

CEP 802 Design Project
Karen H. Rivard
December 2, 2012

Motivational Case

Learner: Susan is a junior in a suburban, private, all-girls high school, and has been in my math classes for two and a half years. Though mostly a B/C student, Susan usually fails most tests, and often scores the lowest in the class on assessments. She struggles with basic math skills, and freely admits she does not know her multiplication tables. She is terrified of fractions, claims she does not know what they “are”, and groans any time a homework problem includes them. Last year I asked Susan to work with me on learning her multiplication facts, to which she agreed. We spent a few minutes of class time in the hallway for two weeks using flash cards together, and I encouraged her to continue her practice at home. I felt confident that she agreed with me that learning her tables was very important and would help her overall in math class. I also showed her how to work fractions on her calculator so that their inclusion in math problems would not prevent her from attempting them. This year I see evidence that she is not proficient in either her multiplication facts or using her calculator for fractions. She and her parents will freely admit that a poor math program in her elementary and middle school years have negatively affected her competence in basic math skills.

Susan has been caught cheating on her homework and tests, and has been accused of plagiarism on her English papers. When confronted, she denies that she did cheat, and has a ready excuse as to what she was doing or simply laughs it off. Her parents have defended her on all counts, but her teachers have an opinion of her as being a “cheater”.

Several of her teachers have had to adapt tests (writing multiple versions) or her environment (moving her desk) due to her tendencies.

Susan refuses most help from me. During homework time when I ask Susan if she needs any help, she will cheerily say, “No! I get it,” or, “I’m going to work on it at home with my tutor.” During class, she will not offer answers, and if asked, answers tentatively in a small voice. While taking a test she will ask many questions, unsure of what steps to take, and appears to be very nervous. She has stated that she is fearful of getting bad grades, and does not want to look “dumb” in front of her friends. There are two opportunities for Susan to meet with me individually each day, during a focus group time (study hall) midday, or after school. I have often suggested to Susan to come in for extra help. If she does first agree, she will come in later with an excuse as to why she cannot stay. In the last two and a half years, Susan has never come to me privately for help.

Learning Activity: This year Susan is in Algebra II. She is in class right after lunch. Classroom format is predictable: after gathering and informal chatting, we pray, yesterday’s homework is briefly reviewed, questions may be asked on the homework, difficult problems are done by me on the board, homework is handed in, then new material is covered. Usually the review takes between 3-10 minutes, new material takes 10-15 minutes, with the remaining class time used to work on the new homework. Most homework is done individually, but conversations about the problems are allowed. Only off-task talking is discouraged, and students lose participation points if they are either off-task or need to leave the room to retrieve forgotten materials. I roam the room during homework time, and my students know that I am available to help with any problems.

Any homework not completed in class, which occurs approximately 75% of the time, is expected to be completed at home.

Learning Setting: Susan's class includes twelve students who are juniors and sophomores. Susan is friends with all of her classmates, including three girls who are new to the school this year. Our school is new and equipped with the latest technology. The desks are arranged in a 4X4 array facing the whiteboard, with Susan sitting in the front corner closest to the large window. All discussion and teaching occurs at the front of the room, with occasional group work when the desks may be turned to face each other. There are several colorful posters on the clean, white walls, plants on the windowsill, and pillows in the corner for the students to use during study hall. Overall the room is clean and tidy.

Motivational Assessment

Motivational Problem: Susan usually arrives to class happy, talking and social with her friends. When it is time to go over yesterday's homework, she does not ask questions, but works quietly writing down answers as I do problems on the board. She often has many problems incomplete on her homework assignment that she fills in from the work on the board. If we do not go over a problem that she did not do on her own, she will not ask to see it, but writes part of the problem to fill in the space on her paper. She is aware that homework is graded for completion only, and most days I only quickly check it to see that the work has been done. On closer inspection of her work I can see that her work is incomplete. Oftentimes Susan is distracted with her friends instead of paying attention to the lecture. This occurs quietly when my back is turned. She also can take notes copiously, nodding her head in agreement with what I am saying and looking

like she is thinking intently, but I believe this is “false effort” (Stipek, 2002, p. 81) and is not serious effort to learn the material.

Susan seems to do just enough to get by without striving to gain true understanding of the mathematical concepts we are learning in math. She is negatively affected by performance goals (Brophy, 2010, chapter 4), which results in high anxiety on test days. She has missed school on test day, acts very nervous and vocalizes her fears before a test, and pesters me for help during the test. If I refuse to help her, she simply does nothing and hands in her test with many blank answers, acting as a “Helpless Hannah”. Even before she receives the test from me on test days she will ask if she can retake it. It is frustrating that even though she has had plenty of time and opportunity to prepare, she is always unprepared on test day.

My **goal** is to motivate Susan to take responsibility for her learning, seek help in understanding, and become a more capable and honest student. Specifically, I want her to increase the amount of questions she asks in class and during homework time, persist on difficult problems instead of just writing in the answers from the board, and become more independent and honest when taking math tests. I want her work habits to become more stable so that she is prepared on test day to accurately show the level of her understanding.

Motivational Analysis: Based on the TARGET framework (Ames, 1990; Brophy, 1998; Maehr & Midgley, 1991), the following conditions exist for Susan in math.

Task: The value of learning the concept at hand is emphasized in my classroom by using real world applications in engineering and science, when available, and also in

relation to further studies in mathematics, statistics, or science (i.e. “you will need to know how to do this in physics when you study the angular momentum of an object”). A “reason” may only be that the item is sure to appear on the ACT, but to juniors in high school, this may be very compelling! As new concepts are introduced, I try to build up the excitement and novelty of the technique to generate interest and motivation for mastery (Stipek, 2002, p. 125).

Authority: I value the opinions of my students, and welcome their comments about the length and difficulty of the homework assignments, or scheduling of tests. I adapt our schedule, within reason, based upon their readiness for the math test and their schedule of other tests. I value mutual respect in the classroom, and manage it with authority, not as an authoritarian. Classroom rules are mutually agreed upon and outside of excessive talking at times, have no discipline problems.

Recognition: My classroom policy is that when tests are handed back no one is allowed to ask, “How did you do?” No one compares test scores in class; I ask them to wait until they leave (and truth be told most of them forget by then). Scores are never publicly announced. During lecture, as I demonstrate a technique, I often ask for response from students individually to assess their level of understanding. If a student gives the correct answer I affirm they are right. If the concept is difficult I may praise them or react with pleasure. If a student does not give the correct response I give leading questions and prompts and wait for them to respond instead of calling on another student who knows the correct response. By doing so, I communicate to Susan (and other low achievers) that I believe in their capabilities and am willing to wait for them to “get it” (Brophy, 2010, p. 108-109). Such methods help low achieving students break the

“failure syndrome”. I comment positively when students do well on a test, especially if their score shows marked improvement. A quiet, “Nice job” as I hand the test back, with a private follow-up later, helps them to know that I acknowledge their efforts have paid off well.

Grouping: I allow and encourage students to work together when doing their daily homework assignments. The typical behavior in my classroom is for students to ask a friend “what did you get?” before seeking my help. This self-check emphasizes cooperation and work towards mutual goals. I explicitly state that we are not in competition with each other, but each person’s goal is to improve their own math skills

Evaluation: I am careful to spend several days before a test reviewing the concepts to be tested, working with students individually who need extra help, and asking meta-cognitive questions such as, “Ask yourself, do you know how to do...?” My policy is that if a student scores less than 80% they may re-take a test. A stipulation is that they must come in during study hall or after school to work through the problems with me individually. My intent is that the learning process does not end with a test; if they did not perform well, they simply need re-teaching or more time to attain competence. I typically do not vary the test, but give one test to all. Any modifications to a test must be validated by an IEP, which Susan does not have.

Time: Our class time is 44 minutes, and we use most of it on task doing math. If the class in general requires an extra day to re-do an assignment, complete a longer task, or prepare for a test, I am flexible in giving it to them.

Motivational Intervention

Based upon the classroom observations in light of the TARGET framework, the following intervention strategies will assist me in helping Susan meet her educational goals in increasing her motivation to learn:

Task: Due to Susan's lack of basic math skills, she is ill-equipped to experience success with her math homework. In an effort to increase Susan's basic math skills, I will continue to encourage her to come in after school or during focus group to seek extra help. I will also suggest activities that will increase her competency with multiplication facts, using either flash cards at home or a drill and practice program on the computer. I will take time to model carefully the more difficult problems step by step, using voice inflection and hand movements to draw attention to critical steps. I will return to the difficult problems, stressing the relationship between real world successes and their mastery, allowing Susan and the rest of the class an opportunity to surpass their challenge. Instead of assigning difficult problems before their concepts are sufficiently understood, I will constantly assess the level of understanding to maintain an optimal level of challenge for Susan and the rest of her class.

Rationale: If Susan lacks competence and does not have the skills to complete the more difficult problems, she lacks a component necessary for intrinsic motivation (Deci & Ryan, 2000). People experience intrinsic motivation when their actions are self-determined and align with their interests, desires, and choices. Authentic motivation leads to better performance and more effort (Unit 4 PowerPoint, Oka, 2012). When Susan becomes competent with the skills, techniques, and strategies she needs to correctly complete her homework problems, she will be motivated to complete her assignments, persist on the more difficult problems, and therefore have a greater chance

of increasing her self-efficacy (Stipek, 2002, chapter 4). Maintaining an optimal level of challenge for Susan will help keep her motivated, interested, and engaged (Brophy, 2010, p. 88).

Authority: An area of difficulty for me is allowing students to choose their own assignments or methods of testing. I decide the content to be covered, which is based on the Common Core State Standards, and testing is always in the standard form. I can improve issues of authority in my classroom by giving Susan a choice in regards to which homework problems she practices. When feasible, I will allow her to modify her homework assignment, having her choose a certain number of problems from a certain group to show mastery of a concept.

Rationale: Increasing Susan's level of autonomy in math will allow her to develop intrinsic motivation to learn by increasing her self-determination (Unit 4 PowerPoint, Oka, 2012). Another benefit of allowing Susan choice will be to increase the level of trust I show in her. In the past, Susan has been (justifiably) accused of cheating or of not completing assignments. When given the chance to choose her assignment, she has the opportunity to show me that she has the ultimate authority and stake in her education, and is willing to work hard for it. This will help her to take greater responsibility for her own learning and develop self-regulating strategies (Stipek, 2002, p. 51).

Recognition: Using Stipek's table 10.5 (2002, p. 171) as a guide, Susan's behaviors clearly shows that she is more concerned with looking good in front of her friends than developing math skills. Her emphasis on performance goals led me to realize that my practice of calling on students randomly during class may increase her

anxiety in class, and work against efforts to increase her task goals, self-efficacy, and comfort with asking questions. In order to avoid a situation of negative recognition, I will only call on Susan when she offers answers in class. I also will seek her out to put work on the board to problems that she has successfully understood.

Rationale: By calling on Susan when she knows the correct answer, she will have the opportunity for positive recognition and help her gain control over anxieties (Brophy, 2010, chapter 5). Recognizing Susan's achievements and relating them to her hard work will help retrain her thinking from one of performance anxiety to increasing self-efficacy. By praising Susan for real effort, and allowing her opportunities for success, and maintaining these practices patiently and consistently, I can help her break her "failure syndrome" (Stipek, 2002, chapter 7).

Grouping: Because Susan works with her friend often in class, I realize that the same motivation techniques I am implementing with Susan I must also emphasize with her friend. They often joke that they are the two worst students in the class.

Rationale: Susan and her friend have self-perceptions of being poor math students, always have been poor in math, and always will be. Since Susan's identity with her friend is so strong, in order to change Susan's self-perception from being a poor math student to one of self-efficacy, it is critical that her friend's self-perception also change. The power of vicarious learning (Stipek, 2002, chapter 4) will allow both students to increase in their competence and motivation to learn, each helping the other believe they can become proficient math students.

Evaluation: By allowing Susan extra time to prepare for a test, she can reduce her test anxiety and increase her level of competence. I will talk to her before the test to

make sure she feels comfortable and proficient with the concepts. I will encourage her to come in for extra help throughout the chapter, so that she maintains proficiency with each concept as it is taught and not caught unprepared and overwhelmed by the amount of material to study in a short time. I will clearly state that I believe she has the skills to do well, and encourage her to self-talk, saying, “I can do this”. If Susan does not do well on a test, I will stress that if she worked hard on the homework the entire chapter, we may need to adjust her strategies.

Rationale: By increasing Susan’s autonomy and competence, her self-perception will be changed from one in which she is a “Helpless Hannah” with no control over her test abilities, to one of self-efficacy where she is confident that her diligent efforts will help her succeed on the test. Cognitively, Susan’s self-perceptions are a greater indicator of success than her actual abilities (Stipek, 2002, p. 44). By speaking encouraging words to her and helping her to believe in herself, she can break from her failure syndrome and experience success more often. In relating her performance to her hard work and/or strategies, Susan can begin to take control of her test-taking situations and feel less helpless and anxious.

Time: Susan’s class is one of three algebra II classes that I teach, and I tend to keep all three on the same schedule. The other classes are advanced sophomore students, and therefore require less time in direct teaching than Susan’s class. To help Susan gain true understanding for the math concepts we are learning, I will allow for flexibility in the schedule and allow each class to move at a pace that is most conducive to overall learning. I will allow Susan extra time to hand in her homework assignments if she has sufficient reason for needing it, even though the classroom policy is “no late homework”.

I will give Susan extra time before a test if she shows that she is working diligently on the material, but needs extra time or help from me for mastery.

Rationale: In making allowances for Susan in regards to time, I am allowing her to gain competence, which along with autonomy and relatedness is needed for intrinsic motivation to increase. I am also increasing trust in her, that her requests for more time are valid and not an abuse of my leniency.

Expected Outcomes/Results

With the implementation of the above intervention strategies, Susan will be able to increase her self-efficacy, take responsibility for her learning, and increase her motivation to learn. Taking extra time in class and in private to help her increase her competence in basic math skills will enable her to experience success in her homework.

Modeling difficult problems repeatedly will give her the strategies she needs to persist in solving them independently. With repeated successes in her homework and positive self-talk practices, she will retrain her failure syndrome thinking into one of a confident, capable math student. If I patiently and persistently encourage her to seek extra help, and respond to her quickly, she will learn to trust my guidance and value its worth.

When she begins to believe she is able to succeed, her likelihood to seek help will increase. No longer a victim of shame and insecurity due to lack of knowledge, Susan will feel more confident and less anxious on test days. She will no longer succumb to the desperation of cheating and will be able to complete her homework and tests honestly and with a sufficient level of performance. As Susan is encouraged to value the importance of what she is learning, she will take more responsibility for truly learning it, and not simply “go through the motions” to just get by.

Several positive changes have occurred with Susan thus far this year. I confronted Susan about her lying to me, and stressed that I wanted her to be completely honest with me. I have noticed that she no longer writes in answers to her homework, but will ask for more help when she does not understand it. I have made a point to repeatedly assure her that I believe she is capable of doing well in algebra II, and that I am willing and happy to help her. I have noticed that she uses her time in class to work on the homework, is not distracted as often, and has begun to ask for help in class. I have praised her privately, encouraging her to continue her hard work, and sense a more trustful relationship with her. She recently came into my room during free time to talk honestly with me about a concern of hers outside of school.

I have allowed her a choice in assignments privately, believing her when she needed extra time to complete an assignment, and stressed the importance of her understanding the work over just filling it in to get full credit. I continue to stress the importance of what she is doing in class in relation to her college and career choices, and she has begun to talk about where she wants to go to college and what she wants to study. I have increased the amount of time we spend on difficult concepts in her class, allowing the other two classes to work ahead. By giving her class more time to understand the concepts, I have seen greater effort *with every student* to master the concepts. Across the class the homework assignments are more complete, attention during class has increased, questions about homework have increased, and test scores have risen. I have seen her pride when she gets the correct answer to a homework problem, and the pride of her classmates on their test scores.

Two weeks ago Susan volunteered to put a problem on the board during class and was able to describe to the class how she had solved it. She recently was the only one to correctly answer a homework problem, and she happily exclaimed, "I got it right!". Last week Susan missed one day of class and did not understand what we had covered. Even with explanation from me in class, she stated she still needed extra help. For the first in over two years she came in for help after school on her own.

Susan still shows some anxiety about new material, as she is still plagued by her lack of basic skills. When I told her we were going to begin work on factoring quadratics, she grimaced. I told her that it is very important that she knows her multiplication tables well, and she admitted that she still does not. I am very pleased with the advancement of her behaviors to the goals I had set for her to: seek help, persist on difficult problems, become personally responsible for her learning, complete homework assignments honestly and on a steady basis, and complete tests honestly. As an added benefit, her entire class is improving in their motivation to learn! I will continue to adopt and apply practices that increase Susan's motivation and improve her self-efficacy for the continuation of the year. I am confident that with continued work, Susan can improve in her skills and increase her motivation to learn.

References

- Ames, C. (1990). Motivation: What teachers need to know. *Teachers College Record*, 91, 409-421.
- Ames, C. (1992b). Achievement goals and classroom motivational climate. In J. Meece & D. Schunk (Eds.), *Students' perceptions in the classroom* (pp. 327-348). Hillsdale, NJ: Erlbaum.
- Brophy, J. (1998, 2010). *Motivating students to learn*. Boston, MA: McGraw-Hill.

Maehr, M., & Midgley, C. (1991). Enhancing student motivation: A schoolwide approach. *Educational Psychologist*, 26, 399-427.

Stipek, D. (2002). *Motivation to Learn: Integrating theory and practice* (4th ed). Boston: Allyn & Bacon.