Center on Innovations in Learning

Wise Ways®

Indicator: All staff conducting co-curricular programs fulfill the purposes of the programs including appropriate elements of student management of learning. (D4)

Explanation: Personal learning models emphasize a number of instructional strategies to enhance students' metacognitive competency and encourage management of their own learning. Effective metacognitive strategy instruction includes explicit teaching and modeling of strategies and explanations and demonstrations of their value for learning, as well as plenty of opportunities for guided practice. Staff within co-curricular programs can, with appropriate training and planning, teach and reinforce these strategies within their programs, thus providing an additional context for students to apply the strategies and develop their expertise with managing their own learning.

Questions: What are the benefits of building students' metacognitive competency and ability to manage their learning? How can co-curricular programming contribute to students' metacognitive competency and ability to manage their own learning? How can co-curricular program staff incorporate programming that benefits students' metacognitive competency and ability to manage their own learning?

What Are the Benefits of Building Students' Metacognitive Competency and Ability to Manage Their Learning?

Learner-centered, or personalized learning refers to "a teacher's relationships with students and their families and the use of multiple instructional modes to scaffold each student's learning and enhance the student's personal competencies" (Twyman & Redding, 2015, p. 3). The student is actively involved with the teacher in co-constructing their individualized learning pathway, and often through technology the location, time and pace of learning may vary from student to student (Redding, in press). Metacognitive competency, one of four personal competencies within recent personalized learning frameworks[1] becomes critical for student success, particularly within personalized learning pedagogies, as students are responsible to some degree for managing their own learning. Metacognition refers to how students learn, and self-regulate learning and use of learning strategies (Redding, in press). Research has provided extensive support for explicitly teaching self-regulated learning strategies to students, and meta-analyses have shown consistently positive effects on student performance generally, and in specific domains such as reading, writing, and mathematics (e.g., Hattie, Biggs & Purdie, 1996; Dignath & Büttner, 2008). In a recent comprehensive meta-analysis including 58 studies addressing 95 strategy instruction interventions, researchers found that:

> Strategy instruction that included the combination of 'general metacognitive knowledge', the metacognitive strategy 'planning and prediction' and the motivational strategy 'task value' enhanced student performance the most effectively. Therefore, teaching students skills such as determining when, why and how to use learning strategies, how to plan a learning task and establish goals for learning, and explaining the relevance and importance of a task (so that they see the importance of what they are doing) are important aspects of self-regulated learning

[1] Other personal competencies are Cognitive, Motivational, and Social/Emotional. For a complete description of a personalized learning framework see Redding, in press: http://www.centeril.org/2016handbook/resources/Redding_chapter_web.pdf)

interventions. Especially the inclusion of task value in the strategy instruction had a large effect on student performance. (deBoer, Donker-Bergstra, & Kostons, 2013, p. 59-60)

The researchers also found evidence that these strategy instructional interventions had a sustained and long-term positive effect on student performance. Metacognitive strategy instruction is particularly imperative given many states' and districts' adoption of Common Core Standards, which require students to be able to use metacognitive learning strategies extensively in order to engage in higher-order processes such as researching and synthesizing information, and critically reading and evaluating texts (Conley, 2014).

How Can Co-Curricular Programming Contribute to Students' Metacognitive Competency and Ability To Manage Their Own Learning?

Student participation in co-curricular programming, which has been referred to as "extra-classroom energy in action" (Lawson & Lawson, 2013) has consistently been linked to positive developmental benefits, including higher grades, motivation, and school completion (Feldman & Matjasko, 2005; Bohnert, Fredericks, & Randall, 2010); as well as self-esteem (Kort-Butler & Hagewen, 2011) and civic involvement in terms of voting and volunteering beyond high school (Hart & Donnelly, 2007). These programs are likely effective because they appeal to student interests, encourage interaction with peers, build student-adult relationships, provide structure and challenge, and serve to connect students to the school (Holloway, 2002). Co-curricular programs may also provide contexts to encourage deeper learning, as they may offer additional time for reinforcement and extension of academic topics. For example, Citizen Schools, a national after school program for middle schools students offering hands-on learning opportunities such as academic enrichment and career/college exposure, has demonstrated consistent positive benefits to student engagement (e.g., attendance) and other academic outcomes such as high school graduation rates (Arcaira, Vile, & Reisner, 2010). Very little research has addressed these programs' impacts on metacognitive competency; however, one study showed a positive benefit for high school students' self-regulated learning (Hirsch, Hedges, Stawicki, & Mekinda, 2011).

How Can Co-Curricular Program Staff Incorporate Programming that Benefits Students' Metacognitive Competency and Ability to Manage Their Own Learning?

Twyman and Redding (2015) and others (e.g., Wolfe & Davis Poon, 2015) advocate teachers intentionally building metacognitive competencies into their teaching and lesson planning; for example, documenting explicitly how a lesson plan component promotes students' self-regulatory abilities, goal setting, and tracking of mastery. However, metacognitive instruction is not commonly observed and teachers often have limited knowledge about metacognition and how it can be enhanced (Wilson & Conyers, 2014). Professional development that provides teachers with this knowledge and how they can teach and reinforce metacognition and students' ability to manage their own learning has been incorporated successfully within several recent studies (e.g., Seraphin, Philippoff, Kaupp, & Vallin, 2012; Dempsey, Beesley, Fazendeiro Clark, & Tweed, in press; Zubrzycki, 2015). Co-curricular staff, including for example, after-school educators and others working within youth-serving organizations, can also benefit from training to incorporate metacognitive strategies into their programming for students. Some recent initiatives involve partnerships between school systems and community educators to develop common plans to address student learning, including metacognitive-related strategies. For example:

In Seattle, the school system is scaling an approach that came out of research from the youth development field. The pilot involved collaboration between certified teachers, community educators, and youth-serving organizations to develop students' creativity through arts education across schools from K-12. Through a review of the research, Seattle is focusing on six 21stcentury competencies, including creative thinking, critical thinking, communication, collaboration, perseverance, and growth mindset. The pilot provided joint professional learning for teachers and community educators, and baseline and cornerstone assessments (both formative and summative) with related observation tools. This approach has now been embedded in the district strategic plan to take it to scale, with a focus on what changes will be necessary to implement in other subject areas outside the arts and with new community partners. (Stewart, 2015)

Having teachers and co-curricular staff participate in professional development addressing how to enhance students' metacognition and ability to manage their own

learning, and engage in collaborative planning on how to incorporate these components into their programs can provide students with opportunities to apply the strategies across multiple contexts, which may in turn enhance their capacity as self-regulated learners. Teachers and co-curricular staff should provide explicit documentation of how metacognitive competency is addressed. For example, co-curricular programs can provide documents that describe the program's purpose and the features that promote students' metacognitive competency, and list "stretch" goals requiring student use of metacognitive strategies to help them engage in creative/critical thinking and problem-solving (Redding, in press).

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