StudentQuiz - Empowerig Students

HSR University of Applied Sciences Rapperswil
Prof. Frank Koch, frank.koch@hsr.ch
Global Moodle Moot November 2019
StudentQuiz - Empowering Students
StudentQuiz - Implementation

- 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 - Create a new StudentQuiz Activity

Question settings

Allowed question types
- Allow all question types
- Multiple choice
- True/False
- Matching
- Short answer
- Numerical
- Calculated
- Calculated multichoice
- Calculated simple
- Description
- Drag and drop into text
- Drag and drop markers
- Drag and drop onto image
- Embedded answers (Cloze)
- Select missing words

Enforce rating

Ranking settings

- Make students anonymous
- Publish new questions

Created question factor: 10
Approved question factor: 5
Rating factor: 3
Latest correct answer factor: 2
Latest wrong answer factor: -1
Exclude roles in ranking
- Manager
- Course creator
- Teacher
- Non-editing teacher
- Student
- Guest
- Authenticated user
- Authenticated user on frontpage

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### StudentQuiz WI1 FS19

**Create new question**

Filter

- Unanswered
- New
- Approved
- Disapproved
- Changed
- Good
- Mine
- Difficult for me
- Difficult for all

**Show more...**

**With selected:**

- **Start Quiz**

Show all 560

<table>
<thead>
<tr>
<th>T</th>
<th>S</th>
<th>Question</th>
<th>Created by</th>
<th>Tags</th>
<th>My Attempts Number / Latest</th>
<th>Difficulty Average / Mine</th>
<th>Rating Average / Mine</th>
<th>C</th>
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<tbody>
<tr>
<td></td>
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<td>Merkmale Data Warehouse</td>
<td>Anonymous Student</td>
<td>AA</td>
<td>5</td>
<td>X</td>
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<td>★★</td>
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<tr>
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<td>1</td>
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<td>★★</td>
<td>★★</td>
<td></td>
</tr>
</tbody>
</table>

**My Progress**

- Latest attempt correct: 370
- Latest attempt wrong: 89
- Questions never answered: 91
- Questions approved: 9
- Questions disapproved: 7
- Questions new/changed: 0

**Ranking (anonymised)**

1. Anonymous Student 1182
2. Anonymous Student 1158
3. Anonymous Student 1087
4. Anonymous Student 1072
5. Gianluca Zanetti 987
6. Anonymous Student 973
7. Anonymous Student 944
8. Anonymous Student 936
9. Anonymous Student 935
<table>
<thead>
<tr>
<th>T</th>
<th>S</th>
<th>Question</th>
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<tbody>
<tr>
<td></td>
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Global Moodle Moot 2019, Frank Koch
# StudentQuiz WI1 FS19

**Create new question**

**Filter**

- Fast filter for questions
  - Unanswered
  - New
  - Approved
  - Disapproved
  - Changed
  - Good
  - Mine
  - Difficult for me

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**With selected:**

**Start Quiz**

**Show all 560**

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**Ranking (anonymised)**

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<th>Count</th>
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<td>Questions disapproved</td>
<td>7</td>
</tr>
<tr>
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#### Show all 560

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StudentQuiz WI1 FS19

Create new question

Filter
Fast filter for questions
Unanswered New Approved Disapproved Changed Good Mine Difficult for me
Difficult for all

Show more...

With selected:
Start Quiz

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Created by
First name / Surname / Date
Anonymous Student 23 April 2019, 8:08 PM
Anonymous Student 23 April 2019, 7:18 PM
Anonymous Student 23 April 2019, 7:13 PM
Anonymous Student 23 April 2019, 6:56 PM
Anonymous Student 23 April 2019, 5:59 PM
Anonymous Student 23 April 2019, 5:49 PM
Anonymous Student 23 April 2019, 5:33 PM
Anonymous Student 23 April 2019, 4:47 PM

Tags
AA
AA
AA
AA
AA
AA
AA
AA

My Attempts
Number / Latest
5 | X
4 | X
n.a. | n.a.
4 | X
n.a. | n.a.
5 | X
4 | X
2 | X
1 | X

Difficulty
Average / Mine
1.0
2.5
n.a.
1.0
n.a.
1.0
2.0
1.0
1.0

Rating
Average / Mine
4.5
2.5
n.a.
4.5
n.a.
4.5
5.0
4.0
4.0

C
n.a.
Double-Spending-Attack

Welches der folgenden Szenarien entspricht einer Double-Spending-Attack?

Select one or more:
- a. Alice bezahlt sich selber mehrmals den gleichen Bitcoin an ihre eigene Address (Identity)
- b. Paul ist Bitcoin millionär findet aber keinen weg das Geld in Schweizer Franken umzutauschen
- c. Philipp bezahlt eine Cola mit Bitcoins und einen Tag später kauft er einen Ice Tea mit den gleichen Coins.
- d. Sara zahlt Bob einen Bitcoin für ein Auto ohne das Auto jemals zu bekommen.

Die Antwort ist richtig.
The correct answer is: Philipp bezahlt eine Cola mit Bitcoins und einen Tag später kauft er einen Ice Tea mit den gleichen Coins.

Add comment

28 August 2019, 6:06 PM | Martin Odermatt
Single Choice Aufgabe...

3 May 2019, 4:49 PM | Frank Koch
"Alice bezahlt sich selber mehrmals den gleichen Bitcoin" ist kein Double Spending Attack, sofern sie den Bitcoin immer an ihre gleiche Address (Identity) sendet. Es ist OK an sich selber zu zahlen. Und das kann man auch wiederholt tun. Ich erlaube mir diese Aussage auf False zu setzen, weil es ansonsten ja eine schöne Frage ist. Bitte melden Sie sich per Mail, falls Sie nicht einverstanden sind. 
# StudentQuiz - Ranking View

## Student ranking - Top 10

<table>
<thead>
<tr>
<th>Rank</th>
<th>Fullname</th>
<th>Total Points</th>
<th>Points for questions created</th>
<th>Points for approved questions</th>
<th>Points for stars received</th>
<th>Points for latest correct attempts</th>
<th>Points for latest wrong attempts</th>
<th>Personal progress</th>
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<tr>
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<td>Anonymous Student</td>
<td>1181.5</td>
<td>180</td>
<td>50</td>
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<td>73 %</td>
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<td>50</td>
<td>134.06</td>
<td>804</td>
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<td>73 %</td>
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<td>65</td>
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<td>70 %</td>
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<td>71 %</td>
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<td>45</td>
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### StudentQuiz - Statistics View

#### Statistics

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<th>Personal Statistics</th>
<th>Value</th>
<th>Community Statistics</th>
<th>Value</th>
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<tbody>
<tr>
<td>Number of questions you have contributed</td>
<td>16</td>
<td>Number of questions in this StudentQuiz</td>
<td>550</td>
</tr>
<tr>
<td>Number of your approved questions</td>
<td>9</td>
<td>Number of approved questions</td>
<td>390</td>
</tr>
<tr>
<td>Your received rating average</td>
<td>2.72</td>
<td>Rating average of all questions</td>
<td>2.71</td>
</tr>
<tr>
<td>Total of all your answers</td>
<td>2306</td>
<td>Community average of all answers</td>
<td>612.12</td>
</tr>
<tr>
<td>Percentage of your correct answers</td>
<td>56 %</td>
<td>Community percentage of correct answers</td>
<td>55 %</td>
</tr>
<tr>
<td>Personal Progress</td>
<td>67 %</td>
<td>Average Community Progress</td>
<td>35 %</td>
</tr>
</tbody>
</table>
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
University of Otago started in faculty of medicine with 1,800 students

- 5 shared banks:
  - Obstetrics and gynaecology 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

University of Otago now opened StudentQuiz for all its 20,000 students
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!
StudentQuiz was extremely helpful for me in catching up with the class. With StudentQuiz I could directly check and consolidate my understanding of the substance.
Find all resources at https://studentquiz.hsr.ch

- Introduction video for teachers
- Introduction video for students
- Manuals (English, German, Spanish)
- 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

StudentQuiz speaks Catalan, Castellano, and many other languages
Think about the question types allowed
Train students how to create good questions, especially MC
Contribute some good quality questions as guidelines 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 ;-)
Next Steps
- Please share the introduction video with interested colleagues
- Feel free to contact frank.koch@hsr.ch
- Feel free to give feedback

Discussion
- Anything missing?
- Special learning scenarios?
- Are you interested using StudentQuiz?
Thank you for your Attention