

**Strategic Learning Website - Reading Skills**  
**IDE 611 Informational Technologies in Educational Organizations**  
**Fall 2017**  
**Instructor: Jing Lei**

**Project Title:** Strategic Learning Website - Reading Skills

**Introduction:**

College students are rarely presented with the opportunity to reflect upon and refine the skills and habits which affect their learning. When it comes to reading comprehension in particular, college students seem to underperform as a result of a lack of exposure to these metacognitive activities (McKeown et al., 2009). Fortunately, there are an abundance of well-researched resources on the internet which demonstrate and facilitate the practice of these study skills - including articles, videos, quizzes, games, and social media engagements. In an effort to curate the most reputable and popular resources for students' use, we will develop a website that breaks down study skills into key areas and delivers important information using a clear formula. For the sake of this project, we will focus exclusively on skills in *reading efficiency* and *reading comprehension*.

**Project Team Members:**

- Nathan Elequin - writer, web designer, curator, data analyst
- Yi Qian - writer, web designer, recruiter, curator
- Yu Zhou - writer, web designer, recruiter, curator

**Overall Project Summary:**

- ❖ Website Design
- ❖ Main Page - Reading Skills
  - Short introduction highlighting importance of reading skills
- ❖ Subpage 1 - Reading Efficiency
  - Recommended Techniques
  - Examples
  - Video (from Youtube)
  - Tips & Tricks
  - Interactive Quiz (our design)
  - Links to Additional Resources
- ❖ Subpage 2 - Reading Comprehension
  - Recommended Techniques
  - Examples
  - Video (from Youtube)

- Tips & Tricks
- Interactive Quiz (our design)
- Links to Additional Resources
- ❖ Website Implementation
- ❖ Collect data from quiz assessments on webpages

### **Needs Assessment:**

“Wineburg (2006) cited the National Center for Education Statistics in reporting that many 12th grade students in the United States are reading and writing at a fifth grade level.” We all know that University-level reading is different from High School reading. Colleges students are supposed to be able to read more efficiently and use corrective strategies to improve their reading comprehension. Many researchers have also discovered that there is a strong relationship between students’ reading skills and academic success. Speed reading can be beneficial to students’ logic improvement and help them reach higher levels of self-confidence. It is also vital for students to comprehend their learning materials thoroughly.

However, professors are more likely to consider that students have already mastered academic reading skills before they enter colleges. As a result, college students are rarely taught reading skills as well as provided with relevant information and resources. They may be aware of their lack of reading skills but can’t find systematic learning methods of improving these skills.

With the rapid development of information technology, e-learning emerges and makes students surrounded by numerous learning opportunities and resources. Students are more willing to browse useful websites and learn at their own pace. Since the mastery of reading efficiency and reading comprehension skills is really significant for college students, our team aims to develop a website which consists of specific reading techniques, our recommended videos and examples, tips and tricks, and additional resources. In addition, we are going to design interactive quizzes for students to evaluate their learning outcomes. Students will be able to learn from our website content and take quizzes again and again until they can skillfully apply the techniques. Our website is like a collection of useful resources of reading skills with a tool for students’ self-evaluation.

### **Goals:**

Benefits to the students:

(Strategic Learning Website)

- Our “Strategic Learning Website ” will serve as resource which college students can use to discover techniques that will aid their reading.
- Students will have access to numerous tips, apps, videos and resources which can help

them master the practical skills associated with reading comprehension and fluency.

- Students will be able to save time from looking for help when they encounter these problems and difficulties in the areas on our website.
- Students will develop a positive attitude towards e-learning and be used to learning on our website.
- Students will develop a healthier and more confident approach to reading assignments.

Benefits to the teachers:

- Teachers will be able to use the website to introduce or reinforce key concepts in reading.
- Teachers' courses will be more efficient and valuable if their students can master the skills on our website.
- Teachers will become more aware of the advantage of integrating technology into their teaching and instruction.

**Target Audience:**

Strategic Learning Website:

- High school students who want to succeed in college but lack essential habits and skills in reading.
- College students who are confused about their academic lives and don't know how to master these important habits and skills.

Reading Skills Website:

- College students who want to be successful in reading but lack strength in reading skills including "How to Read Efficiently" and "How to Remember What You Read".

**Technologies Used:**

| Technology                | Application & Reasoning   |
|---------------------------|---|
| Internet & Digital Media  | Online content is interactive, assessment-savvy, multimedia-integrated, and easier to keep up-to-date.                              |
| Weebly Web Builder        | Weebly is a powerful free website builder with plugins for both HTML embedding (used for the Google Forms) and video players.       |
| Youtube Video Player      | Several high-quality videos on reading skills are available for free on Youtube. We selected the most useful ones for our students. |
| Blog Posts and Hyperlinks | Blog posts are hyperlinked throughout our site to create opportunities for students to "explore" beyond and learning more.          |

|                          |  |
|--------------------------|--|
| Google Forms Assessment  | Google Forms allows teachers to create “Quizzes” which can allow for instant data collection about student retention.    |
| Canva and Graphic Design | Images, color schema, and graphics were generated using Canva, the free platform with simple pixel editing capabilities. |

### Challenges

- We were unable to get our desired Learning Community at Syracuse to agree to sign-on and trial the site with their students. Instead, we collected students from personal contacts.
- It was initially difficult to clearly define differences between some techniques since they had many overlapping characteristics. However, with careful planning this has been rectified.
- While reading skills are universally applicable, they are also fairly vague and therefore hard to prescribe in specific or actionable ways. Examples and multimedia has helped us to achieve greater clarity.
- Some students may not focus themselves on using this website to improve their reading skills so we have added some appealing elements to this website and put some interesting videos to catch students' attention.
- Since this website is designed for students to learn by themselves, it is hard to figure out whether this website is useful for students. Therefore, we created a quiz on each subpage and asked our volunteers to finish these quizzes and get the score to see if this website is useful to them.

### Results

Since the design of the Skillful Reading website was to provide an auxiliary resource for students to freely access, we did not use a traditional classroom environment to implement our project. Instead, we invited colleagues and friends to view the website and provided the link to those who agreed to participate.

A total of 23 Undergraduate and 6 Graduate students agreed to participate in utilizing the Skillful Reading website. Their instructions consisted of the following:

1. Click the link and view the home page
2. Select at least one of the four (4) available reading techniques
3. For each reading technique, complete the following
  - a. Read the webpage
  - b. Explore links and resources if desired
  - c. Take the “Show What You Know” quiz without using any aids
  - d. View their results, and find the answers to their mistakes on the webpage

Thanks to Google Form's data collection, we have the exact time and accuracy at which students completed the quizzes. With this data, we can assess both the choices students made on the website in addition to how effectively they learned the material on the website.

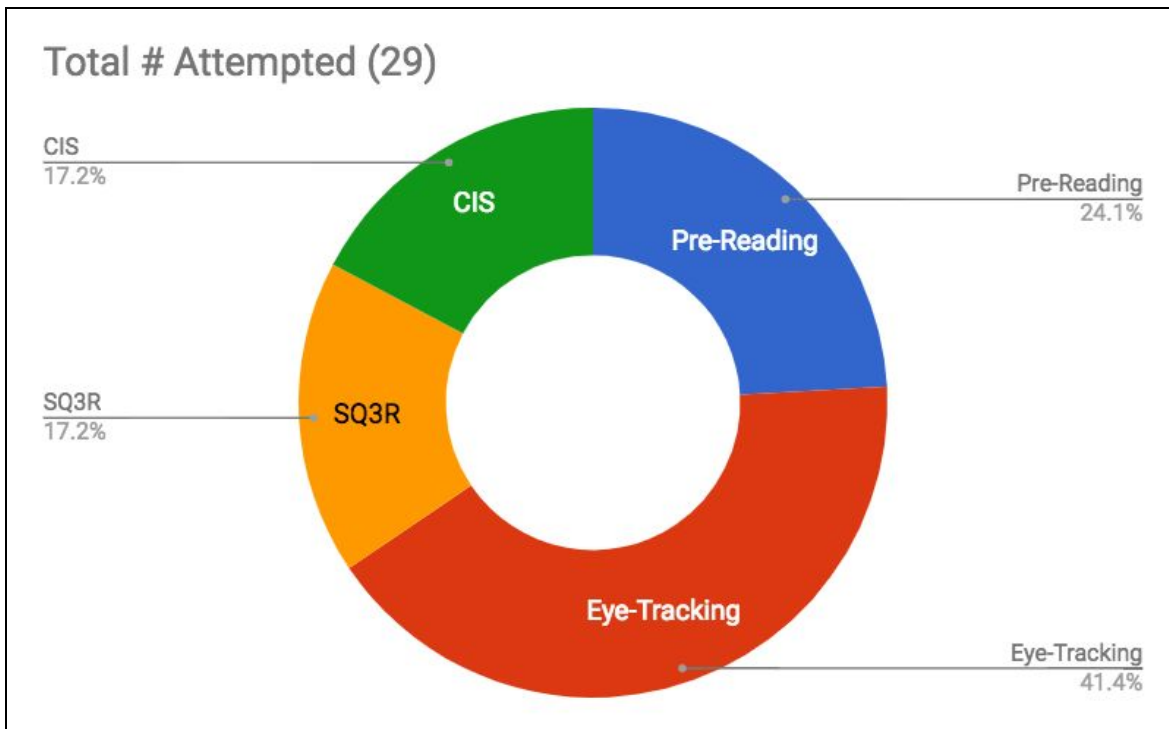


Figure 1.01: Student Participation Across 4 Methods

Participants were much more interested in methods centered around *Reading Efficiency* (Eye-Tracking and Pre-Reading methods) than in methods concerning *Reading Comprehension* (SQ3R and CIS methods). This may be a result of the selection process on the home page, which showcases the names of each technique and their respective category but does not introduce or give a summary of their uses. This would make the SQ3R and CIS methods harder to understand just by looking at their titles.

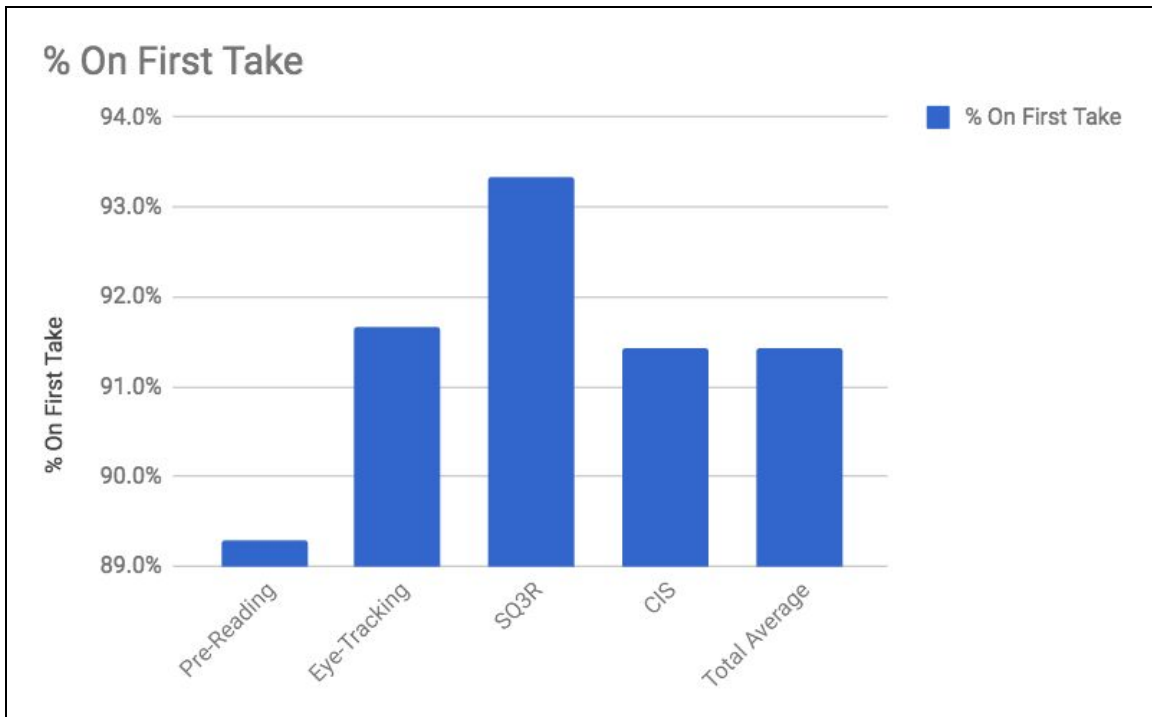


Figure 1.02: Student Performance on First Take of Quizzes

Overall, students performed well in their first attempt at each the four quizzes designed to assess understanding of the techniques. For a look at the questions on each of the four quizzes, refer to **Appendices B-E**.

Since questions not only assessed simple recall but also involved application and thematic understanding, we argue that the above results show that students completed their participation with a rigorous understanding of one or more of the methods listed on the website.

In terms of what went well, this project was able to use a variety of diverse technologies without any real technical issues. Links, videos, webpages, navigation menus, and quizzes all worked without any problems for the duration of the website's development and distribution. In addition, students had no problem understanding their instructions and performing exactly as told, a surprising feat given that many of them completed the assignment by themselves and without our team present.

One thing we would do differently next time is begin the collaborative project by getting survey data from students asking them what types of resources or topics they would like included on

such a strategic learning website. That way we could more directly address their concerns. In addition, we would also attempt to do a benchmarking quiz before students engage with the content so we can measure the actual progress of individual students as a direct result of using our website.

### **Reflection**

After finishing this collaborative project, all of our group members are able to develop multiple abilities in instructional design. Our team members not only develop the abilities in using internet as an instructional tool to help students with their learning skills but also develop the abilities to collaborate with others as well as communicating with others. Achieving these skills can help us to be much more competitive in future when designing an instructional tool or an instructional project to solve some problems as well as finding some jobs related to designing.

Our collaborative project was completed with minimal conflicts because our team members developed a comprehensive time schedule which helped us to know what we needed to do every week and who was responsible for which part of our project at the very beginning of our project. And thanks to our schedule, our team members nearly had a meeting with each other every week to exchange our ideas, summary the work we have already done and hand out our next week's work.

Our team members also came across many problems when working on this project. The first thing was that when we designed to divide our reading skills into two parts, reading comprehension and reading efficiency, it was difficult for us to find specific reading skills which could be classified into these two categories. Because some skills could be classified to both categories or some skills may have many overlapping characteristics that we couldn't clearly define differences between them. Fortunately, we solved these problems after consulting lots of reference materials. At first, we were uncertain whether asking volunteers to finish a questionnaire after browsing our website or asking them to finish some quiz to assess our website. And after discussion, we finally chose to provide a quiz to each part of our website and asked our volunteers to finish it which can not only help us to know whether the materials in this website are useful for students but also help students to solidify the reading skills they learnt before.

Also, our team members are very grateful to the 29 volunteers including 23 undergraduate students and 6 graduate students who agreed to participate in utilizing the Skillful Reading website. Because we were unable to get our desired Learning Community at Syracuse to agree to sign-on and trial the site with their students, we collected all of these volunteers from our

personal contacts. And according to the scores they got in the quiz provided in our website, they all browsed our website very carefully. Without their help, we could not finish our project.

Our team members feel that there are some areas in our project that need improvement. We can add more reading skills in our website if we have more time and we need to have more volunteers to utilize the Skifull Reading website to get more accurate experimental data. Overall, our team members feel that this collaborative project is a meaningful and successful experience for all of us and this website is a successful product.



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**Appendix A:**  
Primary Link To Website

Click [HERE](#) or go to (<https://skillfulreading.weebly.com/>) to view this website.

## **Appendix B:**

### **“Show What You Know” Quiz Questions (Pre-Reading Method)**

- ❖ **Which of the following is one of the questions you should ask yourself before pre-reading a text?**
  - How does the author prove their point in this work?
  - What type of work am I reading?
  - What is the setting or context of this work?
  - Is this work relevant or useful to my studies?
- ❖ **Which of the following is the OTHER question you should ask yourself before pre-reading a text?**
  - What are my greatest resources for understanding this text?
  - How should I set my goals for reading this text?
  - What is the greatest part of this text?
  - What am I reading this for?

**For each of the following situations, select whether you should "Speed Up" your reading or "Slow Down" your reading.**

- ❖ **Familiar Material**
  - Speed Up
  - Slow Down
- ❖ **Technical Material**
  - Speed Up
  - Slow Down
- ❖ **Generalized Material**
  - Speed Up
  - Slow Down
- ❖ **Abstract Material**
  - Speed Up
  - Slow Down
- ❖ **Unnecessary Examples**
  - Speed Up
  - Slow Down
- ❖ **Long or Involved Sentences**
  - Speed Up
  - Slow Down
- ❖ **Unfamiliar Words**
  - Speed Up

- Slow Down
  
- ❖ **Give an example of SUMMARIZING WORDS in a passage.**
  - Correct answers include:
    - In summary
    - In conclusion
    - In brief
    - For these reasons
    - For this reason
  
- ❖ **Which of the following is NOT an example of CONTRAST AND CHANGE words in a passage?**
  - But
  - Regardless
  - Since
  - Though
  
- ❖ **When scanning a reading section, which of the following is NOT a useful question to ask?**
  - Does the work include illustrations, graphs, and bold key words?
  - Is there a table of contents I can scan?
  - Is the work divided into sections?
  - Does the work include references to other works?
  
- ❖ **Why is the Pre-Reading Method useful for reading?**
  - It maximizes efficiency by focusing reading efforts on the parts you need to know.
  - It increases motivation by helping narrow the focus of reading assignments.
  - It decreases frustration with difficult segments and gives context to the work.
  - It provides guidance and supports supplemental reading when studying the work.

**Answer Key:**

B, D, A, B, A, B, A, B, A, See Options, C, D, A

## Appendix C:

### “Show What You Know” Quiz Questions (Eye-Tracking Method)

- ❖ **What is the primary purpose of the Eye-Tracking Method?**
  - Reducing eye strain
  - Increasing peripheral vision
  - Increasing memorization
  - Increasing page-scanning
- ❖ **Which of the following is NOT an example of something you could use as a reading tracker?**
  - A notecard
  - A sheet of paper
  - A highlighter
  - Your hand
- ❖ **What does it mean to "narrow your field of scanning?"**
  - Scan texts to find sections you can skip, then simplify your reading.
  - Start and finish reading each line of text about 2-3 words from the edge of the line.
  - Use the width of the book to skip images and charts that do not inform the text.
  - Shorten your session into quick bursts of high-speed reading.
- ❖ **According to the Eye-Tracking Method, why should you scan a page before reading it?**
  - It will highlight sections you should skip.
  - It will help you choose an appropriate field for peripheral vision.
  - It will serve as a guide for when you should speed-up or slow-down while reading.
  - It will help reduce fatigue by giving you motivation.
- ❖ **What is the primary cause of eye strain while reading?**
  - Experiencing eye movements (saccades) while encountering difficult material.
  - Experiencing eye movements (saccades) for too long or at too great a frequency.
  - Over-scanning a document and thinking too hard about its content.
  - Losing your place while reading too frequently, causing eye movements (saccades) to find it.
- ❖ **True or False: according to the Eye-Tracking Method, you can train your peripheral reading by continuing to read outside your field of focus.**
  - True
  - False
- ❖ **Why is the Eye-Tracking Method useful for reading?**
  - It helps you maintain a clear pace of reading through key signals

- It promotes a greater sense of health awareness by tracking one's eye movements
- It increases your reading speed and stamina by minimizing eye movements
- It makes texts appear easier to read by narrowing the field of scanning

**Answer Key:**

A, C, B, C, B, A, C

## Appendix D:

### “Show What You Know” Quiz Questions (SQ3R Method)

- ❖ **For which of the following situations would the SQ3R Method be most useful?**
  - A student wants to remember the key definitions in a complex section of text.
  - A student wants to prepare research for a paper on the book she is reading.
  - A student wants to understand the main themes and context of a chapter of reading.
  - A student wants to study the style and literary approach of a novel he is reading.
- ❖ **When SURVEYING the text, which of the following would you NOT focus on?**
  - Pictures, Charts, Graphs, and Maps
  - Definitions and Dates
  - Introductory or Concluding Paragraphs
  - Title, Headings, and Subheadings
- ❖ **Which of the following is the BEST example of a good QUESTION to ask while surveying the passage?**
  - Who are the most important people in this passage?
  - How many concepts do I need to memorize?
  - What does my professor expect me to learn from reading this?
  - Why does this section appear in this book or work?
- ❖ **Which of the following correctly lists the 3R's in SQ3R, in the correct order?**
  - Read, Recite, Review
  - Read, Recognize, Recall
  - Read, Review, Re-Read
  - Read, Realize, Recognize
- ❖ **During which of the five steps should you take note of the underlined, italicized, and bolded words and phrases?**
  - Correct Answers: Read, Reading
- ❖ **True or False: according to the SQ3R Method, it is useful after reading to attempt to guess the questions your professor may ask on an exam.**
  - True
  - False
- ❖ **After completing each page, what is the recommended highest number of words you should use to make a page summary?**
  - Correct Answers: 5, Five
- ❖ **True or False: according to the SQ3R Method, graphic aids (pictures, charts, and maps) are important to focus on because you will be most likely to remember them.**
  - True
  - False

❖ **Why is the SQ3R Method useful for reading?**

- It provides a simple framework for making reading faster and more enjoyable.
- It ensures that students read the way that their professors want them to read.
- It helps students connect multiple topics in a convenient system for analysis.
- It gives students a clear purpose for reading, clarifying their focus through answerable questions.

**Answer Key:**

C, B, C, A, See Options, A, See Options, A, D



## Appendix E:

### “Show What You Know” Quiz Questions (SQ3R Method)

- ❖ **Which of the following reading assignments would be best served by the CIS Method?**
  - "Great Expectations," a novel by Charles Dickens
  - "World of Chemistry," a chemistry textbook by McDougal Littell
  - "The Western Heritage," a history textbook by Donald Kagan
  - "Advanced Spanish," a workbook by Barbara Bregstein
- ❖ **Which of the following is NOT an example of a CONNECTION you can make with a text?**
  - Text-to-Self
  - Text-to-Text
  - Text-to-Character
  - Text-to-World
- ❖ **Which of the following is an example of a question you might ask yourself while making INFERENCES from the text?**
  - Which of the following is an example of a question you might ask yourself while making INFERENCES from the text?
  - "Which character do I think will be victorious in their struggle?"
  - "What do these clues tell me about the characters and their world?"
  - "What do I think the author is like?"
- ❖ **What is the name of the step in which the reader generalizes new information and gives their opinions and critiques of it?**
  - Synergize
  - Synthesize
  - Synchronize
  - Simplify
- ❖ **When making CONNECTIONS, which of the following questions is something that you would NOT ask yourself?**
  - What does this remind me of in my life?
  - Has something like this ever happened to me?
  - What is the most powerful part of this reading?
  - How is this text similar to other things I've read?
  - How is this different from things that happen in the real world?
- ❖ **True or False: according to the CIS Method, one part of deep reading may include deciding whether you agree or disagree with something in the text.**
  - True
  - False

❖ **Why is the CIS Method useful for reading?**

- It connects the pieces of complex concepts and makes them practical.
- It helps the reader understand the text deeply and improve their critical thinking abilities.
- It helps establish a timeline for reading texts, making them easier to comprehend.
- It provides important resources for focusing attention while reading.

**Answer Key:**

A, C, C, B, C, A, B