Plan for a SoTL Project

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| **Research Question**What are you curious about? What would you like to know about strategies that might hinder and/or help students to learn, in your course?Do you want to know if an activity, assignment, or teaching strategy “works?”Do you have a question about how to help your students learn a particular skill?On the LMS (Canvas) at U of T, a feature called “Outcomes” allows instructors to set learning outcomes to be included in learning modules. Moreover, when creating questions in online quizzes, instructors can also align learning outcomes with specific groups of questions. In so doing, once students have completed a quiz, in addition to a grade, they will also receive a report on how well they are mastering specific learning outcomes. On the other hand, instructors will also receive a comprehensive chart that summarizes the number of students that have achieved the learning outcomes or not, as well as the in-between levels set by the instructor. I want to explore the question as to whether this additional “Outcome” report can help students identify their strengths and weaknesses and use this information to improve their self-regulation. |
| **Identify challenge/outcome related to learning that is related to your question.**Challenges* Depending on the subject matter, it may be difficult to break learning modules into learning outcomes: some may overlap with others, or the list of learning outcomes may not cover all the elements in the module.
* Students may not know what to do with the “Learning Outcomes” report unless they are explicitly told to use it to identify their strengths and weaknesses and use that information to strategize their learning.
* Measuring the effects can be challenging. It is dangerous to use only grade performance due to numerous confounding factors that can contribute to grade changes.

Outcome* I hope to widen students’ focus from acquiring content knowledge towards reflecting on their learning strategies.
* Students learning to use assessment feedback to finetune their learning strategies
* Specifically: identifying weaknesses and devising strategies to reinforce their learning in these areas.

Describe the learning in a way that suggests how you might *measure* it using either qualitative or quantitative methods.* I plan on doing this research in an English Language and Linguistics course I am teaching.
* Quantitative: Students are allowed two attempts in each quiz. In the control condition, students receive only their grades for the first and second attempts. In the experimental condition, students receive the additional “Learning Outcomes” report after the first attempts and are instructed to use that information to study before the second attempt. Numerical grade differences between the first and second attempts are compared between the control and experimental conditions.
* Qualitative: Students complete surveys at the beginning and the end of the course (i.e. before and after completing the control and experimental quizzes). These surveys contain questions that help the researcher understand whether students strategize their learning, what their learning strategies are, and whether and how they use the “Learning Outcomes” report to prepare for the quizzes.
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| **Describe the instructional activity, assignment, or teaching strategy that will promote student learning on the outcome you identified.**SoTL projects might investigate the impact of a *modification* to an existing strategy or assignment. Describe how the new approach differs from the old approach and why this modification might change student learning on this outcome.I plan to leverage the online quiz function on Canvas. The new modification is to provide the “Learning Outcomes” report that informs students how well they have achieved the learning outcomes set out for the module and tested in the quiz, in addition to an overall numerical grade. The old approach is to provide only the grade. In addition, students are asked to review the “Learning Outcomes” report after the first quiz attempt and use that information to prepare for the second attempt. The “Learning Outcomes” report lists how well students achieve the Learning Outcomes based on quiz results. As it highlights students’ strengths and weaknesses, students use this information to study in a more targeted manner. Instructors can also use this information to help reinforce learning outcomes that appear to be more difficult for students. |
| **Describe the evidence that would persuade an external audience that the new or modified teaching strategy improves student learning on the targeted learning outcome.**Describe the evidence you would need to collect to answer questions about the impact or value of this teaching strategy. How would you convince others that this approach is better than other approaches? What comparisons should you make? Examine students; skill before and after the assignment? Compare students who complete the learning activity to another group of students – what comparisons would be meaningful?* Quantitative: I would compare the numerical grades differences between the first and second quiz attempts. Specifically, I would compare grade differences in the control condition against those collected in the experimental condition. In the control condition, no intervention is implemented between the first and second attempts. In the experimental condition, I would provide the “Learning Outcomes” report and ask students to use information about their strengths and weaknesses to prepare for the second attempt. This quantitative analysis will indicate whether providing the “Learning Outcomes” report helps students perform better in the quizzes.
* Qualitative: I would create one survey at the beginning of the course to collect information about students’ study habits and attitudes towards their learning strategies. After the series of quizzes, one additional survey will be conducted at the end of the course to collect information about whether and how students make use of the information provided in the “Learning outcomes” report. Comparing student responses between the two surveys will provide information on whether students use the “Learning Outcomes” report to inform their learning strategies and widen their focus from content knowledge only to include reflections on “learning how to learn”.
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| **How and where would you publish, present, or disseminate this work?**I plan on presenting this work at the CAST (Center for Applied Special Technology) conference. Since I plan on running this study in an English Language and Linguistics course, I am on publishing the results in the Journal of Computer Assisted Language Learning. I also plan on presenting this work in the institutional IT@UofT conference. |

Adapted from: C. J. Stanny, E. M. El-Sheikh, & H-M. Chung (2009) ***Getting Started with a SoTL Project***

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**Ethical Concerns**

Since not all the students in the course might be interested in participating in the study and letting the teacher/research use their data, I plan on sending out an invite to participate at the beginning of the course. In the invite, I will state the purpose of the study, and how I plan to collect data. Most importantly, I will state that students’ participation is not mandatory, nor will it be tied to their course grade. To achieve this, I (the instructor) will invite a colleague (co-investigator) to present the study and collect participants’ signed consent forms. The list of participants (and non-participants) will be coded and kept confidential from the instructor.

To further ensure participant and data privacy, all participant consent forms, and data storage devices will be stored in locked physical/electronic storage devices.

Before conducting the research, I will also see approval from the institutional research ethics committee. I will explain the experimental procedure in the application. To my knowledge, the procedure does not involve any risk of physical or emotional danger to participants.