



Mathematics Council NEWSLETTER

The Alberta Teachers' Association

Volume 32

Number 3

May 2014

President's Message

By the time you read this, everyone will be back from either spring break or Easter break. I didn't have either of those, but I did make time for a break to attend both the NCSM (National Council of Supervisors of Mathematics) and the NCTM (National Council of Teachers of Mathematics) annual meetings, in New Orleans on April 7 to 12. If anyone has the opportunity to attend either of these meetings, I strongly recommend one or both.

The biggest theme of both these meetings is the United States Common Core Standards. However, built into those standards are process skills that follow ours. NCSM and NCTM have also been much more explicit in emphasizing some of the affective skills, like perseverance and confidence. There is also a big emphasis on rigour in the mathematics. I think we can take a page out of their standards and re-emphasize this in our mathematics.

On the other side of the coin, there were also a lot of sessions on assessment for learning and on authentic tasks. I think we have been working on these skills in our curriculum and teaching over the course of our current curriculum.

I hope to see you all at the symposium in Calgary, in May, and at the annual conference, in October. Remember—do math and you can do anything.

Marj Farris

Looking for the Next Art Jorgenson Award Recipient *(info for your student teachers)*

We are looking for applicants for the Art Jorgenson Award. Please encourage the student teachers you have had during the past year or currently to apply. More information and the application information can be found at www.mathteachers.ab.ca or on the insert in this newsletter. Also mention the conference to them and let them know that there is a student rate!

From the Editor's Laptop

This spring seems to have provided so much inspiration—this newsletter is full of all sorts of interesting tidbits. From our president, we have information on our sister organizations in the United States; from Alberta Education, an update that will be very useful in discussions with parents who are supporting the “back-to-the-basics” movement; and, again, requests for you to submit names of wonderful professionals in our field, including those just beginning (see Math Educator and Art Jorgenson awards).

And take a look at our new column, “C³,” the three Cs being “Current Commentaries by Council.” At our executive meetings we often have interesting discussions on current issues in mathematics, but often do not have the opportunity to share our thoughts with the broader community. Because an important part of growing as a teacher is to stay up to date with current issues in our fields, we hope that this column will be a quick way to help with this. We hope you all enjoy it.

Have a great spring and summer!

Karen Bouwman

Nominate a Fellow Math Educator

Do you know a superb math teacher who is reaching students? Or a math leader who is helping teachers and students to improve understanding?

Why not nominate this person for Math Educator of the Year? Categories include elementary, secondary and those who have contributed toward professional development.

Go to www.mathteachers.ab.ca, click on Grants/Awards on the left-hand side of the page, then scroll down to Alberta Mathematics Educator Award and click on the link to the nomination form to submit your nomination today.

MCATA Fall Conference: A Bridge to the Future

October 17–18, 2014

Coast Plaza, Calgary, Alberta

The annual MCATA conference will be held in Calgary on October 17–18, 2014. The theme for this year's conference is "A Bridge to the Future." Come get ideas on education in the 21st century and listen to a variety of speakers present ideas on the future of mathematics and mathematics education.

This year's conference presents two keynote speakers. On Friday morning, Dieter Breithecker, from Germany, will give an address on "Bodies in Motion—Brains in Motion." He will share his research and ideas on how we can increase student engagement and promote academic progress by incorporating movement in our classes. On Saturday morning, Florence Glanfield, from the University of Alberta, will present a keynote address on "Mathematics: Bridging Past, Present, Future." She will inspire you to think about what the future holds and what mathematics might be needed in the future.

Go to the MCATA website at www.mathteachers.ab.ca for more information about the conference, or to register.

The conference committee is accepting speaker proposals. Please consider being a speaker at this year's conference.

Friday Keynote: "Bodies in Motion— Brains in Motion"

Moving Education in 21st-Century Learning.

Presented by Dieter Breithecker

Hear from Europe's foremost expert on posture, motion and ergonomics as they relate to social, behaviour and learning patterns and how adequate movement promotes both physical development and academic progress.

This keynote address is about student achievement and development. Schools are no longer educational establishments where teachers lecture and pupils sit still and listen in silence. Instead, schools are increasingly turning into institutions that "move people" and that adhere to principles of holistic learning. This conceptualization envisions school as a learning and living space. In such a space, spontaneous physical activity is incorporated into everyday school life to promote the health, well-being, and educational development of students and to enhance the overall quality of time spent in school. Consistent activity overall plays a major role in maintaining body weight, caloric intake, overall health and better brain function. It also supports students with ADHD problems.

Breithecker's address will provide valuable insight and a fresh perspective for teachers; he uses group participation to demonstrate his ideas. You will find his presentation both educational and entertaining—you'll be pleased that you attended and leave energized and enthused about how you can use movement to engage students and keep their brains in motion.

Saturday Keynote: "Mathematics: Bridging Past, Present, Future"

Presented by Florence Glanfield

In what ways has mathematics served as a bridge between past and present and how might it serve as a bridge from the present to the future?

In offering an answer to this question, we will explore together questions such as Why do we teach the mathematics that we do? Who gets to decide what mathematics we teach? Who gets to decide how we teach what we teach? And what does the future hold? What mathematics might be needed in the future? What kinds of lens might we use to think about the future of mathematics and mathematics education? What role might mathematics play in the development of the lens? Together we will think about the future of mathematics and mathematics education.

For speaker information, please visit our website, www.mathteachers.ab.ca.

MCATA Table Officer Election Results

On March 15, 2014 three people let their names stand for the positions of MCATA president; vice-president, publications; and secretary. Because these executive members have been acclaimed, there will be no elections for these three positions at the annual general meeting at our annual conference, Mathematics: A Bridge to the Future, to take place October 17–18, 2014, at the Coast Plaza Hotel & Conference Centre, Calgary.

John Scammell is our new president; Tancy Lazar is the vice-president, publications; and Donna Chanasyk is our secretary. Congratulations to all of you, and thank you for volunteering to further the mission of MCATA to provide leadership to encourage the continuing enhancement of teaching, learning and understanding. I would also like to thank Marj Farris, our outgoing president, for her hard work and dedication to our council. MCATA remains a viable council because of her tireless efforts and leadership. I would also like to thank Lisa Everitt for all her work during this election process.

*Daryl M J Chichak
Returning Officer*

C³—Current Commentaries by Council

The following was written by David Martin and posted on his blog on April 14, 2014. Minor changes have been made in accordance with ATA style. David's blog, including sample lesson plans and many other interesting math ideas, can be found at <http://realteachingmeansrealllearning.blogspot.ca>.

Curriculum Redesign in Alberta

Before you read on, I ask that you stop and think for a couple of minutes about what should school look like.

Why Do We Need to Change?

My reason comes from “Why do I teach?” I teach because I believe in a classroom that is structured differently for each student in the class. My perfect class would focus on meeting the needs of the students, not the system. Students in my class should be thinking critically, learning not only what to learn but also how to learn. Innovation and creativity would be at the core of all my lessons, because the focus would be creating opportunities for my students for the future and for the world outside the walls of my classroom. Students could work at different paces and implement various learning strategies to achieve the goals of my class. I believe in a classroom that allows me to dig deeply into various interests of students without worrying about losing time. Personalized learning would be allowed to flourish in my classroom because the passion and interests of my students would be just as important as pencils and paper.

I don't believe that any teacher or any educational stakeholder, in Alberta, is 100 per cent content with the current education system. If this is true, isn't it about time we change?

Our education system needs to prepare students to be successful in a future world that will be defined by global interaction, competition, engagement and networks. It needs to ensure that Alberta's young people will have the knowledge, skills and attitudes to be prepared for jobs that do not exist yet and in industries that are emerging or evolving.

How Will Curriculum Change?

Inspiring Education involved parents, teachers, students, business and many other educational stakeholders and listened to them about what should change in education. The comments called for more student-centred, personalized, authentic learning experiences that will result in youth becoming engaged thinkers and ethical citizens with an entrepreneurial spirit. The vision was for an education system that is significantly different from that of yesterday and today.

The Alberta government listened and is creating a curriculum with a different focus. We need to invest in our students and empower them to bring out their potential. We are emphasizing the development of key competencies in our students, cultivating engaged

thinkers, ethical citizens and entrepreneurial spirits. We're recognizing that not all students learn the same way, and that textbooks and classrooms are just one way for them to experience education.

Last, What Will Change?

All classes will focus on core competencies, which will be integrated into the curricular outcomes:

- Know how to learn
- Think critically
- Identify and solve complex problems
- Manage information
- Innovate
- Create opportunities
- Apply multiple literacies
- Demonstrate good communication skills and the ability to work cooperatively with others
- Demonstrate global and cultural understanding
- Identify and apply career and life skills

This change will allow any classroom to become the teacher's dream classroom.

Bibliography

<http://education.alberta.ca/department/ipr/inspiringeducation.aspx>

<http://education.alberta.ca/department/ipr/curriculum/about/why-change.aspx>

PEC Report

It has been brought to my attention that mental and emotional health is the number-one therapeutic category for ASEBP. Annual medication expenditure for depression exceeds \$4 million. One statistic that caught my attention is that 12.3 per cent of claimants with depression are under 25 years of age.

The Alberta Teachers' Association has a partnership with the Canadian Mental Health Association, and our Can We Talk? campaign is regularly advertised on Global television.

As teachers we need to discuss, connect and support a healthy school community. One of the most important pieces in building this community is through positive social environments for teachers and students. One in five students have a diagnosed mental disorder, and five of five are affected by someone with a mental disorder. As teachers we can help by developing knowledge and awareness. Learn about the signs of different mental problems and disorders. Speak up for mental health and help end the stigma. External resources are available through Alberta Health Services. We can ensure a welcoming environment for all our students and help them get the help they need.

Summer holidays are around the corner. I hope you all get a much-deserved break for your very busy lives.

Carol Henderson
Provincial Executive Council Liaison

Alberta Education Message

There has been a lot of media attention surrounding mathematics education lately—both provincially and nationally. In Alberta, many of the concerns stem from some misconceptions about the mathematics curriculum, and this highlights the need for all of us to work together to clarify the expectations of the Alberta mathematics programs of study. Below are four questions that Alberta Education has been hearing and some of the messages that we can share with our parent communities.

Q. Does my child need to know number facts?

A. Yes. The math program expects students to understand and commit to memory addition and subtraction number facts to 18 by the end of Grade 3, and multiplication and division number facts to 9×9 by the end of Grade 5.

Q. Can my child learn traditional ways of adding, subtracting, multiplying and dividing?

A. Yes. It is important that your child understand why the method she or he is using works. Your child will be expected to understand and become proficient in at least one efficient and appropriate method. Learning is not one size fits all—students learn in different ways.

Q. Does my child need to use more than one strategy to solve a problem?

A. No. Your child will be expected to try out different strategies and learn at least one efficient strategy well. Once students understand the strategy, they can apply the strategy in future learning.

Q. Does my child use “discovery learning” in math class?

A. Every child learns differently, and a single approach to learning would allow only some students to succeed. The term *discovery learning* does not accurately describe the Alberta math program. Teachers still teach mathematics—students are not left to discover math by themselves.

These questions and others have been adapted from new support materials on Alberta Education’s math web page, <http://education.alberta.ca/math>. The website includes many more supports for teachers, students and parents. For more information or questions about the mathematics programs of study, please contact

- Amaya Ortigosa, team leader of Mathematics K–9, at 780-422-5079 or Amaya.Ortigosa@gov.ab.ca;
- Kris Reid, team leader of Mathematics 10–12, at 780-427-3588 or Kris.Reid@gov.ab.ca; or
- Diane Stobbe, French team leader of Mathematics K–12, at 780-427-7489 or Diane.Stobbe@gov.ab.ca.

For toll-free access in Alberta, first dial 310-0000.

Journal Editor

We invite applications for the position of journal editor of *delta-K*, the professional journal of the Mathematics Council of the Alberta Teachers’ Association. *delta-K* is a refereed professional journal for mathematics teachers in Alberta. This journal is published to promote the professional development of mathematics educators and to stimulate thinking, explore new ideas and offer various viewpoints. *delta-k* is published twice a year.

This position may be filled by one individual or by two coeditors.

The journal editor is responsible for

- overseeing the content and maintaining the integrity of scholarship,
- soliciting the submission of articles,
- working with authors by providing initial feedback to prepare the submission for review,
- assigning articles for review to educators identified by the MCATA executive,
- notifying authors of the referees’ decision and providing constructive comments and feedback for improvement,
- writing an editorial for each issue,
- reporting to the MCATA executive on the status of the journal and attending MCATA executive meetings throughout the year,
- submitting issue contents to publishing editor at the ATA prior to the deadlines, and
- promoting the journal through professional networks.

The journal editor’s qualifications should include

- experience in or knowledge of mathematics education,
- knowledge of research literature in mathematics education,
- excellent writing and communication skills,
- ability to adhere to deadlines, and
- leadership and management skills.

To apply, please submit a letter of interest and resumé to Tancy Lazar, vice-president publications, at trlazar@icloud.com or 80 Covepark Rise NE Calgary AB T3K 6G2, by July 31, 2014.

Copyright © 2014 by The Alberta Teachers’ Association (ATA), 11010 142 Street NW, Edmonton, Alberta T5N 2R1. Unless otherwise indicated in the text, reproduction of material in *Mathematics Council Newsletter* is authorized for classroom and professional development use, provided that each copy contain full acknowledgement of the source and that no charge be made beyond the cost of reprinting. Any other reproduction in whole or in part without prior written consent of the ATA is prohibited. *Mathematics Council Newsletter* is published several times yearly by the ATA for the Mathematics Council. Editorial and production services: Document Production staff, ATA. Address all correspondence to the editor, Karen Bouwman, 30 Sylvan Place SE, Airdrie T4B 1V1; e-mail viersen@ualberta.ca. Authors’ opinions are not necessarily those of MCATA or the ATA. ISSN 0823-1117

Individual copies of this newsletter are available at a cost of \$2 per copy plus 5 per cent shipping and handling and 5 per cent GST. Please contact Distribution at Barnett House to place your order. In Edmonton, dial 780-447-9432; toll free in Alberta, dial 1-800-232-7208, ext 432.

Personal information regarding any person named in this document is for the sole purpose of professional consultation between members of the ATA.