



## A Message from the Editorial Team

In the ever-growing and changing field of education, it can be challenging to navigate the great volume of research available to teachers. *Research in a Nutshell* seeks to support teacher candidates in the development of their teaching practice by connecting them to valuable and relevant research. In this publication, you will find the summarized findings of research articles directly related to topics in education as well as citations to the full articles should you wish to read them in their entirety. Our hope is that *Research in a Nutshell* will be a helpful road map as you build critical perspectives as educators.

In this issue of *RiaN*, we investigate topics in students from military families, problem solving in math, encouraging creativity, and art assessment

Sincerely, Clarissa de Leon and Andrew Coombs (RiaN@queensu.ca)

### Does a difficult pre-task decrease creativity in elementary students?

Judy Wearing, PhD Student

#### Why is this important?

- Creativity is known to be strongly affected by mood and intrinsic motivation.
- This article provides evidence of just how sensitive elementary students are to the timing, difficulty, and mood-impact of classroom activities.

#### What did the article uncover?

- Students given a three-minute difficult task prior to being asked to write “anything they could think of” about the numeral 50 were less creative, made more mathematical errors, and produced lower quality work than students given a less difficult three-minute task.

#### Why does this matter?

- Teachers wishing to encourage students’ creativity may consider the timing and ordering of learning activities, provide relaxation breaks following difficult tasks, and pay attention to positive mood enhancements.

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Price, D. A. & Yates, G. C.R. (2015). Impact of a brief ego depletion procedure on creative behaviour in the upper primary classroom. *Educational Psychology*, 35(3), 328-340.

### What should be the focus of art education and assessment in K-12 classrooms?

Tiina Kukkonen, PhD Student

#### Why is this important?

- Teachers are faced with many challenges when it comes to art education: what art forms are most important? Is it possible to assess self-expression and creativity?

#### What did the article uncover?

- Schönau suggests that focusing on a lot of short-term projects and technical skills is not enough to engage students in meaningful art-making.
- Students need opportunities and *time* to develop their own ideas and art projects—with teacher guidance—and learn to set personal goals.
- Assessment then becomes more self-directed as students reflect on what they want to learn/convey, how they can achieve these goals through artistic means, and how they can improve for next time.

#### Why does this matter?

- Self-directed assessment in art education not only helps make art meaningful on an individual basis but also fosters a growth mindset.

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Schönau, D. W. (2012). Towards developmental self-assessment in visual arts: Supporting new ways of artistic learning in school. *International Journal of Education through Art*, 8(1), 49-58.

## How Can We Support Students of Military Families?

Simone Larose, BA (Hons) Student

### Why is this important?

- Students of military families are a vulnerable subsection of the student population due to a variety of move-related stressors that can hinder their social-emotional and academic development.
- Move-related stress can lead to a wide range of effects on a student's adjustment to a new school environment, further exacerbated by the stress of having one or more parents deployed overseas.

### What did the article uncover?

- Changing schools causes stress of integration-where students are primarily anxious about adjusting to a new context (i.e., making friends).
- The lack of federal oversight across provinces can affect the transfer of transcripts, credits, and student records resulting in critical gaps of knowledge for new schools and teachers. Filling these gaps in knowledge usually falls to students and their families resulting additional stress.

### Why does this matter?

- This article uncovers strategies teachers can employ to help aid the transition of students into new schools including how to: provide access to social workers; increase communication between schools and families and; most importantly, how to foster connections amongst students through extracurricular activities.

Bradshaw, C. P., Sudhinaraset, M., Mmari, K., & Blum, R. W. (2010). School transitions among military adolescents: A qualitative study of stress and coping. *School Psychology Review, 39*(1), 84-105.

## What does effective problem-solving instruction look like in mathematics?

Stephen MacGregor, MEd Student

### Why is this important?

- In the contexts of Canadian mathematics curricula, PS is an integral aspect of student learning.

### What did the article uncover?

- Instruction focusing on the role of mathematical structure in problems can be more beneficial to students' PS performance than instruction on general PS techniques (e.g., understand, plan, solve, and check).
- Instruction aimed at identifying and treating the mathematical structure of a problem can promote computational skills.
- Ideal instruction combines the learning of general PS techniques and problem-specific strategies focusing on mathematical structure.

### Why does this matter?

- In the short term, PS experiences can increase student achievement, support academic skill development, and promote positive views of the learning environment.
- In the long term, PS experiences prepare students to be effective lifelong learners by developing conceptual understandings, analytic ability, and logical reasoning skills.

Jitendra, A. K., Griffin, C. C., Haria, P., Leh, J., Adams, A., & Kaduvettoor, A. (2007). A comparison of single and multiple strategy instruction on third-grade students' mathematical problem solving. *Journal of Educational Psychology, 99*, 115–127.

Catch up on #RiaN4Teachers Volume 1, Issue 1, Fall 2016:

**Pedagogical Documentation: Is it Sustainable?**

**What is Assessment Literacy?**

**What Influences Student Success in Math?**

**How Equitable is Targeted Test Preparation?**

**What do Assessment Standards Tell Us?**

**How do you Foster Self-Regulation in a Grade 2/3 Classroom?**

