

Swiss {Moodle // Mahara // BigBlueButton} Moot #20m3



Peer Quizzing mit dem Moodle Plugin StudentQuiz

Frank Koch, 6. Mai 2020



StudentQuiz - Introduction

- StudentQuiz makes Moodle content **student-driven**.
- StudentQuiz enables students to **collaboratively** create their own question pools.
- Students can **filter** questions into quizzes, and they can rate and comment questions while working through the quizzes.
- StudentQuiz collects **usage data** for each question and ranks students based on their contribution and answers.
- The **Personal Learning Assistance** shows each student his/her individual learning progress and compares this with the community.
- Created questions become part of the Moodle question bank and can be **reused** in standard Moodle quizzes.
- StudentQuiz was developed at the HSR University of Applied Sciences Rapperswil, is open source GPLv3, and can be downloaded from the Moodle Plugin Directory.



StudentQuiz Personal Learning Assistance for John Doe

Show all 566

<input type="checkbox"/> T A Question	Created by	Tags	My Attempts	Difficulty	Rating	C
	First name / Surname / Date		Number / Latest	Average / Mine	Average / Mine	
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Bitcoin	Anonymous Student 16 May 2019, 5:38 PM	BB	1 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Bitcoin	Anonymous Student 16 May 2019, 5:11 PM	BB	2 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Bitcoin vs Blockchain	Anonymous Student 15 May 2019, 10:07 AM	BB	1 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> (BB) Bitcoin & Blockchain	Anonymous Student 15 May 2019, 9:49 AM	BB	4 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Digitale Signatur	Anonymous Student 15 May 2019, 9:07 AM	BB	1 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Sicherheit Blockchain	Anonymous Student 14 May 2019, 11:30 PM	BB	n.a. n.a.			1
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> P2P	Anonymous Student 14 May 2019, 11:11 PM	BB	1 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rate hinzugefügter Blocks	Anonymous Student 14 May 2019, 6:51 PM	BB	4 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Verknüpfung Blöcke	Anonymous Student 14 May 2019, 6:24 PM	BB	1 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Hashfunktionen	Anonymous Student 14 May 2019, 6:23 PM	BB	n.a. n.a.			1
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Blockchain	Anonymous Student 14 May 2019, 6:20 PM	BB	1 ✓			2
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Eigenschaften von Hashfunktionen	Anonymous Student 14 May 2019, 6:10 PM	BB	2 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Out-of-the-Box Systeme Nachteile	Anonymous Student 14 May 2019, 6:02 PM	II	1 ✓			n.a.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Bitcoin Mining incentives	Anonymous Student 14 May 2019, 5:49 PM	BB	4 ✓			n.a.



StudentQuiz Personal Learning Assistance for John Doe

My Progress



Latest attempt correct **355**

Latest attempt wrong **6**

Questions never answered **205**

Questions available **566**



Questions approved **6**

Questions created **8**

[More](#)

Ranking (anonymised)

1. Anonymous Student **973**

2. John Doe **884**

3. Anonymous Student **860**

4. Anonymous Student **772**

5. Anonymous Student **722**

6. Anonymous Student **664**

7. Anonymous Student **626**

8. Anonymous Student **596**

9. Anonymous Student **551**

10. Anonymous Student **524**

[More](#)

Statistics

Personal Statistics	Value	Community Statistics	Value
Number of questions you have contributed	8	Number of questions in this StudentQuiz	566
Number of your approved questions	6	Number of approved questions	402
Your received rating average	2.9	Rating average of all questions	2.68
Total of all your answers	592	Community average of all answers	182.23
Percentage of your correct answers	66 %	Community percentage of correct answers	47 %
Personal Progress	63 %	Average Community Progress	14 %



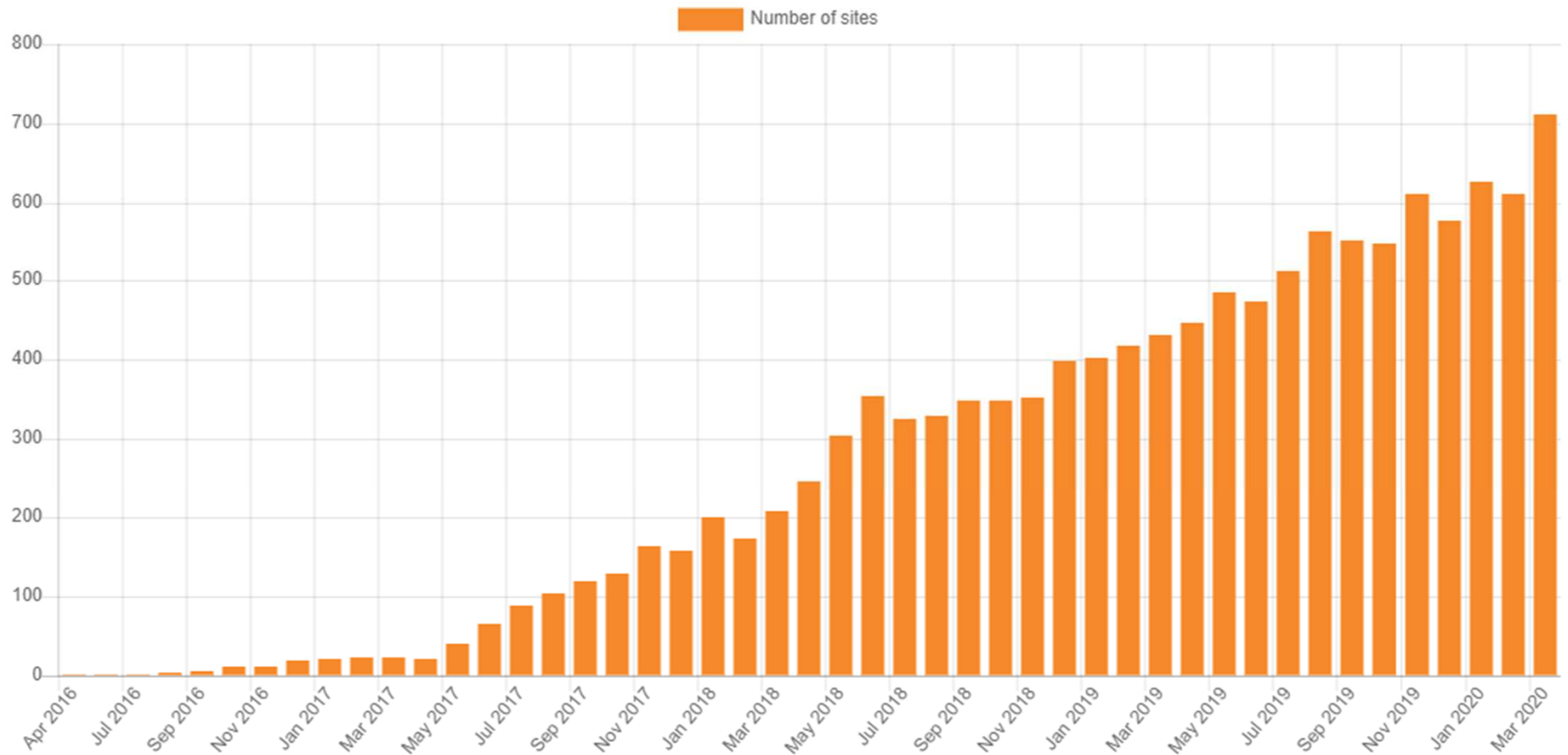
StudentQuiz - Summary

- **Cooperation:** You're not alone
- **Collaboration:** Create and share
- **Crowd-Intelligence:** Rating and Commenting
- **Personal Learning Assistance:** How am I doing?
- **Gamification:** Take advantage of competitiveness
- **Constructivism:** It's good to answer a question, it's so much better to create one
- **Flipped Classroom:** Students create, coach facilitates
- **Inspiration:** Students' creativity often rocks



StudentQuiz - Usage statistic

Number of sites using the plugin: 712





StudentQuiz - Example University of Otago, New Zealand

- University of Otago started in faculty of medicine with 1'800 students
 - 5 shared banks:
 - Obstetrics and gynecology maintains 450 questions
 - Pediatrics maintains 400 questions
 - Psychology maintains 300 questions
 - Pathology maintains 900 questions
 - Pharmacology maintains 500 questions
 - 5th year student revision course maintains 5'750 questions
 - Up to 120 simultaneously working students
 - No performance issues
- One year later, University of Otago opened StudentQuiz for all its 20'000 students



StudentQuiz - Example The Open University UK



Big numbers

2012 onwards

- **100k** students on around **500** live course presentation websites and **3000+** historical sites.
- Average **30k** students visit per day.
- Over **1 million transactions per day**. *Peaked to 2.3 million on 5th October 2015*
- Unique users per day averaging **40,000**. *Peaked at 52,425 on 5th October 2015*
- Forum views per day averaging **175,000**. *Peaked at 260,000 on 14th January 2014.*

- The Open University UK formally accepted StudentQuiz in March 2018.
- Since June 2019, StudentQuiz is generally available as a learning activity in all Open University modules.









StudentQuiz - Example HSR Hochschule für Technik Rapperswil

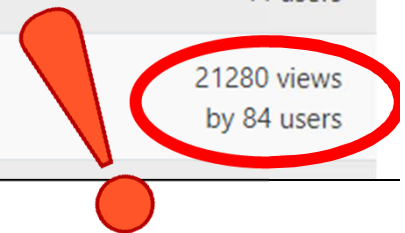
- Course with 84 students
- Each student was asked to provide 4 questions
- During the course of the semester they shared 540 questions
- Given these figures, students submitted 21'280 answers!

Wirtschaftsinformatik 1 FS2018

► Filter

Computed from logs since Wednesday, 23 July 2014, 11:53 AM.

Activity	Views
 Nachrichtenforum	342 views by 44 users
 Semesterprogramm WI1 FS18	542 views by 80 users
 Lehrmittel Wirtschaftsinformatik 1	114 views by 51 users
 Auszüge Buch Wirtschaftsinformatik (3. Auflage 2016)	155 views by 53 users
 Companion Website	70 views by 44 users
 StudentQuiz WI1 FS18	21280 views by 84 users





A student's voice

Ich habe mit der Aufarbeitung des Stoffes begonnen, StudentQuiz war dabei äusserst hilfreich.

Mit StudentQuiz konnte ich mein Verständnis des Stoffes direkt überprüfen und festigen.





A student voice – using StudentQuiz in Flash Card mode

" Mein Vorgehen war wie folgt:

- Ich filtere die Fragen nach "Tag", "Bestätigt" und "Anzahl eigene Versuche = 0"
→ Quiz mit 20 neuen Fragen.
Meist konnte ich 2/3 davon auf Anhieb korrekt beantworten, da ich mich intensiv mit den Folien und dem Buch auseinander gesetzt habe.
- Dann beantworte ich die nächsten 20 komplett neuen Fragen bis insgesamt rund 20 zuletzt falsch beantwortete Fragen zusammen kamen.
- Dann filterte ich nach diesen 20 zuletzt falsch beantworteten Fragen ("My Difficulty > 0.8"). Diese sind also aus den rund 80 beantworteten Fragen die 20, welche ich nicht korrekt beantworten konnte. Ich versuche es wieder und es blieben etwa die Hälfte, also etwa 10 davon stehen.
- Ich beantworte 40 neue Fragen um wieder etwas Abstand zu den gerade bearbeiteten Knacknüssen zu bekommen und wieder insgesamt 20 zuletzt falsch beantwortete Fragen zusammen zu haben.
- Mit der Personal Learning Assistance kann ich nun diejenigen Fragen, welche ich mindestens einmal Falsch beantwortet habe in den kommenden Wochen wieder durchgehen und so festigen. Auch die bisher korrekt beantworteten Fragen werde ich hin und wieder wiederholen, doch werden die Intervalle dafür natürlich grösser. "



Even a COVID-19 Use Case

- Contributing and sharing questions makes students learn and creates an atmosphere of community, even though we work at distance.
- Take advantage of large cohorts and let students create the questions.
- Teachers concentrate on quality control and take over responsibility for the question base.
- Reuse questions e.g. in oral assessments.



StudentQuiz - Practical Experiences

- Think about the question types allowed
- Train students how to create good questions, especially MC
- Contribute some good quality questions as guide lines first
- Require a minimum number of questions from each student
- Make sure questions are distributed evenly over time
- Create a gamified atmosphere
- Be fast with comments, be tough with approvals and deletes
- You maybe want to mention that you “maybe” want to recycle some good questions for the exam ;-)



StudentQuiz - Resources

- **Watch the video at <https://tube.switch.ch/videos/d91a8a0d>**
- **Find all resources at <https://studentquiz.hsr.ch>**
 - Introduction video for teachers
 - Introduction video for students
 - Manuals (*English, German, Spanish, French, and many other languages*)
 - Sandbox to play your game
 - Feedback form
 - Contact (*frank.Koch@hsr.ch*)
- **Official Moodle Plugin Directory**
 - https://moodle.org/plugins/mod_studentquiz
- **Source on Github**
 - https://github.com/frankkoch/moodle-mod_StudentQuiz