

Appendix D. General chemistry students' self-reported study strategies prior to the metacognition lesson and examples of participants' responses

Reported Strategies	Examples of Participants' Responses
<p>Reading and Re-reading, Memorization, Flashcards, and Quizlets</p> <p>(N=236, 37.3%)</p>	<p><u>Reading and re-reading:</u></p> <ul style="list-style-type: none"> -I tend to go over and over the material until I get the right answer. -Currently, my study habits consist of rereading the text. -My main strategy is the repetition of information over and over again so that it is ingrained in my mind. -I usually just re-read material. -What I currently do is take notes and read the textbook...And when I study I really just study the notes over and over again. -I study by taking time out of my night to reread. -Rereading the covered materials starting the week before. -Most of the time I like to at least go over it five times, and even more than that if I am struggling with the information. -And reading them several times over eliminating concepts I feel I have a good grasp on. <p><u>Memorization/Flashcards/quizlet/notecards:</u></p> <ul style="list-style-type: none"> -Rehearsal and rote learning have enabled me to commit everything to my memory. -I will sit for a long time and cram the information in a quiet place like a coffee shop. -I tend to cram study typically because I hold information best when it's recent. -My current habits for studying involve making note cards and having the cards memorized. -Sometimes make flashcards to help me study and memorize terms and definitions. -I will cram right before an exam because I get overwhelmed. -My study habits consist of memorization techniques such as flashcards. -I tend to cram study typically because I hold information best when it's recent...I always begin to study with rewriting because I remember information best when I've written it multiple times. -I also try to memorize problems before tests. -For one I try to cram all my subjects that I am studying into one study session and sometimes I get really confused. -I will also look for quizlet files that relate to what we are studying.
<p>Poor Planning</p> <p>(N=68, 10.7%)</p>	<ul style="list-style-type: none"> -When it comes to studying for a test I like to study the night before. -My current study strategy is to start studying four or five days before an exam. -I have a tendency, however, to procrastinate in my studies and wait until the last minute either the day before or a couple of days prior to the exams. -Most of my professors would give us the test dates at the beginning of the year and I would wait until the last 2 days to study and ended up cramming. -I don't start studying until the week before so I always feel like I am cramming at the last minute in order to remember all of the material.

Appendix D (Continued)

Reported Strategies	Examples of Participants' Responses
<p>Good Time, Management, Planning (N=65, 10.3%)</p>	<p>-My most used study strategy is to begin with the topics I am least confident about. I like to spend most of my studying time focused on my weaker topics. I try my best to hone in on why I don't understand the topic and how I can get to an understanding of it. After I repeat these actions for all of the topics or skills I am concerned about I move on to a type of overview. I go back and review the entire section I am about to be tested on to brush up on topics and to make sure I didn't forget about any concepts.</p> <p>-I divide my time studying for class by what classes I went to that day.</p> <p>-I do any homework the day that it is assigned, if applicable. If possible, I try to do my assigned homework right after its respective class.</p> <p>-Plan homework, quizzes, and exams out so that I make enough time to fully prepare for each one in different classes.</p> <p>-I usually try to do my homework throughout the week rather than the day it is due if I am not too busy.</p> <p>-Sometimes I like to set study goals for the week and myself, usually setting a number of chapters or content for each day.</p> <p>-Currently, I set aside several hours each day for any subjects that I might need to study.</p> <p>-I usually start studying for a test two weeks out to ensure I have enough time to reread and do quizzes.</p> <p>-My current study habits are to read the chapters needed prior to class.</p> <p>-I schedule specific times to study certain classes for four days of the week.</p> <p>-Currently, I do block studying. I will allocate a lot of time and the location to study a specific course, and develop a plan on what material I need to cover.</p>
<p>Studying with Notetaking (N=56, 8.8%)</p>	<p>-Currently, I study by taking notes.</p> <p>-When I take my notes, I make sure that I abbreviate the main important topics that I will need to know for the tests. I also try to highlight and color code my notes to make them easier for me to understand.</p> <p>-Taking notes during or just after reading the textbook.</p> <p>-Color coding my notes makes studying more fun and interesting for me so I tend to retain information.</p>
<p>Outside-Class Resources- Educational Videos, SI Sessions, and TA/Professor Office Hours (N=51, 8.1%)</p>	<p><u>Internet</u></p> <p>-When studying/learning new material I find it beneficial to seek out further instruction on the topic from outside sources, such as [online educational] videos.</p> <p>-Watching informational/supplementary [educational] videos.</p> <p>-I use the internet and [educational] videos.</p> <p>-I try to incorporate [online educational] videos during my studying because I am a visual learner.</p> <p>-I use a program called Clutch Prep to go over the topic/section for the day.</p>

Appendix D (Continued)

Reported Strategies	Examples of Participants' Responses
Outside-Class Resources- Educational Videos, SI Sessions, and TA/Professor Office Hours (N=51, 8.1%)	<p><u><i>SI sessions/TA/Professor office hours</i></u></p> <ul style="list-style-type: none"> -If at that point, I still am not understanding what was being said, I will seek help directly from the professor. -By attending supplemental instruction, I not only feel that I gain a greater understanding...Additionally, I enjoy taking advantage of the LASSO center in order to have one on one tutoring which I feel helps me key in on the gaps in my memory and form a better educational foundation. -To study I tend to get with a tutor and go over the material that I am testing over. - If I do not understand a concept, I go to the TA and ask before going to the professor.
Practice Problems (N=49, 6.8%)	<ul style="list-style-type: none"> -I do as many practice problems as possible. -Work out practice questions (from reviews or back of the book). -If I need to know how to do something, I usually do many practice problems. -I practice problems while going through the material to make sure I completely understand the concepts. -Normally I do practice problems in order to better understand the process (depending on what we are doing), and I go online and do practice problems not assigned.
Reflective Learning (N=43, 6.8%)	<ul style="list-style-type: none"> -Then go back and reflect on the notes later while I am studying and I remind myself of the topics and. -Once I have learned something new I like to revisit the idea in my head several times a day and connect the idea with other concepts from the class. -Reflect upon key points from daily lectures and review areas in which I struggle or have misunderstandings. -I will ask myself how I've been working on a problem and why I got the answer until I have a complete understanding of the subject. -Draw diagrams and pictures of processes and phenomena. Describe what is happening step by step next to the picture that shows it.
Collaborative Learning (N=38, 6%)	<ul style="list-style-type: none"> -Studying with friends is very beneficial because you get the opportunity to learn from each other. -I also like to meet up with peers to discuss any topics I am struggling with. -My current study strategies are to work with my friend who is taking the same course to study. I also plan to ask friends who have already taken the course for tips on study habits and strategies. -I tend to do the best on a test when I study with a friend group or study group. -I sometimes make study groups with my fellow peers.
Self-assessment (N=27, 4.3%)	<ul style="list-style-type: none"> -I constantly quiz myself throughout my studying process to see if I am fully retaining the information. If I do know the information then I will mark it so I know that I understand the concepts so I don't have to focus on that topic. -I practice testing myself before taking exams and try to go over all of the material multiple times. -Then quizzing myself over the material. If I get any questions wrong on my self-quiz, I then analyze the material I am not as familiar with and quiz myself again.