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# **How the Self-Serving Attributional Bias Affects Student Learning**

**Natalie Anderson**

## **Abstract**

The self-serving attributional bias (SSAB) is a very common human bias. The SSAB, however, is at odds with being a good learner, since learning (often) requires learning from failure. In this paper, I explain controlled failure as part of good learning activity design. This design (among others) should include a metacognitive component wherein students are asked to learn about learning from failure, which requires them to come face to face with their own SSAB. In order to alleviate this conflict, I advocate for two designs found in the teaching literature: after-event reviews and guided reflection.

## **Introduction**

In this paper, I argue that students must overcome the self-serving attributional bias (SSAB) in order to learn from failure. In section one, I discuss the folk psychological tendency to invoke the SSAB. The SSAB involves attributing success to internal features about oneself and failure to external factors. I compare this with being a good learner which requires that people frequently attribute both success and failure internally. In this way there is a conflict between our tendency toward the SSAB and being a good learner. In section two, I discuss the utility of failure as a learning tool. I explain controlled failure which is a kind of learning activity wherein teachers allow their students the opportunity to fail in order to awaken students from habitual, problematic practices. I argue that in order for students to learn from this activity and failure in general, they must overcome their tendency toward the SSAB. In section three, I describe an activity that could be paired with controlled failure teaching called an after-event review (AER). This guides students toward attributing their failures internally and thus increasing the benefit of

the controlled failure experience. I conclude with a brief discussion of the utility of including guided reflection opportunities in learning activities in order to help students recognize and overcome the SSAB.

### **Section 1: Folk Psychology and Learning**

In this section, the folk psychological tendency towards the self-serving attributional bias is discussed, as well as how to be a good learner. Being a good learner is at odds with the SSAB, so in order to be a good learner, one should avoid, or learn to avoid, this bias.

#### **Folk Psychological Tendency Toward the Self-Serving Attributional Bias**

Folk psychology is commonly thought to be our “science” of behavior in terms of their beliefs and desires which take the form of predictions and explanations. It is our commonsense understanding of others; how ordinary people understand ordinary people. In philosophy, the term for these predictions and explanations that are given for other’s behavior is “mindreading.” In her book, *How We Understand Others*, Shannon Spaulding discusses multiple ways that humans go about mindreading and different goals they might have. She says that when the goal is self-serving humans often invoke biases they might have to predict or explain others (Spaulding 2018, p. 49).

The self-serving attributional bias describes our folk psychological tendency to attribute our success to stable features of ourselves that we can control (e.g. our own efforts, or qualities such as persistence and diligence) and attribute our failures to features that we cannot control (e.g. bad luck or bias against us) (Spaulding 2018, p. 49). Spaulding says that by invoking this bias, we feel good about our successes and brush our failures off onto other factors. One example of this is a student attributing their good grades to their hard work and their bad grades to bad luck or flaws in their teacher. Knowing that humans have this bias, we can use it to explain and

predict what others will do in response to success and failure. Through this recognition, we also can reflect on our own thinking and change our approach if necessary. I will use this idea to argue that teachers can predict how students will respond to failure and how they, who can recognize that the students have this bias, can help them recognize and overcome it.

### **How to Be a Good Learner**

In the book *How Learning Works* by Susan Ambrose, Michael Bridges, and Marsha Lovett, motivation to learn is discussed (2010). They suggest that students who have a high level of efficacy expectations tend to be more motivated to learn the material being presented. Students who have been successful in the past are more likely to expect success in the future and vice versa for failure. The reasons why they do this are the most powerful predictive tools for their efficacy expectations. The book states that “these reasons, or attributions, involve the causal explanations students use to make sense of the outcomes they experience” (Ambrose et. al. 2010, p. 78). When students are successful in achieving their goal and they attribute their success to some controllable and internal feature about themselves (e.g. effort or persistence) they are more likely to have a high expectation for future success. If they attribute their success to external and uncontrollable features about themselves, they are less likely to expect success in the future.

When a student experiences failure, their motivation will likely remain high if they attribute their failure to some internal and controllable feature about themselves (e.g. low effort or preparation) because they expect that they have the ability to change it in order to achieve future success. This mindset allows learning to occur because they won't just give up in the event of failure, rather they have the potential to change their performance to better achieve their goal. If they attribute their failure to external or uncontrollable features then they will not likely be motivated to try new techniques. They don't see the failure as within their control and, thus,

don't expect future success. To be a good learner, one should associate success and failure to controllable features about themselves. When this is done, motivation to do better and learn from mistakes will be higher.

### **Conflict Between the Self-Serving Attributional Bias and Good Learning**

The SSAB and being a good learner are at odds, at least on the face of it. Being a good learner, as we have seen, requires us to “own” the failure, otherwise we lose motivation. Being a regular folk psychologist includes attributing failures outside the self. In this way, the SSAB, part of our standard folk psychological toolkit, is most assuredly at odds with being a good learner. Spaulding suggests that because of our folk psychological tendencies, we naturally link failure to external and uncontrollable factors while being a good learner suggests that we should link failure to internal and controllable features about ourselves. This way we can learn from mistakes and achieve more success in the future. Since there is a conflict between the two, being a good learner is challenging because one has to overcome certain biases that they have in order to achieve the most success.

### **Section 2: Good Teaching Practices are Limited by Folk Psychological Tendencies**

In this section, I articulate the benefits of including failure in learning experiences. Although failure is a useful teaching tool, what is done with failure is an important factor in the amount of benefit received from including it. Since students are susceptible to the SSAB, they are less likely to benefit from the inclusion of failure.

#### **Learning from Failure**

In the simplest terms, learning is a change in behavior. There are different ways to learn, but one way is to experience a sequence of “predict-experience-contrast” which leads to the revision of theories (Fromberg 2001, p. 101). When a student enters a learning experience, they

likely have pre-conceived ideas about what the experience entails, so they have a theory and predictions. The students are able to experience an event and then after they can contrast that with their predictions. This pushes the student towards learning because they try to provide an explanation for the outcome of the event and also predict future events (Ellis 2006, p. 670).

Failure of predictions creates an imbalance which can stimulate a change in behavior.

An example coming from Dave Concepcion (2004) is to imagine a student that is new to writing a philosophy paper. The student might have preconceived notions about how to write an argumentative essay that they have picked up throughout their education. When they write using these preconceived notions in their philosophy essay and then receive negative feedback, they can contrast what they thought would work with what their professor actually wants and then they learn how to write a better paper.

### **Controlled Failure**

Since failure is a powerful learning tool, teachers should utilize it in their creation of learning experiences. Dave Concepcion coined a term called “Controlled Failure” which is a tool for unlearning. Unlearning must sometimes happen whenever students are “advanced beginners.” Advanced beginners are different from complete novices and experts in that they have more knowledge about a particular activity than novices and less abilities to synthesize and connect information than experts. Advanced beginners often use knowledge and/or techniques that they have learned throughout their education in new situations where those skills might help or hinder them (Concepcion 2004, p. 132). Concepcion is especially interested in the idea that prior knowledge hinders learning in new domains. He says that when a person’s background knowledge conflicts with new experience, advanced beginners find it more difficult to learn than complete novices. (Concepcion 2004, p. 132). Unlearning of past knowledge and techniques

must happen in order for a higher level of success in a new domain where the generic skill set will not suffice.

Concepcion says that in order for unlearning to take place, teachers can use controlled failure experiences. Controlled failure is when students are asked to perform a task where they will use their prior knowledge and skills to complete it but will ultimately fail because these will not be sufficient in order for them to perform the task adequately (Concepcion 2004, p. 133). He says that in order for controlled failure to be successful, it should happen early in the scaffolded learning cycle and should not have any influence on the student's grade. If the stakes are high, students will settle for using their all-purpose skills and get a B or C instead of trying a new approach and possibly getting an A but also possibly getting an F. Concepcion says that the students should receive discipline specific feedback immediately following the controlled failure experience. That way when they fail, they are more likely to try a new approach (Concepcion 2004, p. 133.).

### **The Self-Serving Attributional Bias Reduces the Benefit of Failure and Controlled Failure**

Although failure and controlled failure are powerful tools that teachers can use when they are designing learning experiences for their students, students might have trouble fully benefitting because of their tendency towards the SSAB. Take the example of the new philosophy student attempting to write a philosophy paper using her argumentative essay knowledge. Suppose that the teacher designed this paper assignment to be a controlled failure experience. As mentioned before, learning from an event starts with the explanations for the outcome that the student proposes, and folk psychological tendencies will affect the explanations taken to be best. When the student tries to use her argumentative essay skills and then fails, she is likely to blame external factors for her failure such as inadequate preparation from the teacher or

that the teacher is mistaken. With low stakes and adequate feedback, the student might be able to improve, but because of the SSAB, they likely won't fully internalize their failure which is important to be a good learner. This leads to the necessity to design better assignments which ask students to engage in metacognition about their performance.

### **Section 3: What Teachers Can Do to Increase Learning from Failure**

It is helpful for teachers to know about different biases that their students have. When they are aware of these various biases, they can predict and explain their behavior when they are planning and assessing learning activities. When teachers recognize features about their student's folk psychology, they can plan learning experiences where they utilize the positive aspects but also avoid the negative. In this section, it will be discussed how teachers can take their knowledge of folk psychology and plan better learning experiences and also help student's to recognize and correct the bias within themselves.

#### **Controlled Failure with After-Event Reviews**

One way that teachers can combat the SSAB's effect on controlled failure is to pair controlled failure activities with after-event reviews (AER). AERs are a type of guided reflection which directs learners to understand what the specific causes for their successes and failures were (Ellis 2006, p. 669). An AER is where after an event, a person is guided through questions about that particular event. Both successes and failures are discussed, and the questioner can either support or disqualify the person's claims based on evidence taken from the event.

In the article, "Learning From Successful and Failed Experience: The Moderating Role of Kind of After-Event Review," Shmuel Ellis, Rachel Mendel, and Michal Nir discuss how students who make more internal attributions when faced with a failed experience are more likely to learn. As discussed before, the tendency towards the SSAB makes it harder for students



to own their failures. The authors suggest that AERs are a useful tool for generating more explanations after an event that are internal rather than external because of the focused nature of the questions and the usage of evidence from the event to guide the reflection.

The study done by Ellis, Mendel, and Nir looked at people playing a game and then being provided with different kinds of AERs or no AER. The people then played the game again and the ones who had AERs were more successful on their second try than those without the AER. The people were then given another AER and those who had the AER for the first round generated different explanations for their failures and successes. These explanations included a significant increase in internal explanations (owning behavior) than the first time. The authors of this study suggest that AERs improved performance by directing the people to analyze their performance in terms of internal as opposed to external causes (Ellis 2006, 673-677).

Teachers can utilize this strategy after a controlled failure experience by having a discussion individually with each student about their performance. When the student is guided in the right way, they will internalize their failures as features that they are in control of and then they can change their approach. When the teacher uses the controlled failure experience where the student writes a philosophy paper to unlearn their argumentative essay strategy, the teacher could include an AER that would focus on the positive and negative aspects of the student's performance. Students could then use specific examples from their paper and their teachers feedback to examine what they did well and where they went wrong. This should allow the student to turn more of their failures internal and better learning should result.

### **Controlled Failure with Guided Reflection in General**

Teachers design many learning activities for their students and as discussed previously, controlled failure is a powerful learning activity design. Additional learning activities that

teachers might choose to use will also often lead to failure for students. Students who fail in these instances will often invoke the SSAB which will hinder their learning.

As mentioned previously, AERs are a type of guided reflection. The study by Ellis, Mendel, and Nir focused specifically on the AER, but another possible way to decrease the SSAB is to design learning activities with guided reflection components, simpliciter. When a student studies and takes an exam and then does not receive the grade they were expecting, they will likely blame external causes. If the teacher included a guided reflection following the exam, the questions might cause the student to recognize the features about themselves that they could change and then they might try and implement different strategies for the next exam. Guided reflection must be sufficiently targeted, so they understand that they are supposed to learn something about themselves from this failure to bypass the SSAB.

Guided reflection is a great opportunity for teachers to help students not only learn from their failure, but also to learn about the SSAB and how to avoid it in the future. The guided reflection could specifically target thinking about how the SSAB could prevent or decrease learning. If the guided reflection is specifically targeted, the students should come to realize the SSAB in themselves. By recognizing their tendency, they can change their patterns of thinking in exchange for a better approach to learning.

## **Conclusion**

There is a rich intersection between the scholarship in teaching and learning and the scholarship in folk psychology. For example, Shannon Spaulding (2018) says that teachers should focus on in-grouping themselves because students learn better from teachers who they perceive to be similar to them in relevant ways. This is because we interpret in-group members more charitably than those in the out-group. This idea appears to be at odds with controlled

failure because it forces the teacher into the out-group because failing a student doesn't appear to be an in-grouping behavior. This tradeoff might sacrifice the in-grouping that the students might feel with their teacher had they not participated in this particular learning experience. This apparent conflict requires more attention from the scholarship of teaching and learning and folk psychological literature in order to further investigate what is the best teaching practice.

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