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Funding request for Peter Brusilovsky

I am requesting \$9,000 to make the necessary modifications to integrate my research software, "Database Query Analyzer" ("DBQA"), with software developed by Peter and his group, "Mastery Grids".

DBQA is a web application that illustrates the effects that clauses and conditions have on an SQL SELECT statement using a visualized, data-oriented approach. It takes a procedural-like approach, allowing users to see how a dataset is initially obtained by the FROM clause of a SELECT statement and ultimately processed and filtered by the other clauses and conditions to obtain the final result set.

This funding request will allow me to devote the time required to personally make the updates to DBQA this summer. I expect these changes to require one month's work (reflected in the requested funding amount) and to include the following modifications:

- Allow DBQA to bypass the existing login requirement and use a dedicated MySQL database schema when accessed via Mastery Grids
- Update DBQA to use the LTI standard to communicate with Mastery Grids and other learning management systems
- Use this standard to notify Mastery Grids of user interactions with DBQA, including:
  - queries submitted
  - steps forward and backward
  - highlighting of previously evaluated clauses/conditions
  - updates to result set limits
- Make any necessary interface updates to increase DBQA's usability inside an iframe

Please feel free to email me at [ryan.hardt@stthomas.edu](mailto:ryan.hardt@stthomas.edu) with any questions.