# Metacognition: Transforming Learning Experience

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## ABSTRACT

*A simplistic definition of metacognition is "thinking about thinking." It involves taking time to analyze and delve into the various ways the mind receives and retains information. It is not a new concept but metacognition is evolving as a new word for successful learners. It is stimulating much conversation and excitement in academia as educators strive to enhance learning skills. This paper dissects the concept of metacognition and argues that it could be the new "best" thing in the field of thinking and learning. It discusses the Miles College experience in using metacognition principles to enhance student learning.*

## EVOLUTION OF METACOGNITION

The concept of metacognition has been around since humans have been able to reflect on their cognitive experience. Cognition or cognitive experiences are mental processes that involve attention, memory, manufacturing and understanding language, learning, reasoning, problem solving, and decision making. The famous ancient Greek philosopher, Plato, is credited for coining the concept of "thinking about your own thinking" in 400 BC. In 1690 John H. Locke, the English philosopher, mentioned the concept of children reflecting on their own thinking process, which is the basis of metacognition. However, the word "metacognition" was made popular by American psychologist John H. Flavell in the 1970's. Metacognition is thinking about thinking, knowing about knowing, or cognition about cognition. Metacognition is to know when, why and how to solve problems; it is a higher-order of thinking that enables understanding. Metacognition is consciousness of one's own learning or rational process; it is having an appreciation for the knowledge that you already have, knowing how and making room for the knowledge you do not have. This evolving concept is like an internal guide that notices when one's comprehension fails or succeeds and why. The concept may seem intimidating initially but we engage in metacognitive activities daily.

Metacognition is very critical in successful learning; as educators it is beneficial to our students to teach them this concept so they know how to allocate their cognitive resources through metacognitive control. Their learning will improve as they take control of their metacognitive capabilities

## MILES COLLEGE'S METACOGNITION EXPERIENCE

The Miles College Metacognition Lab has one singular, simple mission: To teach students very specific, tailored metacognitive strategies that will increase academic success and retention. Around Miles College, the term metacognition is now commonplace and well understood. However, when the Metacognition Lab was initially created two years ago, there was a healthy amount of skepticism and confusion over what metacognition is and how it was supposed to help students succeed.

In the summer of 2011, Administration was inspired to bring metacognition to Miles College after they heard

a speaker at the SACSCOC 2011 Summer Institute on "Metacognition: The Key to Student Learning". It is a testament to the Miles College's vision for and commitment to student learning that one of the leading scholars of metacognition was a lecturer at the Miles College Faculty Conference at the beginning of spring 2013. Miles College is at the forefront of the nation's metacognition movement. Miles College is one of the few Colleges and Universities in the United States to have a campus-wide center dedicated to student metacognition.

As the Metacognition Lab was birthed, the most common questions we heard from students and faculty alike were: "What are metacognitive strategies?" and "Why is metacognition essential?"

The Lab took every opportunity to spread the word that our purpose was to teach students activities that would help them become aware of and monitor their learning in order to enable them to better manage their cognitive skills and to determine weaknesses that can be corrected by constructing new cognitive skills.

Thanks to the support of the entire Miles College Administration, the Metacognition Lab was very successful in spreading awareness about our lab and our mission. As noted previously, the guest speaker lectured and gave workshops to train the entire Miles College faculty and staff on the importance of recognizing and utilizing metacognition as a key to unlocking student success. After the conference, we had faculty that had once been critical of the Lab's mission sharing with us that the guest speaker's talks and workshops had energized and encouraged them more than any conference they had ever attended.

So how exactly has the Metacognition Lab helped students? Well, allow us to let our students tell you. When asked how learning about metacognition helped them, this is a sampling of some of the responses we got from our participants:

1. "Slow down on my work"
2. "To concentrate and ask for help if you need it"
3. "Relaxing helps the lessons go easier"
4. "I learned how to use the Cornell Note-Taking Method"
5. "Read the directions before getting started"
6. "How to solve equations and why I got the answer"
7. "Helped me to be more CONFIDENT!!!"
8. "It is a relaxed atmosphere-which makes learning more comfortable"

Since its inception, the Metacognition Lab has seen tremendous student success. In the 2011-2012 academic year, students who participated in the Lab had on average more than a 12% increase in their semester GPA. For students who started with less than a 2.0 GPA, the average increase in their semester GPA was over 40%.

That first year, the Lab started with a staff of two work-study Honor students and one full time coordinator as Academic Coaches. Over the 2011-2012 academic year we worked with 28 students, many of whom were students with very low grade point average and student athletes threatened with ineligibility. We also had two student athletes who were ineligible to participate in athletics (as well as receive any scholarship money) become eligible again for the fall. We even had two students earn a 4.0 GPA for the summer term.

This academic year, 2012/2013, the Metacognition Lab was expanded to include nine handpicked Academic Success Coaches. The Lab now has a staff which includes seven Honor students who are part-time employees, one Honor student volunteer and one full time coordinator. This semester, the Metacognition Lab worked one-on-one with over 240 students. That amounts to about 85% increase in student participation in just one academic school year!

Impressively, despite the amazing increase in students participating, we have seen very similar increases in students' semester GPA's to our first year. In the 2012-2013 academic year, students who participated in the Lab had on average more than an 8% increase in their semester GPA's. For students who started with less than a 2.0 GPA, the average increase in their semester GPA's was over 55%. Additionally, when looking at students new to Miles with no prior GPA who worked with the Lab, we saw that over 68% of them ended the semester with over a 2.0 GPA while 21% of them ended the semester with over a 3.0 GPA.

Under the Lab's strategic system of student contact, the Academic Success Coaches continually monitor and assess the students as well as teach the students to continually monitor and assess themselves. We aim to keep each student's experience with the Lab individualized and flexible. Depending on what a student's needs are, we offer a range of personalized lessons such as understanding strategies to use in order to comprehend college textbooks, understanding the importance of inner dialogue in assisting or impeding self-motivation, and evaluating and understanding learning styles. We complement these metacognitive strategies by then demonstrating how to use these new ideas on the assignments that the student is working on in their classes. Each Academic Coach has one main goal: To convince the students that the power lies in their hands and that they can take control of their minds and their education.

To illustrate with one example of how the Metacognition Lab has changed student lives, with his permission we would like to introduce Miles College student Alfred (name changed for privacy.) Alfred came to us after midterms this spring semester. Alfred unfortunately had a very tumultuous beginning of the semester and came to us with subpar midterm grades. He managed to upset all of his professors and give off the impression that he did not care about his grades. At the time he came to us, Alfred had not bought any of his textbooks and was not really doing any school work outside of class.

The Metacognition Lab Coaches worked together to provide a welcoming, encouraging, and most importantly, consistent environment where Alfred could come and be treated as a scholar. We taught Alfred how to order his textbooks on the website Half.com and how to order older editions that he could afford. Alfred was given workshops on strategies to help him not only read his textbooks, but understand and retain the information by previewing material and asking critical questions about the text in order to stay engaged in the material.

When we first met Alfred, his professors complained that he was frequently missing class and even when he did show up, and he would be conspicuously late. As Alfred began working with the Lab, the Coaches stressed to him the importance of going to class not only on time and every time, but coming to class prepared to participate by reading the material ahead of time and having questions on hand to ask his professor. His attendance improved, his relationships with his professors improved, and he would spend any time not actually in class in the lab.

At the end of the semester, Alfred's D in Biology Lab improved to an A, his F in Crime and Criminality had improved to a C, his D in Speech improved to a B and his F in African American Experience improved to a B. Most astonishing, Alfred now felt like a true scholar in his college community, had built relationships with some of the top Honor students, and believed in his own academic abilities. He is now a model student and is one of the Metacognition Lab's most vociferous recruiters on campus.

As the Metacognition Lab continues to evolve and expand, the services always remain rooted in teaching the student strategies, techniques, and organizational skills that will allow the student to become an independent thinker who is a master learner. We hold true to the old adage: "Give a man a fish and he eats for a day, teach him to fish and he eats for a lifetime". The Metacognition Lab is thankful for the opportunity to empower the students of Miles College on their journey to become lifelong scholars.

## CONCLUSION

As the Miles College Metacognition Lab continues to evolve and expand, the services always remain rooted in teaching students strategies, techniques and organizational skills that will allow them to become an independent thinker who is a master of learning. The Metacognition Lab has been beneficial to both the students who completed High School prepared or unprepared for College work. One objective is to statistically close the gap between the Honor students and non-Honor students. Educators can experience greater rewards from unprepared students by establishing higher expectations for them; emphasizing consistent contact, helping students in determining their individual learning style, and by helping students define their own academic success. By meeting students where they are, helping to clarify their academic responsibility and establishing a learning community of scholars, students will embrace their metacognitive skills and increase their academic reward.

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