



A Message from the Editorial Team

This year, *Research in a Nutshell (RiaN)* is continuing its mission to connect you to the research and researchers behind the practices we use as educators. We hope you join us in welcoming four new faculty members to the Queen's Faculty of Education community: Dr. Michelle Searle, Dr. Ian A. Matheson, Dr. Claire Ahn, and Dr. Jordan Shurr. Our first issue of Volume 3 is a special spotlight feature on their research.

Sincerely, Clarissa de Leon, Stephen MacGregor, and Chris Suppa (RiaN@queensu.ca)

What can we learn about formative assessment with iPads?

Dr. Michelle Searle, Assistant Professor

Can an iPad initiative impact equity and inclusion?

Dr. Michelle Searle, Assistant Professor

Why is this important?

- Technology affects our lives and is interwoven in learning, but there is limited evidence about how iPads are used to promote learning.
- Formative assessment can be used to improve student attainment.
- Investigating how iPads are used for formative assessment, the benefits/challenges they offer, and the kinds of practices they enable or magnify illuminates teaching practice.

What does this research uncover?

- iPads facilitated diagnostic assessment (e.g., Quizalize; PingPong), increased and differentiated opportunities for feedback, and introduced software for tracking learning and growth.
- iPads supported learner involvement by facilitating an exchange of ideas.
- Attending to practicalities (e.g. available Apps, distractibility, and WiFi) can improve formative assessment with iPads.

Why does this matter?

- While there remain challenges in integrating iPads into teaching and learning, utilizing iPads can potentially increase the breadth and ease of formative assessment to optimize student growth.

Why is this important?

- Educational technology use has increased over previous decades but research about iPads and inclusion is limited.

What does this research uncover?

- After a school district implemented a one-to-one iPad initiative to provide more equitable access, specific positive benefits included: increased equity; curriculum access; perceptions of sameness; communication and collaboration; positive emotional affect; more access than with Special Equipment Amount equipment; and increased access to technology, including more access at home.
- Negative impacts were the potential difficulty for students who struggle with self-regulation and possibilities for iPads to be used in socially exclusionary ways.

Why does this matter?

- Equity, academic inclusion, and social inclusion were all impacted by the use of iPads in teaching and learning.

Searle, M. J., Elrofaie, A. Kirkpatrick, L. C., Sauder, A. E., & Brown, H. M. (2017). Investigating the use of a one-to-one technology programme on formative assessment practices in Grades 7 to 9 classroom learning environments. *Assessment Matters*, 11, 145-162.

Kirkpatrick, L. C., Brown, H. M., Searle, M. J., Sauder, A. E., & Smiley, E. (2017). The impact of a school board's one-to-one iPad initiative on equity and inclusion. *Exceptionality Education International*, 27(2), 26-53.

What is the nature of the reading comprehension gap?

Dr. Ian A. Matheson, Assistant Professor

Why is this important?

- Increasingly, students read texts that contain an integration of words and images across subjects and outside of the classroom.
- How students read to understand “graphic texts” has not been examined in the same way that texts comprised exclusively of words has.

What does this research uncover?

- Students seem to struggle most with comprehension when reading graphic texts.
- Students with severe challenges in reading comprehension are furthest behind their typically-achieving peers with graphic texts.
- The significant gap between these groups may have more to do with engagement and motivation than reading strategy use.

Why does this matter?

- Students do not read all texts the same way.
- A greater focus on teaching students how to read texts that integrate words and images is warranted both for success in schooling and communication in everyday life.

Matheson, I. A. (2018). *Unpacking the reading comprehension gap: A consideration and examination of text type and strategy use*. Manuscript submitted for publication.

How can we help teachers and students align their understandings of exceptionalities?

Dr. Ian A. Matheson, Assistant Professor

Why is this important?

- Some exceptionalities (e.g., learning disabilities) do not present as learning-related challenges in a clear and obvious way.
- Less clear and obvious challenges are harder for teachers to provide support for.
- They are also harder for students with the challenges to understand.

What does this research uncover?

- The types of beliefs students with exceptionalities can form about their identifications that are considered maladaptive.
- A framework that recognizes the sectors of the identification process, and the factors (e.g., types of beliefs) that determine their alignment.

Why does this matter?

- Identified students and their teachers should have an accurate understanding of their exceptionality and how it affects learning.
- Using the presented framework, educators can work towards appropriate supports and clear communication regarding students’ exceptionalities.

Matheson, I. A., & Robinson, K. (2018). *Aligning elements of the identification process: Implications for hidden exceptionalities*. Manuscript submitted for publication.

Catch up on #RiaN4Teachers Volume 2:

Are children colour-blind? Implications for elementary school educators

What do teachers know about supporting transgender and gender-creative students?

How do elementary teachers use online learning environments to support their literacy practice?

Does self-regulation and engagement differ among classroom grouping, play, and transitions contexts?

How does a grade two teacher foster critical literacy within an inquiry-based setting?

How does language proficiency contribute to international students’ academic success?

What can teachers do to support children with severe difficulties in arithmetic?

What are school bus drivers’ perceptions of bullying?

How well do teacher education programs prepare you for inclusive teaching practice?

What shapes teachers’ approaches to assessment?

What events and experiences do graduate students describe as impacting their thriving and well-being?

What do elementary teachers working with exceptional learners need to thrive?

How can teachers’ classroom assessment practices promote the development of metacognition?

Which visual rhetorical modes in environmental documentaries most affect viewers' understanding of environmental issues?

Dr. Claire Ahn, Assistant Professor

How can "Picture Plus Discussion" make literature more accessible for young students with significant disabilities?

Dr. Jordan Shurr, Associate Professor

Why is this important?

- Environmental issues are a growing, global concern.
- Environmental documentaries are increasing in popularity, and the images play a powerful role in how viewers perceive the environment and the inherent issues.

What does this research uncover?

- A preliminary list of the categories of visual images (visual rhetorical modes) including apocalyptic and hopeful rhetoric.
- The most powerful rhetorical effect was observed when viewers drew personal connections (to any form of visual rhetoric), which raised their awareness about certain environmental issues.

Why does this matter?

- The nuanced play of visuals in documentaries can be tremendously persuasive. When students turn to documentaries to learn about environmental issues, it is important that they are informed about what visual rhetorical modes are and how these modes may impact and shape their understanding.

Why is this important?

- Access to age-appropriate literature is critical for social and academic connections, learning, and opportunities for students.
- Students with significant disabilities often have limited access to literature.

What does this research uncover?

- Young students with significant disabilities can gain meaningful access to texts through an intervention combining illustrative pictures and guided discussion (Picture Plus Discussion; PPD).
- The PPD intervention increased understanding, verbal communication, as well as student engagement in reading activities.
- The intervention can be successfully completed with a peer.

Why does this matter?

- The PPD intervention is easy to use, can be applied to any text, and does not require excessive teacher time to prepare or conduct.

Ahn, C. (2018). *Visual rhetoric in environmental documentaries: Making the personal connection*. Manuscript submitted for publication.

Shurr, J. & Kromer, G. (2017). Picture plus discussion with partners: Peer centered literacy supports for students with significant disabilities. *International Journal of Developmental Disabilities*. Advance online publication. doi: 10.1080/20473869.2017.1312060.

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