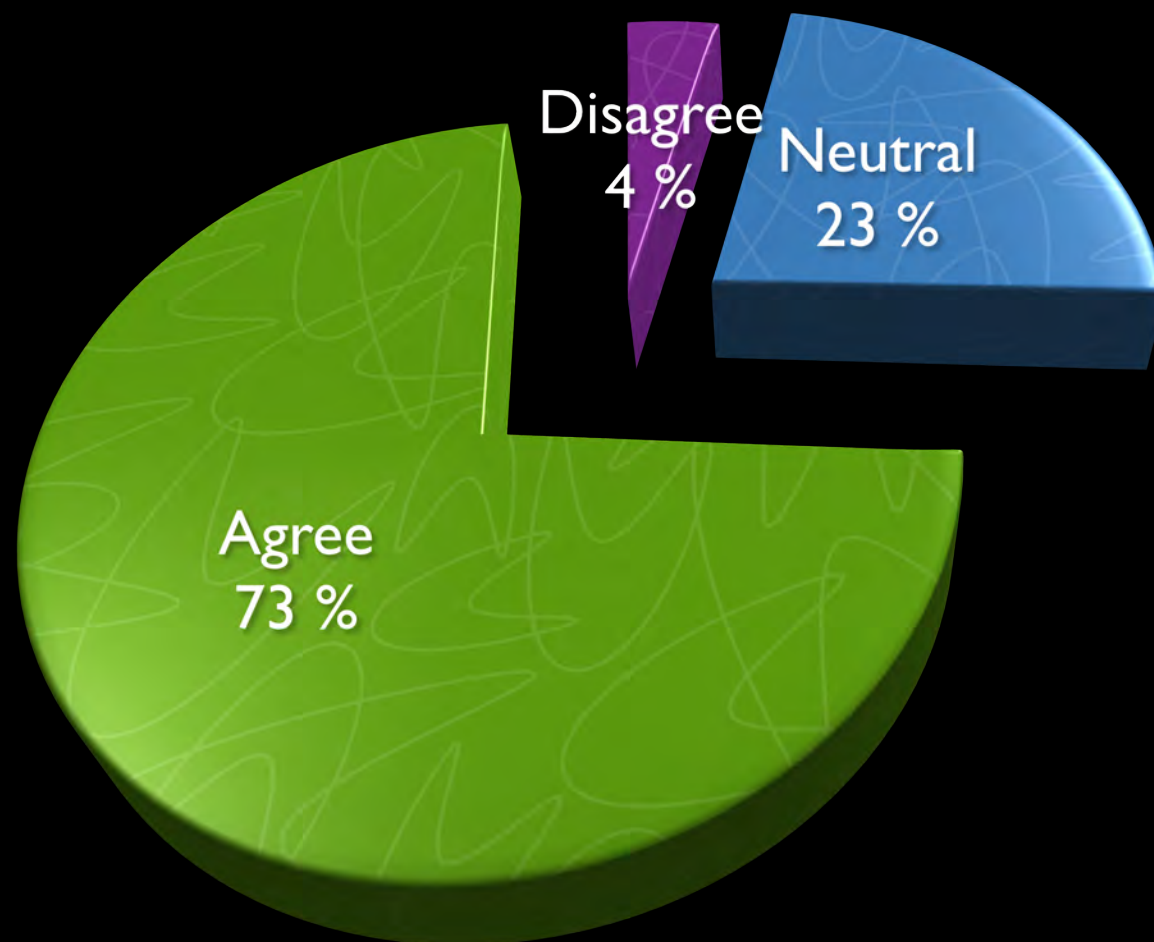
One semester



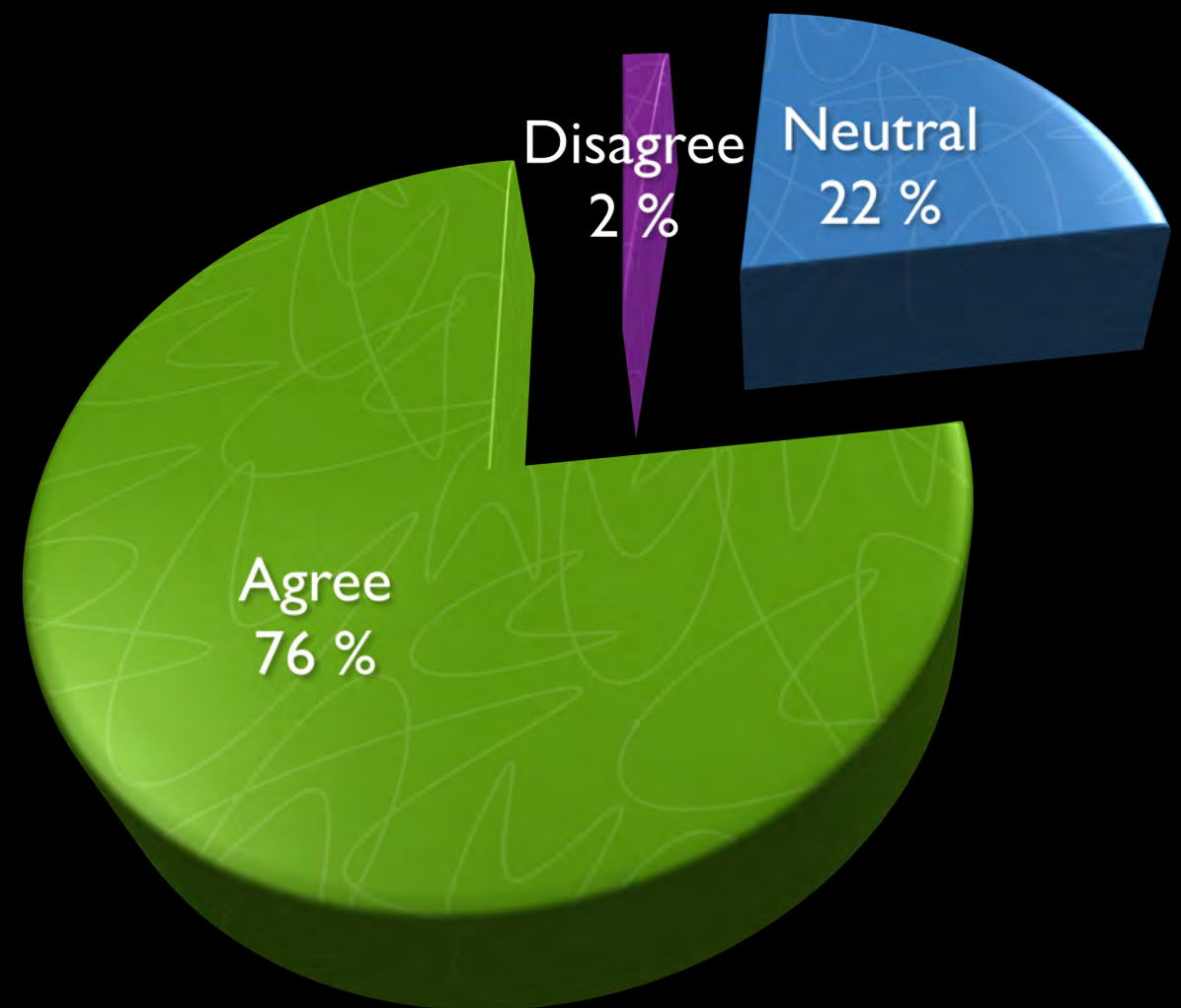


# I learn from playing Kahoot!

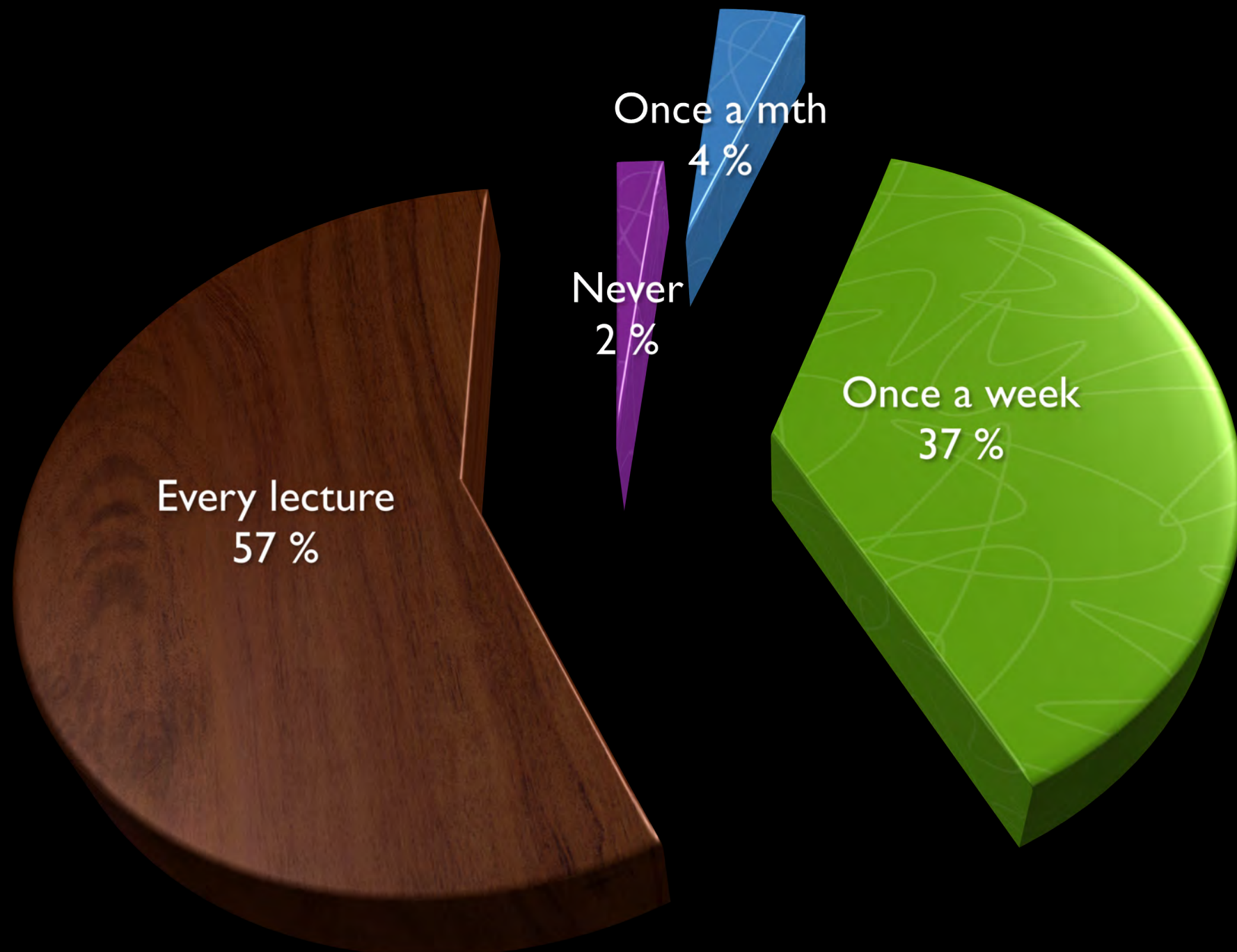
One-time event



One semester



# How often should Kahoot! be used in lectures?



# Research results: Paper vs SRS vs GSRS



## Experiment:

Same lecture taught in 3 parallels:

1. Used paper form quiz to review
2. Used simple student-response system (SRS) to review
3. Used Game-based SRS to review



# Paper forms

**QUESTIONNAIRE**

Very often ☐

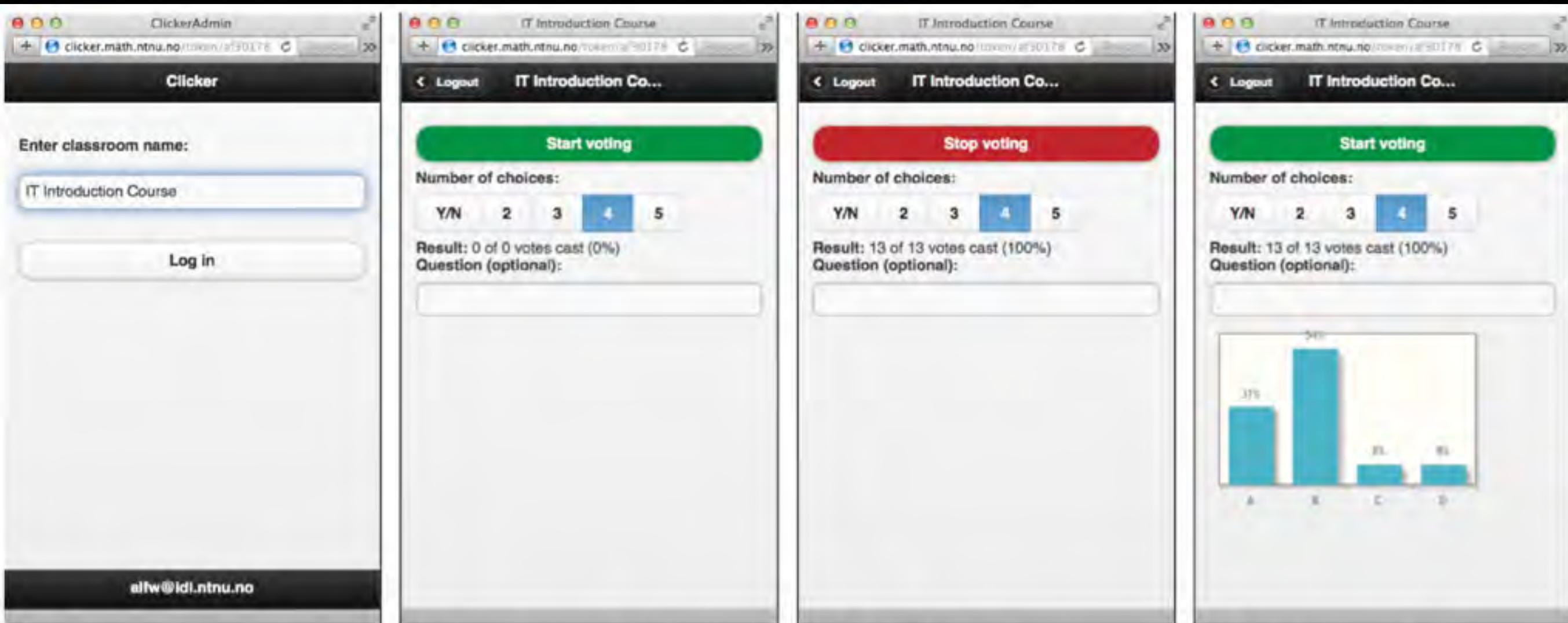
Often ☐

Sometimes ☒

Rarely ☐

A close-up photograph of a white questionnaire form. The title 'QUESTIONNAIRE' is printed in bold, black, uppercase letters at the top. Below the title, there are four rows of text, each followed by a small square checkbox. The text labels are 'Very often', 'Often', 'Sometimes', and 'Rarely', arranged vertically. The 'Sometimes' checkbox is marked with a blue checkmark. A black pen with a gold-colored tip is positioned to the right of the 'Sometimes' checkbox, having just finished marking it. The background is a solid black.

# Clicker - Student-response system



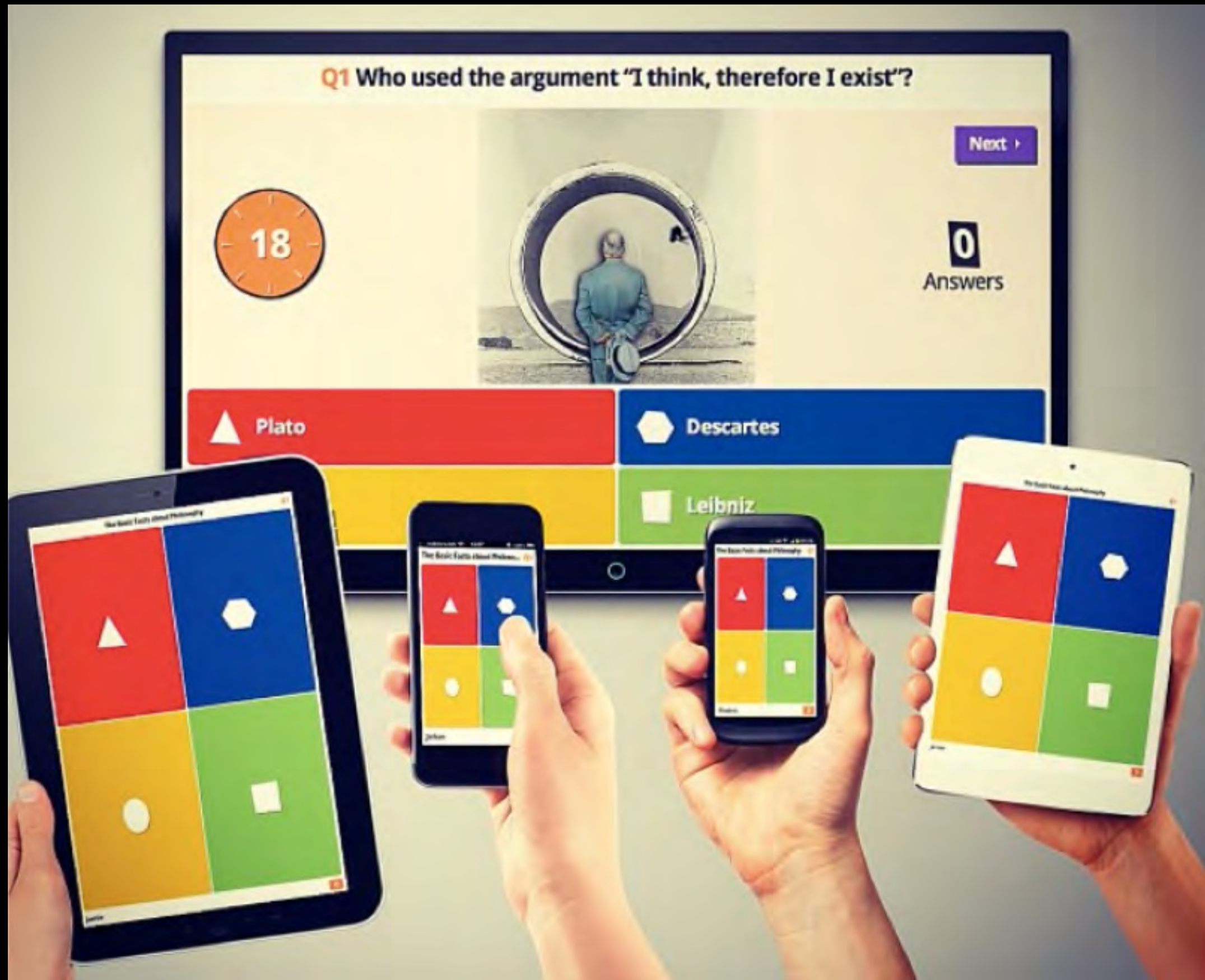
a) Enter classroom

b) Choose choices

c) Collect votes

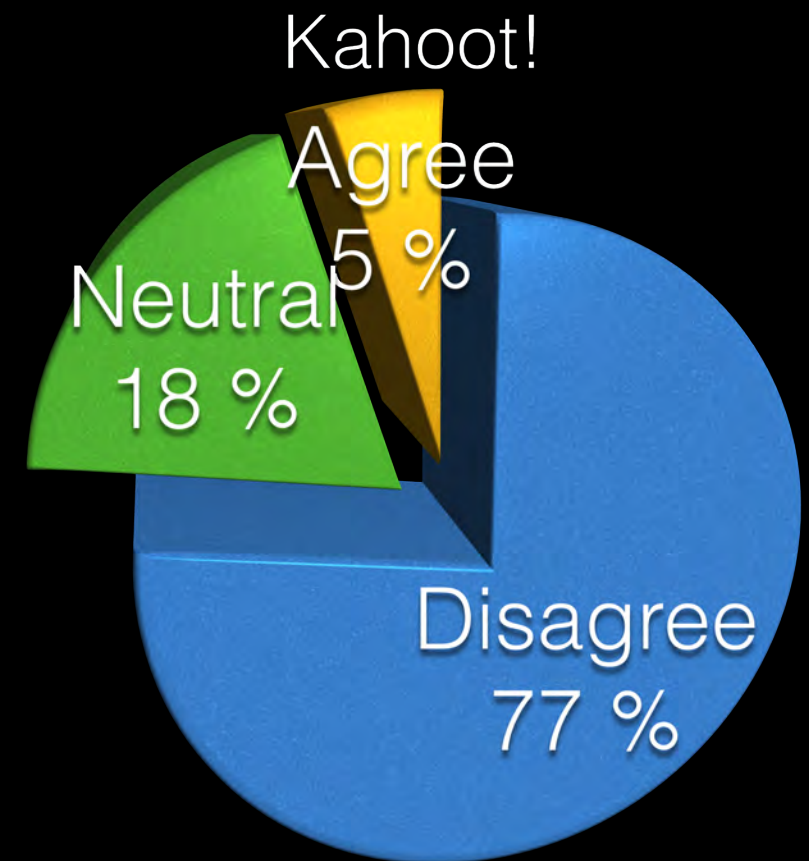
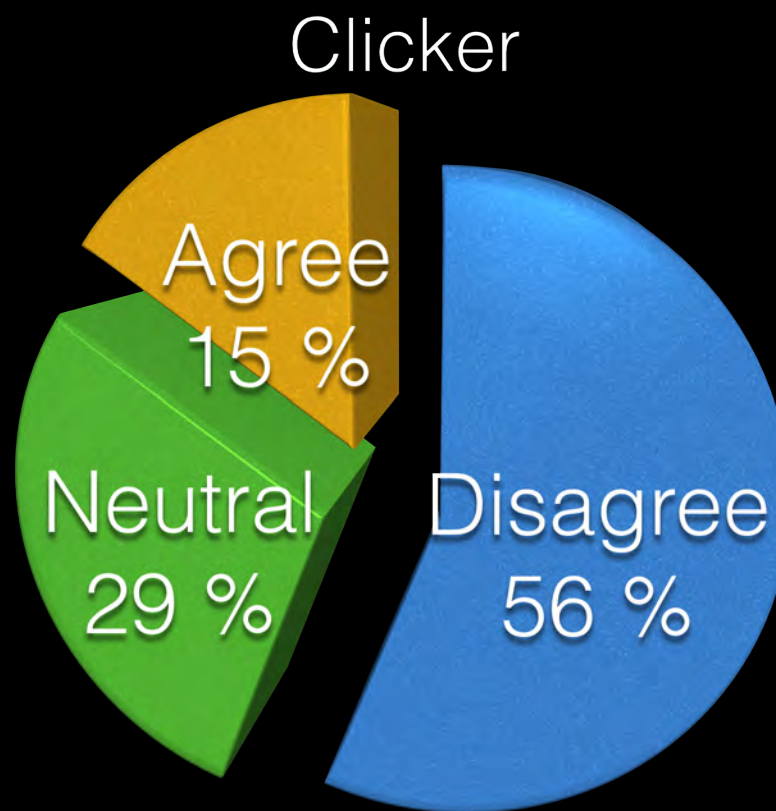
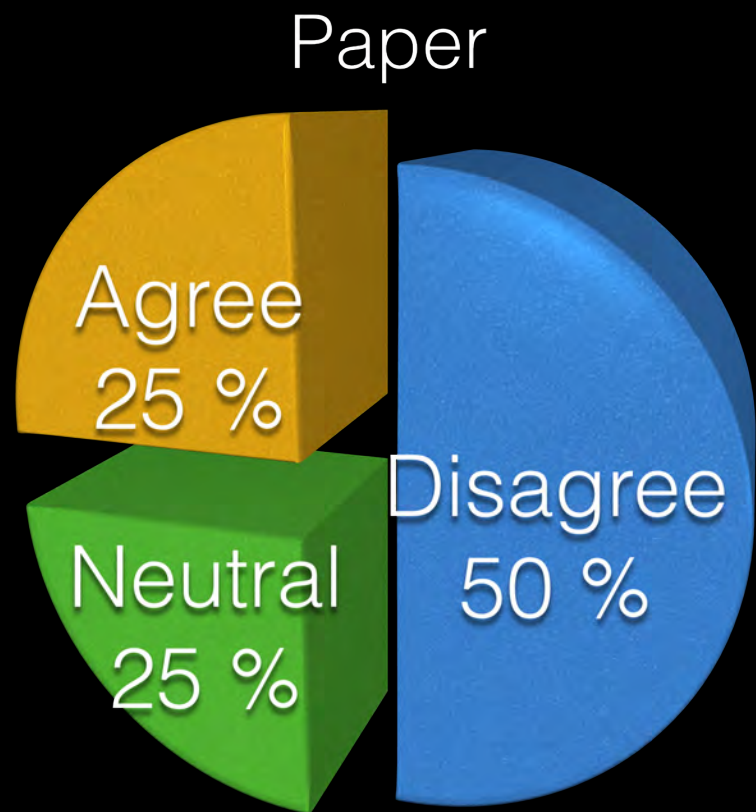
d) View results

# Kahoot! - Game-based student response system

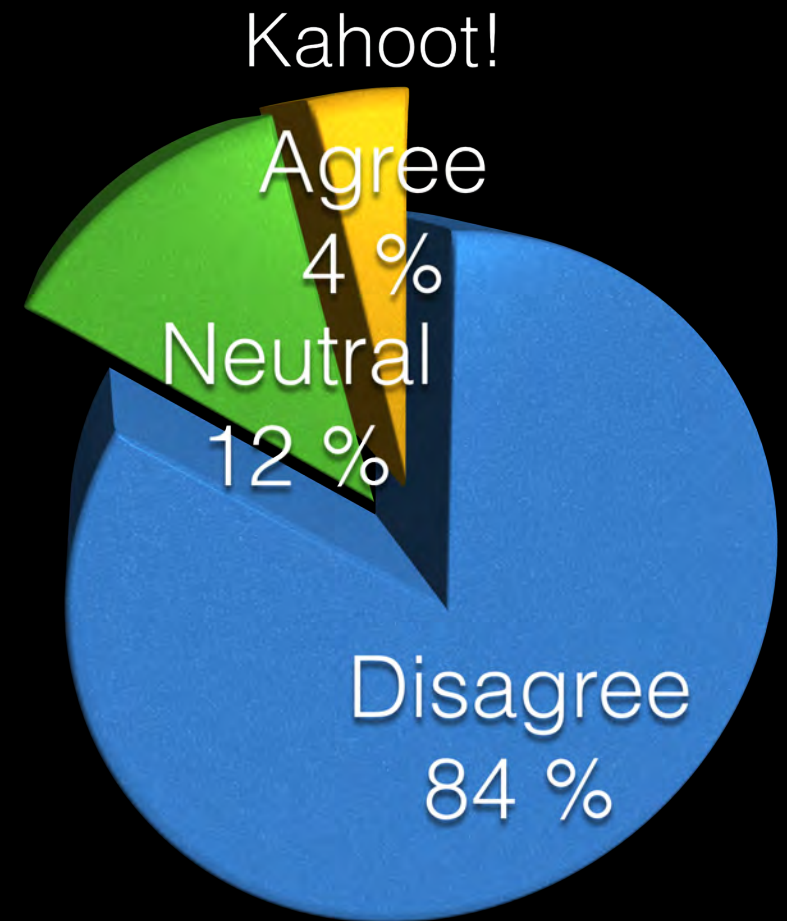
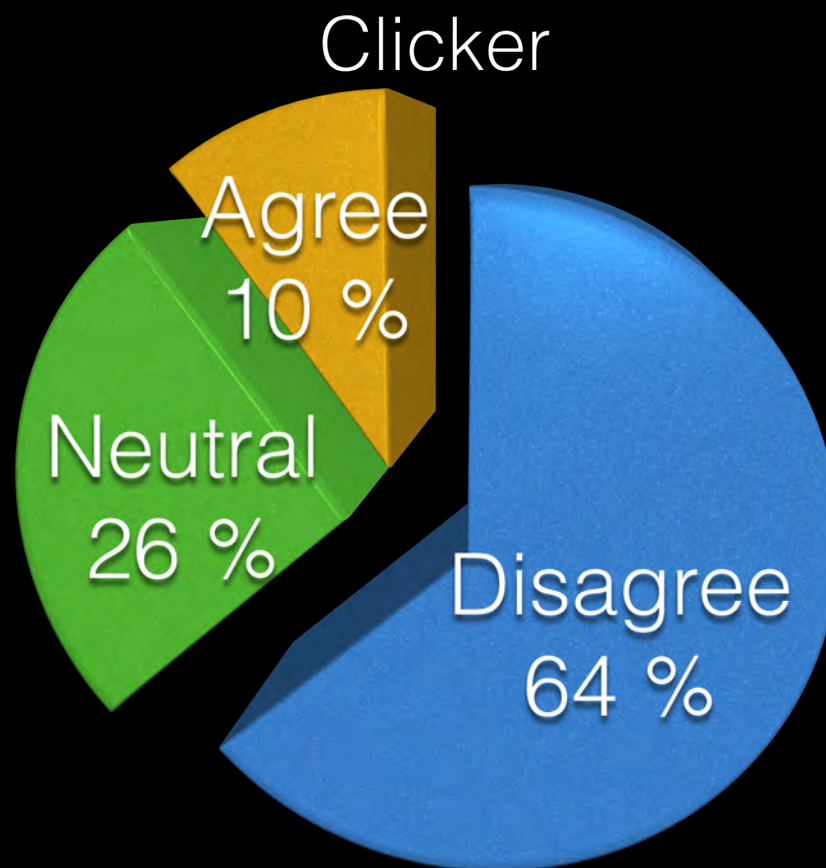
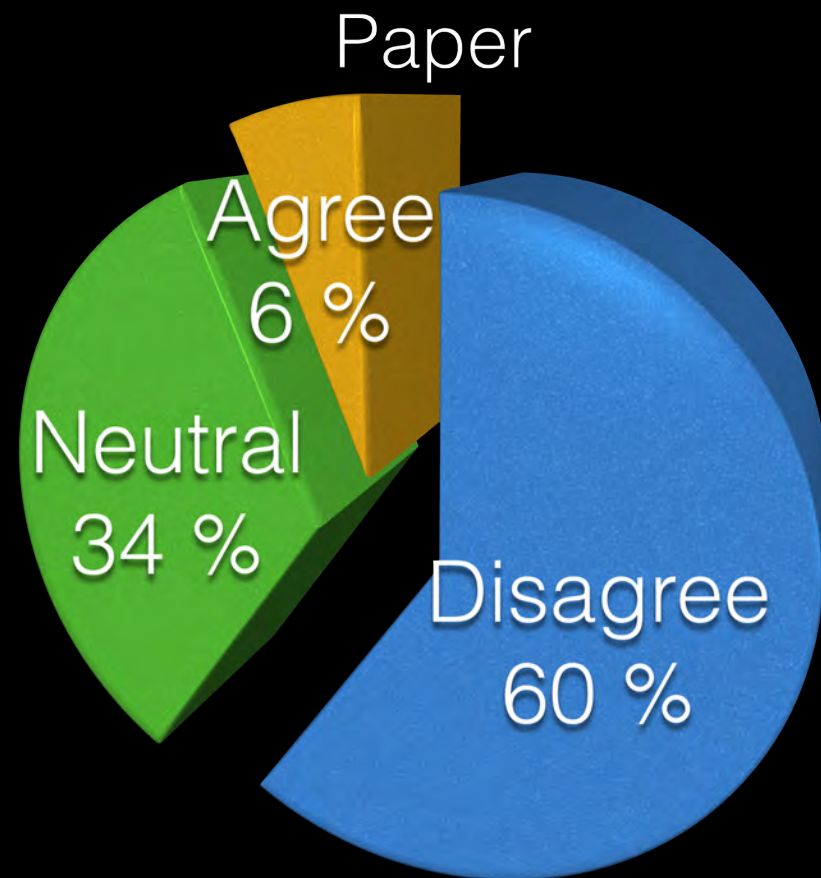




“I did the quiz only because the teacher told me to”

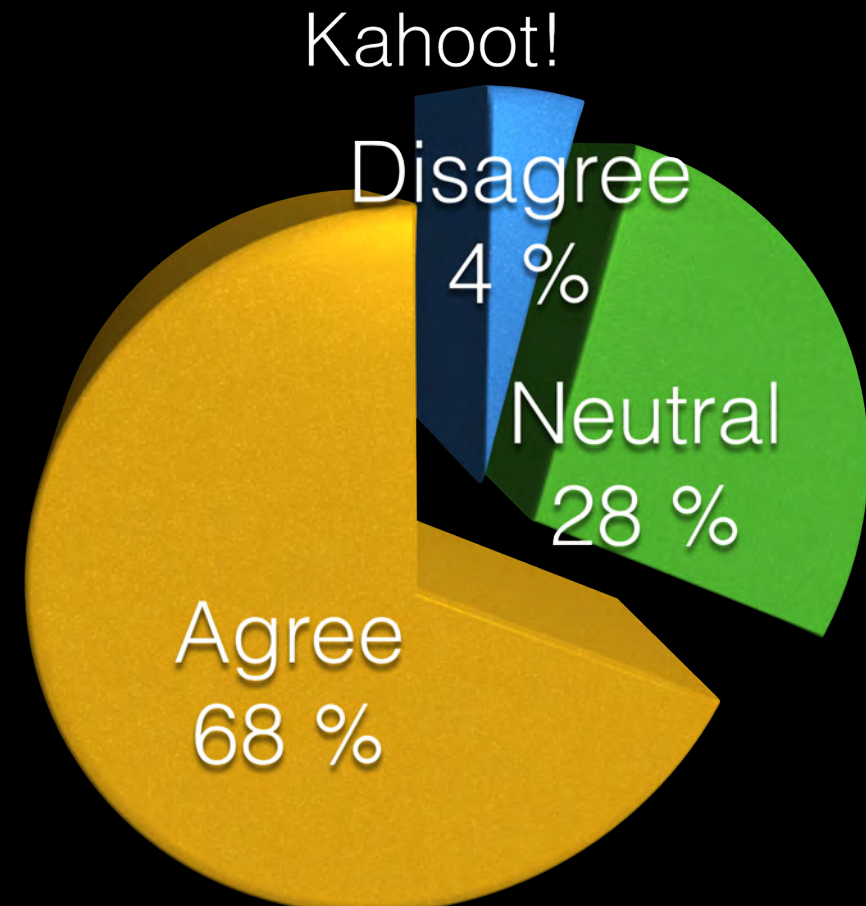
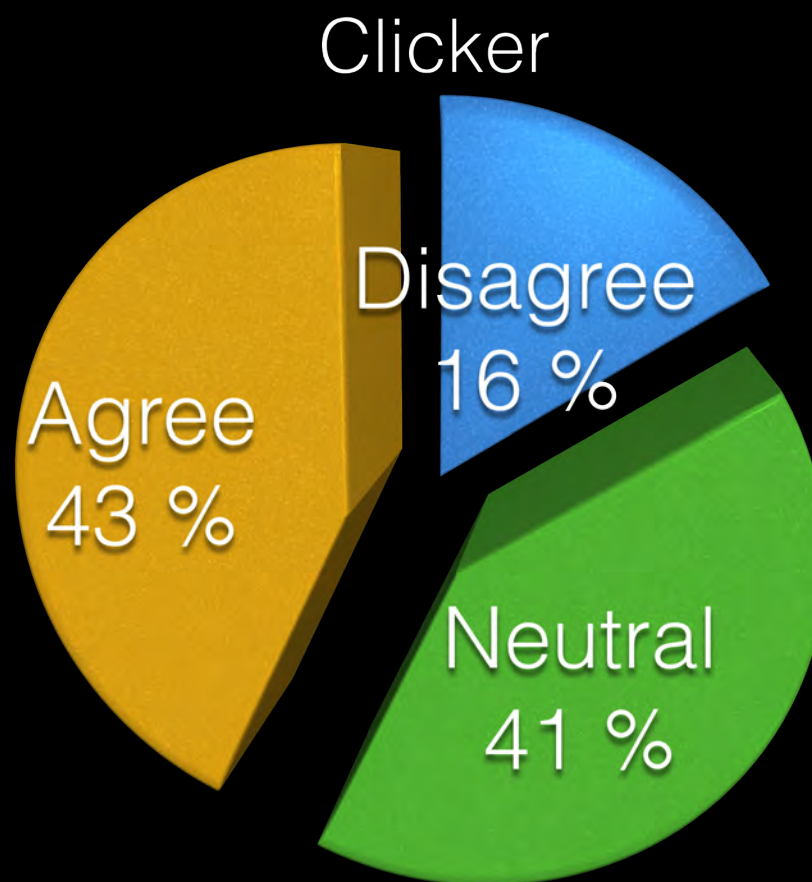
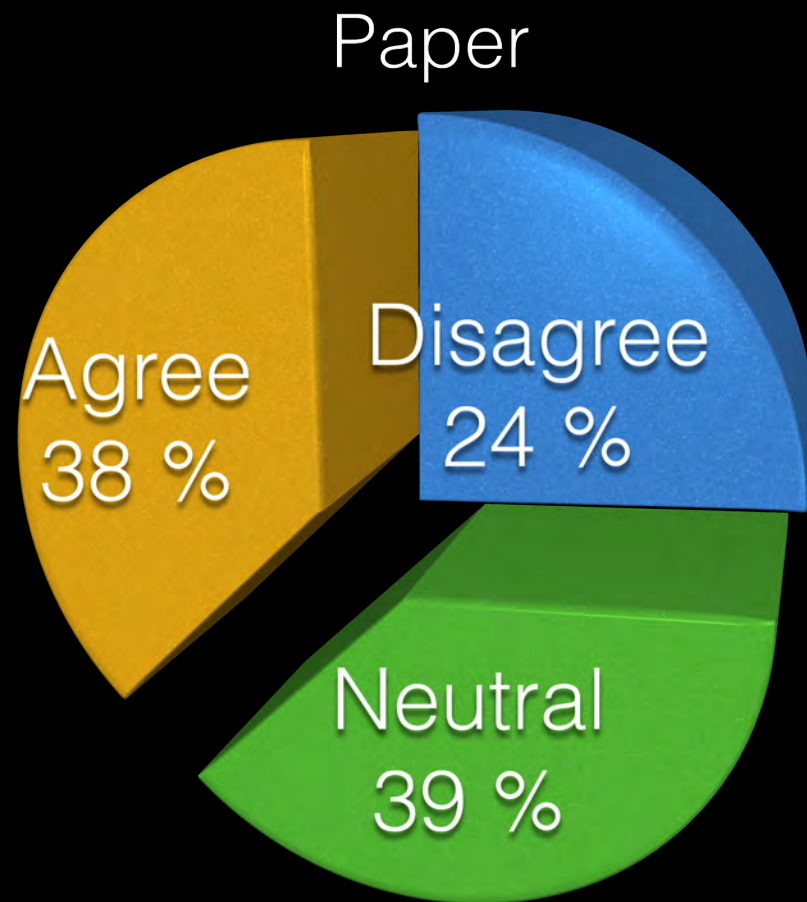


# “The quiz was boring and not engaging”



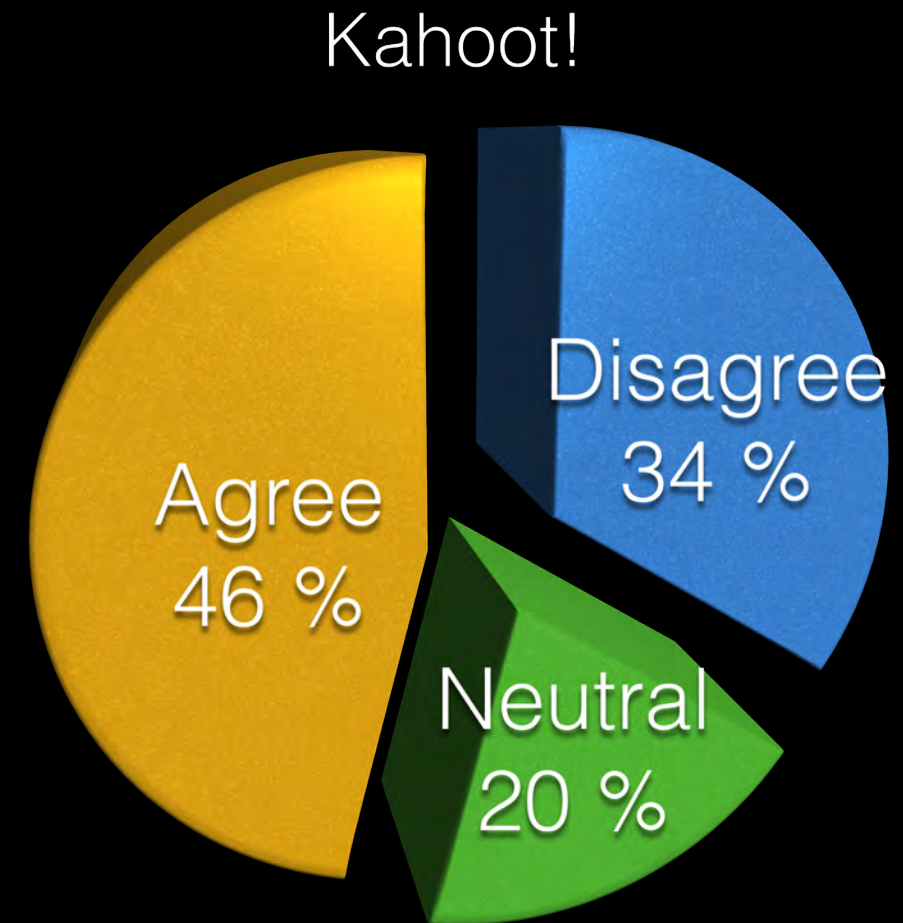
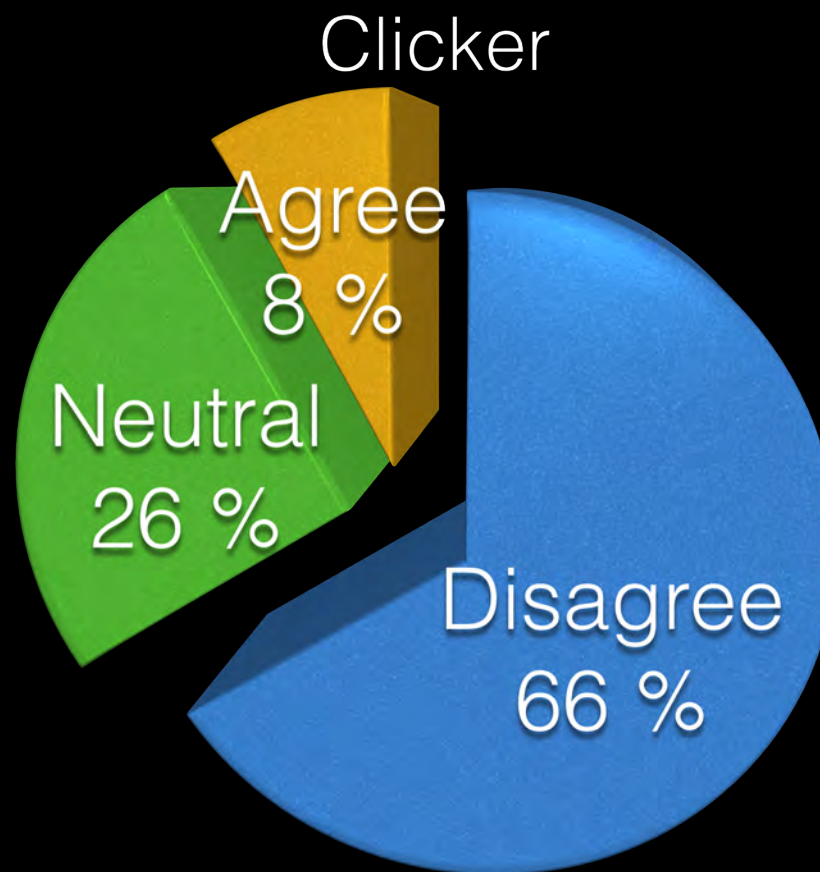
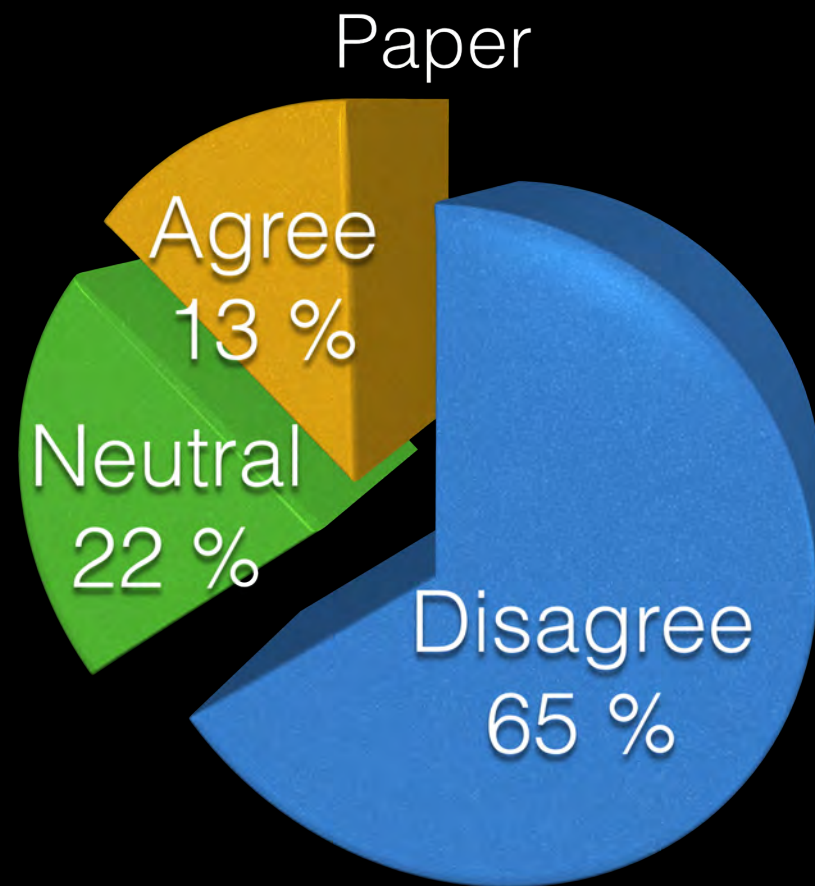


# “I want to do better on the quiz than most other students”





# “I felt increased pulse when answering the quiz”



# Other results

- Mean learning improvement (post-test - pre-test):
  - Paper: 3.669
  - Kahoot!: 3.817
- Less variation for gender and whether students play video games for Kahoot!
- Most variation for gender and whether students play video games for paper quizzes.

# Thanks!

- Email: [alfw@idi.ntnu.no](mailto:alfw@idi.ntnu.no)
- Web: <http://www.idi.ntnu.no/~alfw>
- Please try out Kahoot! and/or make your lecturer try out Kahoot!



[getkahoot.com](http://getkahoot.com)