A Metacognition Carousel for Fun Faculty Development

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INTRODUCTION

This research investigates how student’s metacognitive awareness changes during the first semester of their higher education after taking a university gateway course (i.e., a first year seminar or a learning strategies course).

METHOD

- Students in gateway courses completed the MAI during the first week of their gateway course.
- Instructors were encouraged to review the MAI scores with their students in order to increase the likelihood that students received specific instruction on what metacognitive awareness is and how this awareness can benefit them through their education.
- Students took the MAI again during the last week of the gateway course.
- Results will be shared soon – look for some at NITOP 2016.

SoTL Project – Metacognition in FY Classes

- Investigating the use of the MAI during the first semester of college is limited (Minnaert & Janssen, 1999). This is first study investigating identifiable changes in student’s metacognitive awareness during their first semester of college.
- Study will specifically assess if/how purposeful, self-regulated learning activities lead to changes in MAI scores.

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Our Faculty Learning Community (FLC):
- Cross-disciplinary group of faculty and staff
- Focused on self-regulation and metacognitive teaching
- Met regularly to enhance teaching and learning related to curriculum of the community (Coa, 2004)
- Activities included: 1) common readings, 2) invited workshop facilitator, 3) "carousel" presentation of metacognitive teaching practices
- Outcome included: empirical SOTL project investigating first-year students and their changes in metacognitive awareness

Our Carousel
- Part of a university’s “Teaching Festival,” a weeklong collection of teaching and learning innovation presentations
- Presenters formed a large room-sized circle filled with presentation stations
- Each station exhibited a metacognitive instructional practice successfully used by an instructor – stations also included time for questions and dialogue about the instructional practice
- Attendees formed small groups and visited one presentation station (around 10 minutes) before rotating to the next.

Abstract
This poster presents a carousel of metacognitive learning activities exhibited by seven different faculty from seven unique disciplines within the same university. The carousel was a result of one faculty learning community that provided structure and guidance for university faculty and staff engaged in learning and researching self-regulation and metacognition. This faculty learning community benefited greatly from focusing on how deep, meaningful, and independent learning requires students to have a host of different attitudes toward learning as well as a myriad of cognitive skills with which they approach and engage in learning activities.

Metacognition Inventories
- Tools for students to self-assess and self-regulate their learning (Wilson, 2013)
- Two validated instruments available for this activity 1) 27 item Metacognitive Activities Inventory (MCAI) (Cooper and Sandi-Urena, 2009) and 2) 52 item Metacognitive Awareness Inventory (MAI) Schraw and Dennison (1994)
- Self-Testing of recall (McDaniel, Howard, & Einstein, 2009; Roediger and Karpicke, 2006)

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Knowledge Surveys
- Knowledge survey (KS) includes questions covering entire course content and students rate confidence in their understanding (Nuhfer, 1993, 1996; Nuhfer & Kniff, 2003)
- Can be an organizational tool (Bowers, Brandon, & Hill, 2005; Cluss & Geedey, 2010)
- KSs are pedagogically beneficial (Wirth & Perkins, 2005) and promote metacognition by causing students to reflect on their understanding (Cluss & Geedey, 2010)

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Research Strategies
- Information search process requires problem solving and procedural knowledge
- Instructors benefit viewing the associated metacognitive tasks students perform when conducting research
- Instructors then can develop better assignments to support the research process. (Brower, 2010)

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- Tool for students to document and organize their knowledge visibly (charts, diagrams, etc.:) (e.g., Bean, 2011; McGuire, 2008)
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- Can be coupled with metacognitive prompts to encourage student reflection about what, how, and why they are learning (Bellantna, 2007)

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Flipped Classrooms
- Provide a learning environment in which students and faculty participate together in classroom activities
- Explore a more active classroom made up of more prepared students
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Future Directions
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- Focus on relationships among integrative learning, transfer learning, and life experiences.
- Investigate distinctions among these instructional practices, educational level (e.g., undergraduate vs. graduate courses), subject areas, and educational culture.

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