# **Zosimos for Online Chemistry Teaching**

Erika Biró



Visit us at: https://zosimos.io

### Presentation and workshop:

Poll about organic chemistry drawing styles

Research at University of Dayton and Kantonsschule Zug

Quiz - do it together

Introduction of Zosimos

Demo of creating a quiz and practicing with students

Completing the created quiz





#### Q&A



Raise Hand

Reactions

Record

Share Screen

Chat

- Please feel free to ask your question in the zoom chat window any time, we will try to answer them as soon as possible
- We will stop at some points to answer your questions.
   Please use the 'Raise Hand' button from 'Reactions' on the Zoom toolbar.



# Join our chemistry teaching poll

https://app.sli.do/event/2j7m1y6t





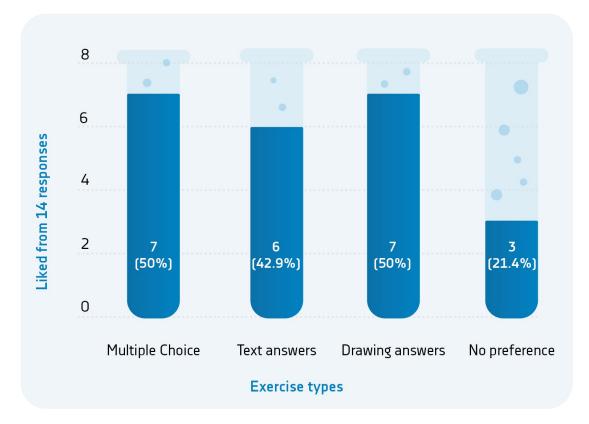


# Organic chemistry educational research at the University of Dayton

- To what extent do the students engage with an online learning tool on an optional basis?
- Can any patterns of behavior be observed when students are practicing with an online learning tool?



# Popularity of some exercise types









"The drawing ones took a lot of time and were harder to do on the computer."

"I liked the structure of the drawing answers the best because most of the test material was drawing structures."

"The drawing answers and text answers made me focus on those specific reactions or problems and gave me more practice than the multiple-choice."

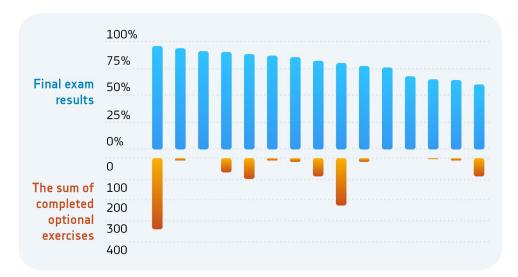




#### Result of the students

- 47% of students practiced
- The actively practicing students got on average 15% better results on the final exam
- The actively practicing students got on average 6.25% better

results on mid-term exams





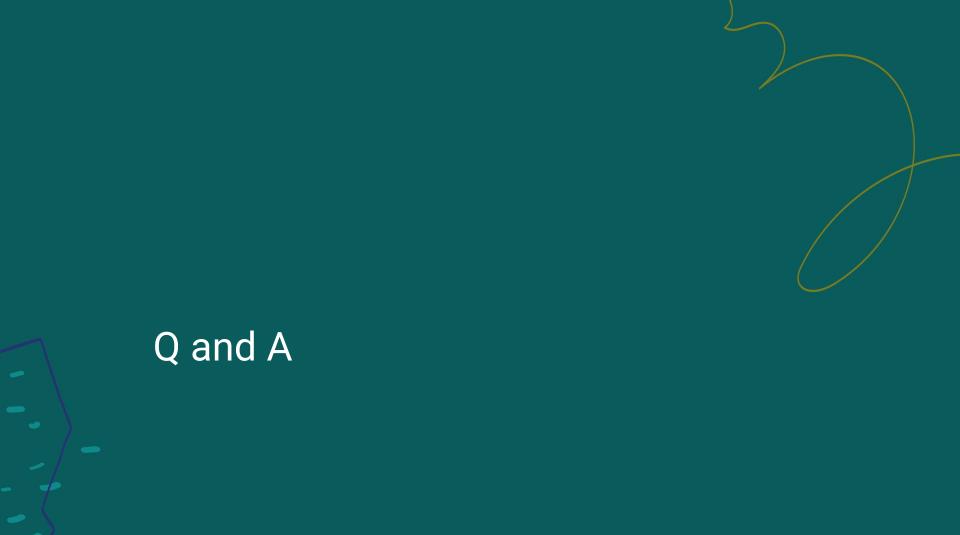
# Structure Drawing - The Heart of Teaching Chemistry 1 Research at Kantonsschule Zug, Switzerland

Structure drawing is important in high schools.

Online tools are part of the in-class experience during a normal school lessons after the covid period.

$$H_3C$$
 $CH_3$ 
 $H_3C$ 
 $CH_3$ 
 $CH_3$ 







# Fruit chemistry quiz 🧪







#### Scan with your mobile phone to try out the Fruit quiz' or type

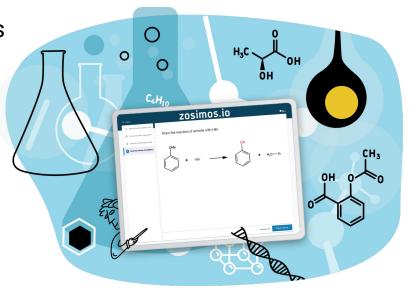
https://bit.ly/3AAgTb5





#### Zosimos...

- is an online chemistry educational tool
- is supported on laptops, tablets and mobile phones (BYOD)
- provides instant feedback to students about correctness of the answers







- enables teachers to create interactive chemistry quizzes for practicing and assessments
- provides automated checking of student responses with automated scoring
- LMS systems integration
  - Moodle
  - Canvas
  - Blackboard
  - D2L
  - Realizelt





# Chemistry capabilities supported in the question part of the problems

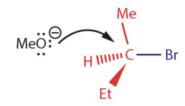
$$\bigcap_{\text{CI}} \bigcap_{\text{H}}$$

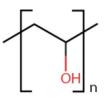
$$C_3H_8O$$

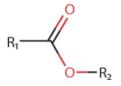
$$H_3C$$

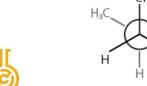
$$C_1$$







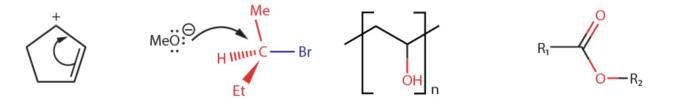




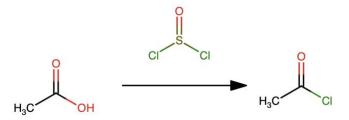


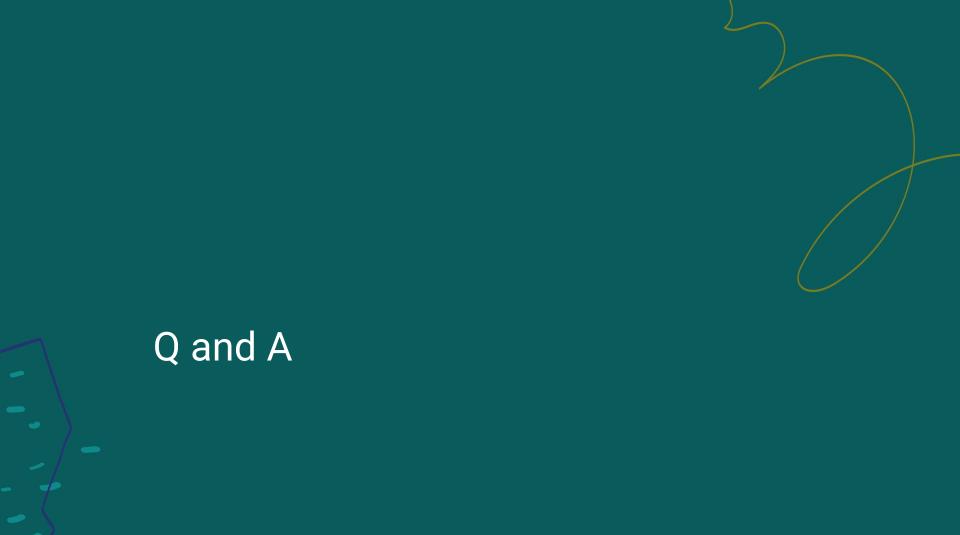


# The teacher expects from students to draw



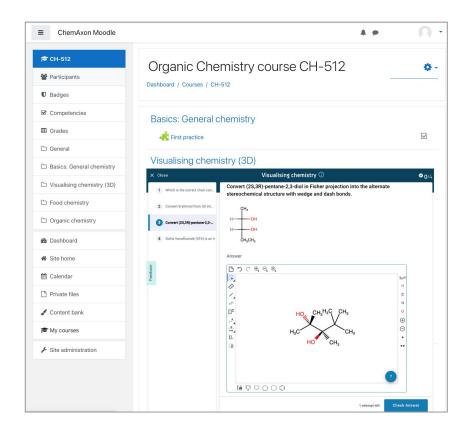




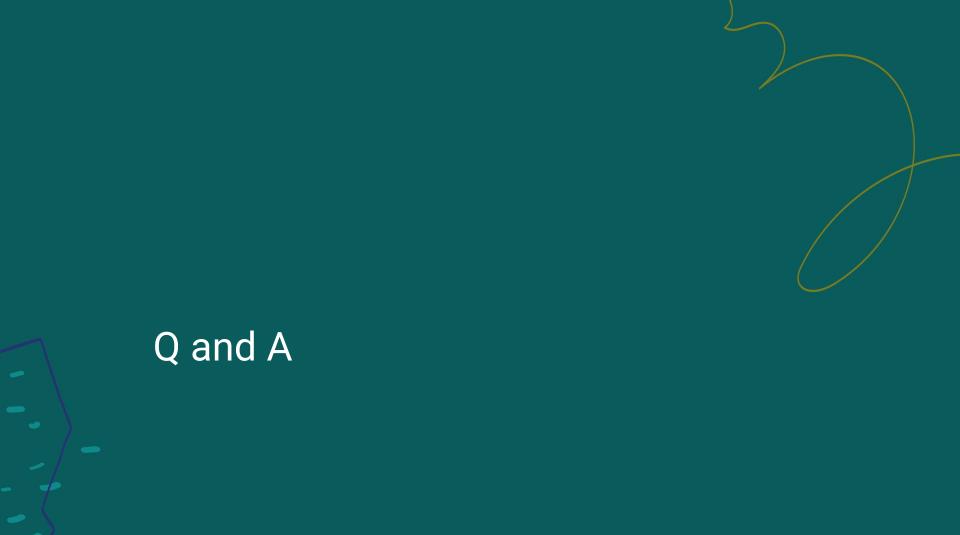




### Demo with Moodle about 'Alcohols and phenols'







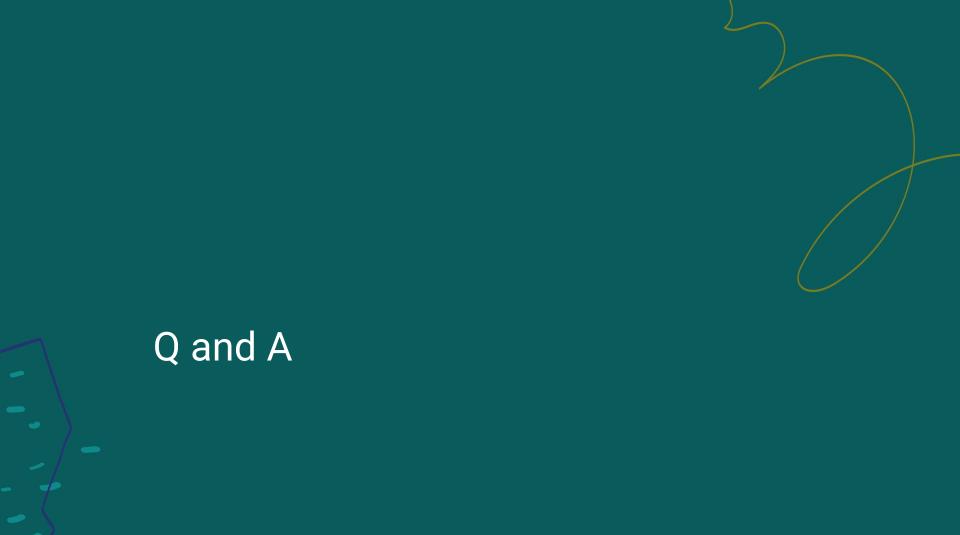


### Demo with Moodle about 'Alcohols and phenols'

Try our the 'Alcohols and Phenols' quiz



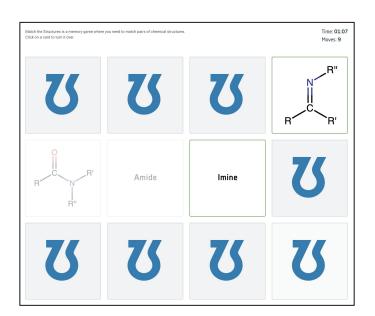






# Gamification: learning functional groups

# Zosimos game







# Thank you.



# Request a demo:

<u>ebiro@chemaxon.com</u> or <u>zosimos-team@chemaxon.com</u>

Learn more about Zosimos

- Hello Zosimos
- <u>Zosimos</u>
- Zosimos Learning



# Thank you.

Erika Biró

ebiro@chemaxon.com