A Project-Based Method to Help Students Practice Study Strategies in an Authentic Context

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MOTIVATION AND CONTEXT FOR ACTIVITY

Success in college requires the development of self-regulated learning strategies that move beyond high school skills, but teaching these strategies can be challenging. I teach a first-year seminar at a large comprehensive university that includes helping students develop college-level studying and time management skills among its goals. Knowing that students would be more likely to value these skills (and later, transfer these skills) if they were situated in context, I developed an assignment that requires students to practice self-regulated learning strategies—active reading, management of study time and achievement goals, proactive interaction with faculty, metacognitive reflection, and more—within the context of a student-selected course.

ASSIGNMENT

In the Strategy Project assignment, the latest version of which can be found below, students learn time management, communication, and study strategies in the process of preparing for an actual test. Students then demonstrate that learning by submitting their test preparation activities as part of a graded project in the first-year seminar.

First, students choose a test in another course that they find challenging. Then, they complete a contract, in consultation with their first-year seminar instructor, that indicates their individualized due dates and studying plans based on their chosen test. Students also write a pre-project reflection paper discussing their current approaches to studying and time management.

Next, the students complete a "professor interaction" activity where they visit the instructor of the chosen course to discuss a previous test or quiz, if applicable, and ask for advice about achieving success in that particular course. This portion of the project helps first-year students become comfortable interacting with their instructors and reinforces help-seeking behaviors. After this meeting, students develop a plan of study that outlines the strategies they will use to study for the test. This activity encourages effective time management and allows students to experience the benefit of study time that is distributed over several days.

Finally, the largest portion of the project requires students to complete a variety of metacognitive strategies such as textbook annotation, self-quizzing, concept-mapping, etc. Providing choices in strategies allows students to demonstrate metacognition by effectively matching studying techniques to their chosen test. After the test is graded and returned, students again complete a metacognitive reflection on the outcome of their studying habits in a short informal paper and presentation to the class.

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ACTIVITY OUTCOMES

For a number of years, I have studied the Strategy Project as a method for students to practice metacognition in an authentic, valuable context. I have used the project as a component in STEM learning communities that paired a first-year seminar with first-year STEM courses (e.g., Steiner, Dean, Foote, & Goldfine, 2016) as well as stand-alone first-year seminars (e.g., Steiner, 2016; 2017). Results from these studies have indicated that the project did raise awareness of, and encourage the use of, beneficial metacognitive strategies, and for most students, also increased their test scores in the chosen courses. One study's preliminary findings (Steiner, 2017) also show a gain in self-reported metacognitive behaviors as measured by the Motivated Strategies for Learning Questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1993). Anecdotally, students tell me that the Strategy Project was a powerful motivator to change high school habits that had become ineffective. Many students say that although they realized their strategies needed to change, without the incentive of a graded project, they would not have committed to changing their approaches. Students also have responded positively to learning more about metacognition in my first-year seminar (Steiner, 2014), suggesting that metacognition may be an important topic for others to address in similar seminars or "learning-to-learn" courses.

LESSONS LEARNED AND FUTURE DIRECTIONS

I continue to revise the Strategy Project yearly as I learn more from my students about its efficacy. To date, I mostly have used the Strategy Project in my own classroom. However, a colleague and I are planning a large-scale study of the Strategy Project which will compare the metacognitive gains made by students in sections of the first-year seminar that include the project versus those that do not. Because many faculty who teach the first-year seminar do not have a background in educational psychology, we will include professional development on metacognition and memory as part of the training. I look forward to continuing to revise the Strategy Project in light of others' experiences using it. I would appreciate any feedback you or your students have on the effectiveness of this assignment in your own classroom.

REFERENCES

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Steiner, H. H., Dean, M. L., Foote, S. M., & Goldfine, R. A. (2016). The targeted learning community: A comprehensive approach to promoting the success of first-year students in general chemistry. In L. C. Schmidt & J. Graziano (Eds.), *Building synergy for high-impact educational initiatives: First-year seminars and learning communities.* Columbia, SC: National Resource Center.

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Appendix

Strategy Project

This assignment will help you see the connections between what you're learning in your first-year seminar and your other courses. In this project, you will apply the strategies and hints that we've learned in seminar to preparing for a test in another class. The test you select should be between Sept. 30 and Oct. 30, and should be a test that requires you to study. To complete the strategy project, you will complete and submit a variety of test preparation strategies along with written reflections about your experience. You will submit these materials as noted below. All papers should be double-spaced, with 12-point font.

Strategy Project Timeline:

Contract (5 points). List the details of your chosen test, choose the strategies you plan to use, and mark the necessary due dates. We will meet briefly in class to ensure your chosen test and strategies are appropriate. Please bring the printed and signed contract to class on **[date]. If you need to make changes to your contract after this meeting, please notify me. No changes may be made after Week 5 of the semester.**

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Pre-Project Survey (5 points). This portion of the project will require you to take the MSLQ survey or complete an alternative assignment in accordance with IRB policy (see link for details). Your instructor will only grade the survey for completion, <u>not</u> for how you answered the questions.

Pre-Project Reflection (25 points). Please reflect on your current habits in a 2-3 page essay. When writing your essay, please consider the following questions:

- What do you feel are your strengths when it comes to college success?
- What do you feel are your weaknesses when it comes to college success?
- What are you most worried about when it comes to college studying and learning?
- What are your favorite study strategies, and why? Where did you learn these strategies?
- Is there anything you'd like to improve this semester that could lead you to be a successful college student?

Submit the essay via the Assignments Tool on D2L. The survey and reflection must be completed by **[date].**

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Professor Interaction (15 points). Attend office hours or a drop-in session with the instructor of the course you've chosen for the project and write a one- or two-paragraph description of the questions you asked, what you learned, and why attending office hours might be helpful. A list of suggested questions is below, but please feel free to add your own:

- What is the format of the upcoming test?
- What do you think are the best ways to study for this test?
- What do you think differentiates the most successful students in your class from the least successful students?
- What do you like most about being in academics?
- Do you conduct research? If so, what is it about?

Submit this via the D2L Assignments Tool by **the due date indicated on your contract**.

Plan of Study (15 points). Using the suggestions from your professor interaction as well as what you've learned in first-year seminar, please outline your plan for studying for this test. You should create a <u>detailed</u> study schedule that describes <u>what</u> you will do and <u>when</u> you will do it, demonstrating your plan to spread out your studying over at least two weeks, using a variety of active learning strategies. This outline should be created and submitted via the D2L Assignments Tool **by the due date indicated on your contract**.

Metacognitive Study Strategies (60 points). These study strategies should be submitted **in one folder or binder** <u>in class</u> **on the date indicated on your contract**. Please make sure everything is clearly labeled, and that your signed contract is in the front of the folder. You must choose at least four of these strategies, one of which must be active notetaking or active reading. Please choose your strategies carefully, taking into consideration the course, the professor, and the type of test.

> **Choose at least one:**
>> ● **Active Notetaking.** Use the Cornell or a modified Cornell method to take notes in your chosen class for <u>at least two weeks</u> during the period leading up to your test, making sure to set aside space for self-quizzing and daily summaries. Submit these notes (or a copy of these notes) in your folder.
>> ● **Active Reading.** Preview and annotate all textbook chapters associated with this test, paying special attention to the visual aids, vocabulary, and concepts. Summarize these annotations by distilling all important information into a one-page study sheet. Copy a <u>4-page sample</u> of your annotations and include it and your one-page study sheet in your folder.
>
> **Choose three (or two, if you chose both strategies above):**
>> ● **Complete Practice Problems** from an outside source. This is a good strategy for math, physics, chemistry, and computer science courses.
>> ● **Quiz Yourself** by creating your own test.
>> ● **Create Flashcards.** These flashcards must include explanations of the topic in your own words as well as examples. You must create at least fifteen flashcards.
>> ● **Create a Concept Map.**
>> ● **Meet with a study group** and describe your experience in 1-2 paragraphs.
>> ● **Attend a tutoring session** and describe your experience in 1-2 paragraphs.
>> ● **Other strategies?** Propose a strategy that is appropriate to your course in consultation with your instructor.

Post-Project Survey (5 points). Complete the MSLQ survey (found at this link: [<u>link will be active</u>]) or complete an alternative assignment in accordance with IRB policy (see link for details). Again, your instructor will only grade the survey for completion, <u>not</u> for how you answered the questions.

Post-Project Reflection (20 points). After you take your test but before you receive it back, please estimate the grade you think you received. Once you receive your feedback, please write a reflection paper 2-3 pages in length about your experiences with the strategy project. In particular, please reflect on which elements of the project you think helped and which did not. Please also reflect on the grade you received, whether it was an improvement over your last grade (list both grades), and whether it matched what you thought you'd receive. Also address whether or not your study strategies have changed since you've been in college. Submit your reflection paper via the D2L Assignments Tool.

The survey and reflection must be completed by the **date indicated on your contract.**

Strategy Project Presentation--IF REQUIRED BY YOUR INSTRUCTOR (15 points). Please plan to share your Strategy Project with fellow students in an <u>informal</u> presentation of about 10 minutes in length on **Nov. 28 or 30**. You may use the doc cam to show elements of your project. This is a great chance for other students to learn strategies that may be useful to them in the

future. In particular, your fellow students would like to know: What is your course like? Was the professor receptive to your questions? What elements of the Strategy Project worked in your course?

Strategy Project Contract

Name_____

Course you will use for this project_____ Date of Test (between 9/30 and 10/30): _____

I would like to choose the following study strategies for my project. Please choose at least four.

☐ **Active Notetaking**   AND/OR   ☐ **Active Reading**

☐ **Complete Practice Problems**

☐ **Quiz Yourself**

☐ **Create Flashcards**

☐ **Create a Concept Map**

☐ **Meet with a study group**

☐ **Attend a tutoring session**

☐ **Other (Please Describe):**

I understand that my due dates for this project are the following:

_____   Contract

_____   Pre-Reflection Paper and Survey

_____   Professor Interaction (three weeks prior to test)

_____   Plan of Study (two weeks prior to test)

_____   Active Notetaking (next KSU 1101 class meeting after your test day)

_____   Active Reading (next KSU 1101 class meeting after your test day)

_____   Additional Test Preparation Strategies (next KSU 1101 class meeting after your test day)

_____   Post-Reflection Paper and Survey (two weeks after your test day)

_____   Presentation (if required by instructor)

_____   _____

Student Signature   Instructor Signature