MAJ R & D application:

**Moodle Database Activity Enhancements**

**Budget Requested -- ¥200,000**

¥100,000 for prototyping expenses

¥100,000 for travel and promoting the project to bot MUA and the Moodle HQ development team

**Functionality**:

The database activity is one of the oldest activities in Moodle, and it is one of the most flexible and powerful modules as well. However, it is one of the more difficult ones for users to master because of its unfriendly user interface and its user experience issues. The goal of this project is to identify the problem areas in both the database activities UI and UX and then develop possible solutions in the form of design documents and project proposals. Wherever possible, prototype software will be developed as a proof of concept. Once we have completed these steps, we will work to have the project accepted by the Moodle Users Association and also when possible presenting to the Moodle HQ development team. The goal will be to have the major changes be funded by the MUA and implemented by the Moodle HQ development team. The following are some of the areas that we have already identified which need improvement.

1. Database Form Enhancements

* Add more (optional) views, not just ***list*** or ***single***. (possibly like Dataforms)
  + Restrict access to different views.
  + Student view, teacher view/related to access restrictions for the purpose of anonymizing entries in the DB.
* Have more common database presets included. (For example a database template for collecting basic information for a geography project or a photo gallery (like the example from Moodle documentation)
* Allow special fields to be accessible in the header/footer regions of the list view for the purpose of allowing individual data reports for each student.
  + Student ID
  + Student Name
  + Student email, etc

1. UI/Functionality Enhancements

* Add a JavaScript editor (instead of just the plain text window that exists now). Shows line numbers, possible syntax errors, etc.
* Make the permissions for who can rate entries simpler; don’t require the instructor to go to the permissions page
* Add a “Didn’t save changes” pop window when making changes to templates
* Allow for the reorder of fields on the field set up page
* Make comments exportable
  + Remove the database comments from the site-wide comments/only with the database that was created.
* Pop up window when a change to the settings will make information viewable to all students/not to only the creator of the entry
  + Possible lock feature to keep entries private.
* Have a toolbar similar to Google Forms to make the Add views easy to create.

1. Database Field Enhancements

* Add functions to database numerical fields to allow for
  + Summation/Totaling
  + Averaging
  + Operations (+ - \* / etc)
  + Formatting of numbered outputs.
* Add a "participants in the class" field (with access to profile fields)

1. Database Module Assessment

* Add grading module (like Moodle Enhanced Forums).
* The capability for teachers to rate entries without the entries being approved.
  + Allow comments on unapproved entries

**Timeline**:

April 2020 -- Begin design document creation (Thom and David)

August 2020 -- Complete initial design documents

September 2020 -- Receive estimates for prototypes.

October 2020 -- Develop prototypes.

December 2020 -- Testing prototypes.

January/February 2020 -- Promoting changes for MUA.

The first step in this process will be to create design documents. Based on the current level of busyness of the proposers, this can be completed in detail by August of this year. From there, the proposers will get estimates to create functional prototypes of some or all of the changes proposed based. If the prototypes are successful and completed early, the proposers will try to recommend this project be submitted for the fall MUA project cycle, however if not possible then the proposers will submit them for the MAJ Best Innovation awards in MoodleMoot Japan 2021. If these changes are accepted by Moodle HQ the future maintenance costs will be shouldered by Moodle HQ.

**Chronology**

No attempts at modifying the Moodle Database have been made by the proposers. Gordon Bateson has made many modifications to the Moodle database and the proposers will attempt to make use of those enhancements in the design changes being proposed.

**Target Users**

All the world Moodle users of the Moodle database activity. Billions of people basically.

**Proposer Information**

**David Campbell, Lead Architect**

Assistant Professor

Obihiro University of Agriculture and Veterinary Medicine

Previously received MAJ grants (https://github.com/nakaharatt/moodle-block\_forum\_report)

* 2017 Forum Report Block & Forum Interface Improvements
* 2018 React Forum & Forum Interface Improvements (with Matt Cotter)
* 2019 Forum Report Block & Forum Interface Improvements (with Matt Cotter)

MAJ member 2020

Moodle User Association Member 2020

Awarded “Particularly Helpful Moodler Badge 2020”

**Thom Rawson, Participant**

Associate Professor, Nagasaki International University

Basically useless drone

MAJ Member since 2011 ongoing

**Japan Focused Information**

This project is not aimed at the Japanese users of Moodle. Rather, it is aimed at all users of Moodle. By making the Moodle database activity easier to use and more powerful, it will benefit all Moodle users including those in Japan.

**Building relationships with Moodle HQ**

One goal of this project should it become accepted by the MUA is to send Professor Campbell to the Moodle HQ office to present the changes directly to the developers. This will help foster good relations between MAJ and Moodle HQ.

**Maintenance Plan**

If the project is accepted by MUA, then the maintenance and support of this project will be funded by MAJ donations to the MUA and Moodle HQ development.