Teaching Tips

A Forum for discussion and tips for advancing teaching and learning at Mona

Centre for Excellence in Teaching and Learning

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Special points of Interest:

- The **Teaching Tips Newsletter** is a publication of the Centre for Excellence in Teaching and Learning (CETL) at the UWI, Mona.
- The newsletter is published three times during each semester and once during the summer. It provides tips for improving teaching and learning in higher education and is available online (http://myspot.mona.uwi.edu/cetl) as well as in the office of the CETL.
- If you need additional teaching tips on specific classroom practices, please contact us.

METACOGNITION:

Becoming better learners, rethinking learning styles

In recent years, learning styles have come under fire [see: Paschler, McDaniel, Rohrer and Bjork (2009); Steiner and Foote (2017); Willingham, (2008)]. There are those who claim they do not exist. Others have argued that we should think about them as learning preferences. The issue of whether there is a compelling argument for learning styles is certainly important for the learning sciences and for classroom teaching and learning.

A student having completed a learning style inventory came home and told his mother that he was a kinaesthetic learner and therefore, he recognised why he was performing poorly at French. Based on his understanding, learning French required great listening skills and he did not possess those skills to learn French well, he thought. The learning style inventory certainly emboldened him in his thinking that he was not an auditory learner and hence, he thought that he was between a rock and a hard place in his quest to learn French.

Unfortunately, too many teachers, parents and students use perceived learning styles to pigeon-hole learners. Luckily, the research on metacognition is available for us to use to help learners look at their learning and become better learners.

Metacognition

Metacognition involves thinking about one's own cognitive processes. It is thinking about one's thinking, learning, reasoning, problem solving processes and it is essential for effective learning in complex situations. Metacognitive students are aware of their own learning processes and adjust them based on experience and reflection.

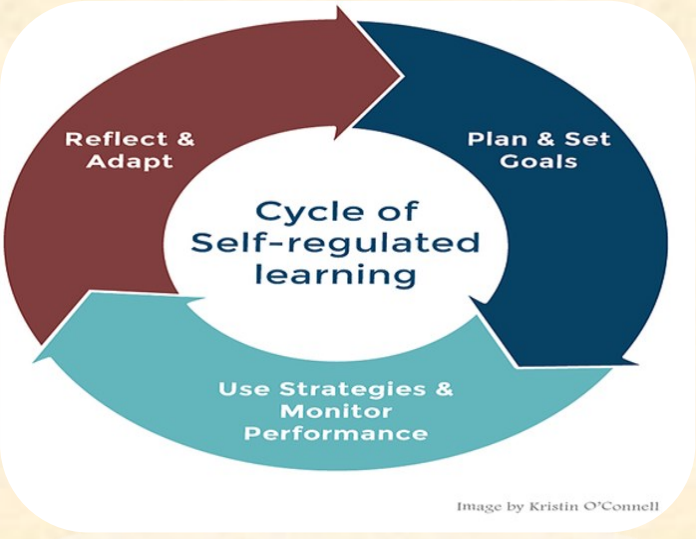
- It involves planning, monitoring and evaluation of strategies and therefore is task dependent and mutable;
- Metacognitive strategies are connected to motivation, specifically to value and expectancy;
- Metacognitive students are constantly adapting and adding to their strategy repertoire and they realize that they are not limited by a certain style.

In this era, we have been focusing in multiple ways on improving teaching and learning and much attention has been paid on finding out as much as we can on how students learn.

We must continue to help our students focus their thinking on realising their utmost potential as learners. This is realisable for some if they can de-emphasize their focus on a learning style to recognising the possibilities of embracing metacognition. Metacognition has been well researched and has been shown to improve learning. The same is not true for learning styles. It has come under fire in recent years and it has been convincingly shown to rest on very weak research.

Reframing the focus on learning styles to a focus on metacognition

It is possible to reframe our thinking/students thinking about learning styles. This is possible if students are taught to understand that their learning preference is simply that, they can learn in multiple ways. They can also be taught to become self-regulated learners.



Metacognition should include planning for learning (time management, strategy choice), monitoring for learning (deciding whether the information has been truly learned, and whether learning strategies are working), and evaluating one's own learning (deciding whether goals were met and how strategies might be changed). In this regard, students should be taught to continually reflect on their learning, but this is one strategy in a tool box of strategies that metacognitive learners

METACOGNTION:

Becoming better learners, rethinking learning styles Cont'd

make use of. Metacognitive exercises should be integrated, sustained and taught throughout the semester to get impressive results and of course, to help students become self-regulated learners.

Implications

- Helps students discover who they are as learners and how the learning process works;
- Creates opportunities for deeper and more integrative learning to occur;
- Enables students to leverage their strengths to develop dynamic approaches for learning.

Metacognitive Activities for students

At the beginning of the semester:

- Ask students to reflect on the strategies they have used in the past to learn similar material. Were those strategies effective? How might they change those strategies for your class? Share the learning strategies that typically lead to success in your class and help students reflect on how they might use them.

Before class time:

- Ask students to spend 10 minutes previewing the assigned reading and to generate 2-3 questions they have about the reading. Direct them to think about these questions during the class. Then, after class, direct them to read the assigned reading, continuing to keep those questions in mind

During class time:

- Use think-pair-share reflections in which students reflect on their own learning individually before sharing in smaller, and then larger groups.

- Assign minute papers, where students reflect on a prompt in a stream-of consciousness fashion. These are especially good to use at the beginning of class as a "check" for class preparation or to prompt discussion. They can also be used at the end of class to help students reflect on topics that might require more review.

- As you are teaching content, frequently ask students "How are you trying to learn this? What will you do to make sure you remember this? Most of them have never considered learning as a process, or their role in it.

Before projects are due:

Encourage students to create "a plan of attack" for the project that divides the major tasks into smaller tasks that can be distributed over an extended period.

Have students submit a weekly status report on the project that discusses activities completed since the last report, their plan for the next week and any problems they have encountered. This will help them get used to monitoring and planning their work.

Before a test:

Have them create a practice test and answer the questions as a homework assignment. Use some of the most well-crafted questions on the actual test.

Use guided reading questions as a homework assignment to supplement textbook reading (see http://www/improvewithmetacognition.com/developing metacognition draeger/ and http://wwwcurriculum.org/secretariat/files/oct25Metacogntion.pdf for examples)

Have students place topics on a chart as you are reviewing for a test, with headings like "I understand this topic well," "I recognise this topic but need to review more," and "I have never heard of this before." (see http://www.improvemetacognition.com/student metacognition development melone for an example).

References

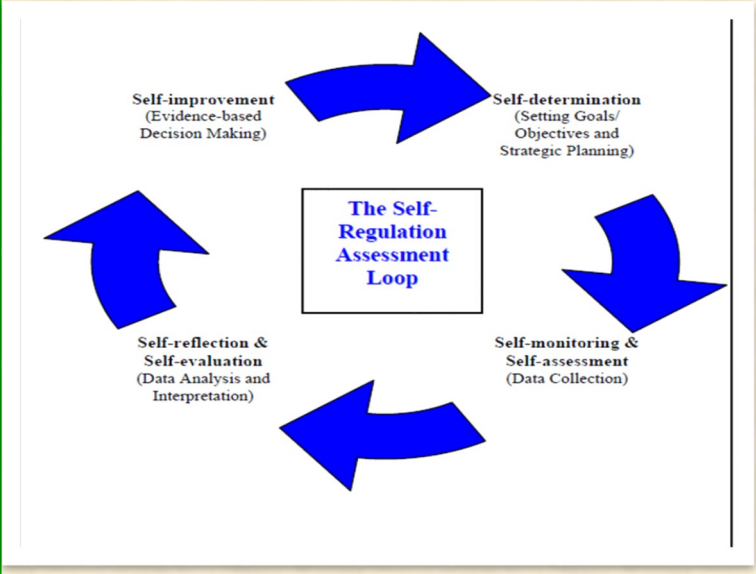
Paschler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2009). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, 9(3), 105-119.

Steiner, H. H., & Foote, S. M. (2017, October 28). Using metacognition to reframe our thinking about teaching and learning styles. Paper presented at the POD Conference, Montreal, Quebec, Canada.

Willingham, D. (2008, August 21) Learning styles don't exist [Video file}. Retrieved from https://www.youtube.com/watch?v=slv9rz2NTUk

Self-Regulated Learning

Zimmerman (2002) is an advocate for metacogntion especially in relation to self-regulated learning. He is an advocate for metacognitive teaching and reflective pedagogy using the self-regulated learning cycle. The cycle involves the following:



Reference

Zimmerman, B. (2002). Becoming a self-regulated-learner: An overview. *Theory Into Practice, 41 (2), 64-71.*