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Newsletter

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THE 49TH COLLEGE CHEMISTRY CANADA (C3) CONFERENCE, MAY 26-28, 2023 IS BEING PLANNED AS AN IN-PERSON CONFERENCE!

François Gauvin | Retired professor from the Université de Saint-Boniface

For the first time since 2019, the 49th C3 conference is schedule to be an in-person event and will be hosted at the Université de Saint-Boniface (USB) In Winnipeg, MB, on May 26-28. According to François Gauvin (recently retired but still active with the C3 community), "the permission and some institutional money have been confirmed by our vice-principal Academic & Research so it should be a go to organize the in-person conference that we missed in 2020".

As with the originally planned but cancelled (due to COVID 2019) 2020 conference, the theme for the conference is "**Nuts and Bolts Challenges in Chemistry Education, from Primary School to University Level**". The goal of the 2023 conference is to bring together the different groups involved in chemistry education (teachers, educators, professors, chemists, and other specialists) so that we may share our experience and knowledge and ultimately better support student success.

Teachers of science or chemistry concepts at primary and secondary levels will find support from the very dynamic C3 community. Teachers of chemistry at the college and university levels will be able to create bonds (no kidding!) with all participants and learn from other educators in the C3 community .

Stay tuned for more details!

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COLLEGE CHEMISTRY CANADA GENERAL STUDENT AWARDS –2022

Elizabeth Troflimenkoff

(e.trofimenkoff@uleth.ca) University of Lethbridge, Lethbridge, AB

Elizabeth is an MSc graduate student at the University of Lethbridge (U of L). According to John Eng (Chemistry Instructor at U of L and C3 treasurer), “Elizabeth is an outstanding graduate student and one of the best teaching assistants (TAs) I have enjoyed mentoring”.
Elizabeth has an impressive track record with her involvement with student and community volunteer organizations. Elizabeth is a member of the Canadians Working for Inclusivity in Chemical Sciences, Engineering and Technology (CWIC). The University of Lethbridge club name is ACID:BASE, which stands for Association of Chemists working for Inclusivity and Diversity: Building Advocacy, Solidarity and Education. Elizabeth is the media relations coordinator on the executive committee.

Elizabeth's community involvement is also outstanding as she is a regular volunteer instructor in American Sign Language (ASL) clinics. This endeavor is very personal for Elizabeth, the motivation was her partner's parents and much of the family are hearing impaired. She worked at becoming fluent in ASL and is self-taught. She applied this ability to sign to coach nonverbal athletes and taught other teammates some ASL so they could be inclusive of the nonverbal athletes.

Elizabeth started as a biochemistry major and switched to a focus on chemistry and education. The decision reinforced Elizabeth's aptitude for teaching. After a practicum course and teaching, she realized teaching in a grade school system was not enough. Elizabeth switched her career objective to academia and at a post-secondary institution. Elizabeth graduated with distinction in 2020, completing a BSc major in Chemistry with an honour's thesis entitled, "Validating the Steady State Approximation: The Establishment and Application of a Standardized Scaling Algorithm for Multidimensional Systems". Elizabeth immediately joined Marc Roussel's research group to pursue a Master's degree in Chemistry. Elizabeth is currently conducting research using "Mathematical Modeling to Understand the Role of eIF5B in Non-Canonical Translation Initiation and Gliomagenesis". As a graduate student, Elizabeth has demonstrated remarkable initiative and skill as a Teaching Assistant for a number of lab courses. Again in the words of John Eng, “Elizabeth's strong communication skills and her ability to find real world analogies to reinforce complex concepts that students often struggle to grasp was outstanding. She is conscientious, rigorous, and open-minded, all of the traits which will make her successful in the future.”

Alexandra McKinnon

(alexandramck4321@gmail.com) University of British Columbia, Vancouver, BC

Alexandra is a student in the Honors in Chemistry program at the University of British Columbia (UBC). In the words of José Rodríguez Núñez (Associate Professor of Teaching at UBC), “Alexandra has demonstrated to be an excellent student and an outstanding citizen in our Department”.

Academically, Alexandra has maintained a high average over the last four years (91.5% in 2021-2022 academic year) in the Chemistry program and has participated in research since her first year. But what especially sets Alexandra apart from other students, however, is her work with the Undergraduate Chemistry Society (UCS). Over the last three years, she has worked as the Athletics Coordinator (2019-2020), Treasurer (2020-2021) and President (2021-2022) for the UCS. She has organized, hosted, and participated in outreach, professional development, and recruitment events. For example, she initiated, organized, and hosted the Chemistry Second

COLLEGE CHEMISTRY CANADA GENERAL STUDENT AWARDS –2022 - continued

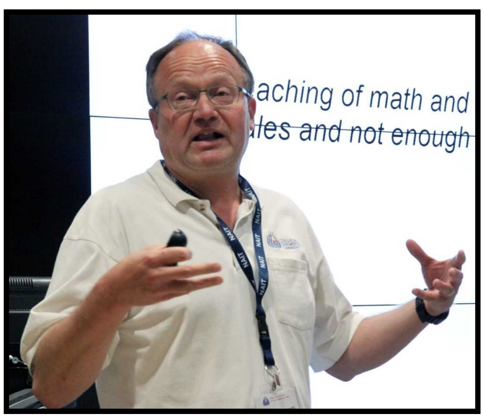
Year Social event. This gathering was created to welcome students who had just joined the UBC program to meet our faculty and their peers. She also organized Faculty Meet and Greet to bring faculty and students closer in a social setting. She has also organized the UBC Chemistry Undergraduate Research Conference and Chemistry Forum. In the former, students present their research to their peers and can use this opportunity as practice for their thesis defense or capstone poster presentations. The latter event gathers employers in the Lower Mainland who present about their companies to upper-year undergraduate students. These are invaluable professional development opportunities for UBC students that demand time and effort to be organized. Under Alexandra's leadership, the UCS has planned and executed these and other events successfully.

Professionally, Alexandra plans to pursue a PhD in spectroscopy upon finishing her undergraduate degree. Long term, she wants to work in academia as a professor.

SUBMITTED ARTICLES

TEACHING THE NATURE OF SCIENCE

Dietmar Kennepohl (dietmark@athabascau.ca), Athabasca University , AB



As a regular volunteer judge at the regional science fair in our city, I am constantly impressed that the younger competitors (Elementary level Grades 4-6) are more like real scientists than the older students. They get excited when they tell you about their research and discoveries. They are not afraid to creatively experiment with all sorts of things no matter how ridiculous it might seem to us. If it does not work, they are content to report it and go on to try something else. In contrast, the older students are more self-conscious about making mistakes. Their projects and presentations are carefully polished and they tend to look at your reaction in hopes that they have given you the 'right' answer. While their projects are more sophisticated, it seems the more senior students have adopted other attitudes in their scientific approach.

I am not telling you anything new when I say that views on the whole scientific enterprise is rife with misconceptions. Chemistry and chemists seem particularly hard-hit as you might realize if you have ever had to explain to non-chemists what you do. Negative impressions are certainly a part of this, but it is the lack of understanding of the nature of science (NOS) of both the public and my own students that concerns me. The area of NOS has become its own area of research and is now frequently used to inform curriculum development in many educational (K-12) jurisdictions around the globe. Figure 1 shows some of the elements commonly incorporated. It is not an exhaustive description of NOS, but touches on the more important aspects that are often meant to be integrated into science instruction. I say 'meant to be' because legislators, school administrators, and even science teachers do not necessarily have a strong grasp of NOS and also carry their own misconceptions.

It is in this context that I believe teaching chemistry at the post-secondary level needs to explicitly include the more foundational aspects to raise awareness of NOS and to increase the general level of scientific literacy. In the past, I have done this implicitly in my own teaching relying mostly on doing things by example and assuming it would be obvious for my students. I have since come to realize that being more direct gets better results. Learners really do need both examples and a frame to hang them on.

TEACHING THE NATURE OF SCIENCE - continued

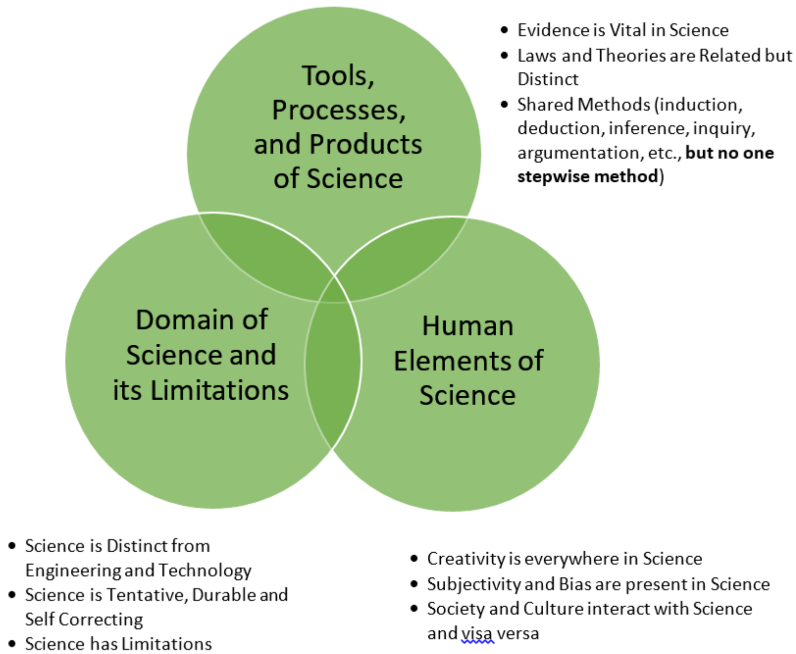


Figure 1. Nine key nature of science (NOS) elements across three domains often recommended for inclusion in science instruction (adapted from McComas 2020).

I have found the more common misconceptions include assuming science is cold and absolute. Many do not realize important aspects under the whole human experience domain or appreciate that science has limits. A more ingrained misconception (held by almost everyone) is that there is only one scientific method that must be followed step by step: define problem > gather information > form hypothesis > make observations > test hypothesis > draw conclusions > communicate results. While many research papers are published in this rigid format, actual science methodologies vary greatly.

We know chemistry has its own particular epistemology, language, culture, and way of doing things. Students are not merely learning facts and concepts; they usually undergo an apprenticeship within their discipline. So, a good understanding of NOS is vital to being a professional chemist. However, most of my students do not become chemists and mine is often the last chemistry course they would ever take. For them I think NOS is equally important in developing both their scientific literacy and giving them a more realistic and positive perspective of chemistry.

Finally, my hope is also that an examination and appreciation of NOS in my courses, by all students, might rekindle that wonderful sense of exploration, discovery, and learning that seems to be present so naturally in our early years.

Reference

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IN-PERSON? ONLINE? BLENDED? WHAT WORKS BEST FOR OUR STUDENTS? WHAT WE LEARNED BY USING THE BLENDED MODEL OF DELIVERY IN THE TECHNOLOGY ENTRY PROGRAM AT BCIT

Jennifer Wolf (jwolf8@bcit.ca), BCIT, Vancouver, BC

The BCIT Technology Entry Program is a full-time (32 hours/week) one-semester (15-week) academic upgrading program. Students take classes in math, sciences, and English (technical communications) to satisfy grade 11 and 12 requirements for applying to technology programs at BC. The program is also appropriate for anyone who needs the high-school level courses for applying to post-secondary programs elsewhere in BC. The program is cohort-based, with up to 46 students each semester in two groups.

IN-PERSON? ONLINE? BLENDED? - continued

Ages range from right out of high school to 55+, with most students in their 20s. Most students are Canadian citizens or permanent residents, and the program is tuition-free for domestic students under the BC Adult Basic Education umbrella. In any given term, 5-15% of students are international. The main goal of the program is to prepare students for the demands of the BCIT technology degree and diploma programs.

In Winter 2020, like most post-secondary schools, we made the emergency pivot to fully on-line classes, including labs and exams. In the academic year 2020-2021, continued with fully on-line delivery of the program. For 2021-2022, we delivered the program in a blended model, in which students three days per week were in-person instruction and two days were on-line. All labs were in-person, and most lecture courses were at least half in-person (exception: Computing was delivered completely online). Online classes were given as a combination of pre-recorded videos (watched synchronous or asynchronously), live Zoom, and independent activities.

Why did we choose this blended delivery model? This was an approach we had thought about before COVID, and the Fall of 2021 seemed like an ideal time to try this model. We thought we could take the best of what we learned with on-line teaching, apply to our general program. The advantages we expected were: 1) Less commuting time for students (consistent with sustainability goals for BCIT); 2) Accessibility: offering the program partially on-line gave us more options for when students when sick, self-isolating, or otherwise could not come to campus; 3) We felt that the small classes and cohort-based program gives us a good opportunity to gauge student success. We also thought this option might be more attractive to students who would otherwise prefer to do academic upgrading through distance education. We were aware that some students may have been fatigued from online learning and would prefer completely in-person. We also wanted to ensure that our students were receiving high quality of instruction in the blended model, and that they would be prepared for their follow-up programs at BCIT.

From informal surveys and conversations with students, we learned that most students were positive about the blended delivery model. They appreciated the flexibility, accessibility, and felt that the blended model provided ample opportunities for interactions with peers and instructors. However, about half the students admitted that they thought they would learn more material if the instruction were fully in-person. Instructors in general also like the blended model, appreciating the flexibility and were able to make best use of the in-person time. However, some instructors said they cannot complete as much material when teaching is partly online.

Going forward, we plan to continue this blended model for one more year and assess again whether we will continue. We will carefully examine which parts of classes are best done in person, and make sure we are not sacrificing standards or learning outcomes. In the future, we will explore expanding on-line options to make our program more accessible and inclusive for students in remote communities.

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LANGUAGE MATTERS: ARE YOUR STUDENTS LUCKY?

Andy Dicks (andrew.dicks@utoronto.ca), University of Toronto, Toronto, ON

In this brief note I highlight the main points from my C3 conference presentation: “"Language Matters": Some Musings on Terms We Use As (Chemistry) Educators”. This talk generated some interest among attendees, and I hope it provided everyone with an opportunity to reflect on a few of the common phrases that are common in academic circles (certainly beyond chemistry!). I mentioned at the time that I am not a member of the “speech police” and that the following (see Table 1 below) are simply observations and suggestions about words we often say and how we communicate to students…

I'm sure you have your own phrases that you like to use with students during your teaching that are along these lines. If so, please share them (andrew.dicks@utoronto.ca) and perhaps a follow-up will be forthcoming. Enjoy your Fall semester!

Table 1. Common phrases used by college and university instructors and possible alternatives

What we often say…	**Alternatively, how about this…**
“**lectures**”: within our course syllabi, as in “*lectures will be held on Mondays and Wednesdays at 1 p.m.*”, or “*to be successful you will need to come to lecture*”	“**classes**”: I'm confident that as educators we do not lecture our students when we teach them (end encourage their participation in multiple ways), so why not encourage them to come to *class* as part of their *course*?
“**office hours**”: also within our syllabi, as in “*my office hours will be held after lectures on Mondays and Wednesdays at 2 p.m.*”, or “*I operate an open-door policy for office hours*”	“**student hours**”: this time is for students and especially nowadays may be offered in-person or virtually – the location doesn't matter
“**are there any questions?**”: during class(!), to show interest, elicit student participation and to help clear up any misunderstandings	“**what questions do you have?**”: more welcoming and personable: making it an expectation that you anticipate and are open to student concerns
“**obviously**” and “**of course**”: also during class, as in “*of course, it's obvious that Fe^{3+} has five unpaired d electrons*”, or “*you obviously need to disassemble the glassware you've just put together*”	**avoiding these words and similar ones…** they can be perceived as demoralizing – what is obvious to experts may not be so to students (as one has told me!), particularly those taking our courses as a program requirement
“**good luck!**” during class, student hours, emails or perhaps written on an assessment itself: as in “*good luck on your test!*”; “*good luck on your final exam!*”; “*good luck studying!*”	“**I wish you every success**”: we generally know from our own experiences and through those of others that luck isn't a factor in performing well on assessments – success is earned through hard work (among other qualities)

UN-GRADING LABORATORIES?!

Kelly Resmer (kelly.resmer@msvu.ca), Mount Saint Vincent University, Halifax, NS.

When I first started teaching at MSVU a colleague described a classroom with no grades; students would just learn, motivated by their curiosity and wanting to understand. At the time I couldn't imagine this working in my laboratory classes. Over the years I began to see students motivated by grades and increased anxiety around grades. I also worried about my own grading schemes and wondered if they were fair and inclusive for the diverse learners in my lab. Inspired by the book 'Grading for Equity: What It Is, Why It Matters and How It Can Transform Schools and Classrooms'[1] by Joe Feldman, I decided to change my grading practices. I also read 'Ungrading: Why Rating Students Undermines Learning (and What to Do Instead)'[2] and subscribed to the 'Grading for Growth'[3] newsletter to learn more about the different ways to 'un-grade'.

I decided to experiment with my second-year lab since there were only 12 students. Given the small class size the portfolio method of un-grading described in the 'Grading for Growth' newsletter seemed like the best option. I determined 20 lab learning outcomes that students were to demonstrate by the end of the term. Every week students completed the lab experiments, wrote up lab reports, and submitted them as usual. However, this term they were not graded, only feedback was supplied on how to improve. At the middle of the term students reflected on the 20 learning outcomes and identified what outcomes were demonstrated, which ones needed more practice and what ones were not met yet. At the end of the term students submitted their final lab portfolio which included a proposed lab grade based on how many learning outcomes were successfully demonstrated. Evidence was needed to support their reasoning for what outcomes were achieved. This could include sample lab reports, graphs, calculations, a video demonstrating a lab skill or a scan of a lab notebook page. I tried not to limit the possibilities for this 'evidence', allowing students to choose how to demonstrate their learning process.

Most of the lab class presented a written portfolio, but there were some who presented an oral presentation of their lab portfolio, which allowed for additional dialog. The lab grades were not all A+ and students proposed realistic grades, though I did have the final say in assigning the lab grade. Next time I would include a rating scale for the weekly lab reports along with written feedback since some students were uncertain if they had successfully demonstrated the learning outcome. 0/1/2 scale where 0 needs improvement, 1 is at standard and 2 exceeds the standard. I would also incorporate more reflective writing throughout the term to help students gain experience reflecting on their learning and applying feedback received.

Overall, it was an enjoyable experience that helped reduce grade anxiety, allowed for risk-taking, mistake making, and creativity. The portfolio method worked very well for a small lab class. This fall I am using 'specifications grading'[4,5] for my much larger first year chemistry labs and look forward to reflecting on the experience.

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CLASSROOM CONNECTIONS: WHAT I LEARNED AFTER MY FIRST-YEAR TEACHING IN A PANDEMIC

Alyssa Doué (alyssa.doue@msvu.ca), Mount Saint Vincent University, Halifax, NS.

As soon as I was notified that I had been hired as a Laboratory Instructor at Mount Saint Vincent University, I was excited to teach chemistry and lab skills to my students. I started my semester with the best intentions, but quickly learned that there was more to it than just teaching in the lab. The school year went well though, and I used it as an opportunity to reflect on how I taught labs in the past, and what I could do to address the comments and concerns of my students.

As a new instructor, I wanted to get feedback from students about how they thought the semester went, and additionally what they learned that would benefit their futures. The latter was a great question for my students, but the former was for me to get to know what my students wanted out of the lab. A large majority of students wanted more opportunities to work with peers and connect with the people in their lab. After reading this, I immediately thought of my game plan for future semesters.

When I thought about how I should lay out the semester and what type of assignments to plan, collaboration was always in my mind. In my labs, students work individually so they get hands-on experience, but they also end up focusing on their own work and work in "silos". Therefore, I made some assignments in-lab worksheets instead of formal, written lab reports. Students are thus encouraged to share ideas and help one another understand the chemistry. I knew though that I would first have to set a solid foundation for collaboration if I wanted these assignments to work smoothly.

To do this, I designed my orientation lab around connecting students, myself, and resources available at our university. We first made name tags that could be worn during the lab. Preferred name and pronouns were suggested to be included, and creative expression and field of study were encouraged. Walking around the lab now, I see name tags that say "Bio Major", "I love Chemistry", and "Mother". It's been a great way to get to know my students, and has helped them connect with one another. I remember near the end of the semester last year, I told someone to borrow glassware from "Student A", but they didn't know who that was! I believe these nametags are a simple way to help students meet the people in their lab and feel comfortable approaching their classmates.

After the nametags were complete, I encouraged students to talk with the people around them. I provided some conversation starters like "What's your major?", "What are your hobbies?", and "Do you like chemistry?". This last one was my favourite question since a lot of my students take chemistry because they have to. I told them if they found others who didn't enjoy chemistry, they could commiserate and at least enjoy their time together while learning what needed to be done. I felt bad when I had to stop them after the five minutes I provided for conversation so we could move on with the rest of the orientation!

The last part of my orientation was to introduce the many student resources available at our university. Reflecting on my year of teaching, I noticed students struggled most with time management, so I asked our Learning Strategist to join us during orientation for a time management activity. Students got some pointers on working efficiently during the semester; they also saw the benefits of reaching out to those who are there to support them.

After the session, I asked students to complete an anonymous survey. Students were asked to come up with three goals they would like to accomplish during the lab semester. I did not read these goals, but I wanted each student to have some goals in their mind as they worked, in the hopes that they connected with more than the lab material. I also asked them their expectations of the lab instructor so that I could build a strong relationship with them from the beginning by meeting the needs that they deemed important. I look forward to the mid-term survey that asks them what I should Stop, Start, and Continue doing!

I hope that these small changes I have made will drastically enhance the way that students connect while in the lab. I'm already excited by the collaboration that I see, and have enjoyed seeing how students connect with one another and with available university resources.

QUESTION-EMBEDDED VIDEOS VERSUS TRADITIONAL TEXTBOOK READINGS: WHICH IS BETTER TO SUPPORT STUDENT PRE-LECTURE LEARNING?

Carl Doige (cdoige@okanagan.bc.ca), Okanagan College, Vernon, BC.

Although pre-lecture learning has often been a key component to the traditional higher education classroom, this aspect of the learning cycle is even more crucial in the flipped classroom. In the flipped classroom model, student preparation related to the course content occurs prior to class, thereby allowing students to engage in problem solving and active learning during the class under the direct guidance of the teacher[1]. The student pre-lecture preparation has typically involved reading text-based based materials or watching educational videos. Notably, the quality of in-class learning is significantly influenced by the quality of the student pre-lecture preparation[2].

Unfortunately, both forms of pre-lecture preparation suffer from disadvantages. Textbook reading assignments are often not completed, and students appear to struggle with processing and filtering the large amount of information provided in textbooks. While educational videos are intrinsically more motivating for students to complete (presumably because the videos are usually more topic focused and they tap into both visual and auditory sensory modalities), students will often watch videos passively, and thereby bypass potential learning benefits. Given these disadvantages, it is not surprising, therefore, that studies have NOT found differences in learning outcomes for students learning from videos and content-equivalent text[2].

Recent developments in screencast software, video platforms, and interactive plugins such as H5P, however, now allow interactive questions to be embedded directly into videos. Further, research is now showing that students are more engaged and are learning more from these question-embedded videos (QEVs) as compared to traditional videos[2-4]. It has been speculated that such gains in learning are related to the testing effect, where the practice of information retrieval while learning allows for better encoding into long-term memory.

This brings us back to the quality of student pre-lecture preparation. Considering the evolution in video technology, a question that has not yet been addressed in the literature until recently is: which serves as a better learning resource to support student pre-lecture preparation, textbook readings or QEVs?

Surya Pulukuri and Binyomin Abrams tackle this question in their recent randomized controlled study of the learning outcomes and metacognitive monitoring of students learning introductory organic chemistry[2]. This study is particularly significant because the results are interpreted through the lens of the theoretical framework of self-regulated learning. Below I offer a brief description of the Theoretical Framework, the Methodology, the Salient Results, and Implications for Teaching.

Theoretical Framework

Student pre-lecture preparation by its very nature involves self-regulation. Students must choose to begin and complete the preparation (motivation). They need to monitor the extent of their learning and adapt or adjust their learning behaviour to optimize their learning (metacognition). In the context of chemistry or science learning, rich feedback on attempted problem solving can facilitate students' ability to monitor their learning.

Methodology

The study was designed to mimic the self-regulated learning students would do to prepare for class, either from textbook readings or QEV's. Undergraduate students who had previously completed a general chemistry course were randomly assigned into one of three groups (n= 27): control, textbook, and QEV. The textbook and QEV groups were given 45 minutes to learn introductory organic chemistry material (new material for these students) from their given resource. The textbook resource comprised of an introductory chapter, with text, solved example problems and within-chapter practice questions. The QEV resource consisted of three videos (17 minutes total) with a total of 20 embedded single- or multiple-answer multiple

QUESTION-EMBEDDED VIDEOS VERSUS TRADITIONAL TEXTBOOK READINGS— continued

choice questions. Pre-populated feedback was provided for all answers. For incorrect answers, explanations were provided why the chosen response was incorrect. After the learning exercise, the experimental groups were given a Likert-scale confidence survey and a post-test. The control group was also given the Likert-scale confidence survey and post-test, but of course no learning intervention.

Salient Results

Learning gains: While the textbook group showed slightly better assessment scores in the post-test compared to the control group, only the QEV group showed statistically significant difference in scores (with a large effect size) relative to the control group.

Metacognitive monitoring accuracy: Students were asked to rate their confidence after the learning exercise and this rating was compared to their post-test scores in a calculation that produced a calibration score. A score closer to 100 indicates a better match between confidence estimates and actual content understanding (i.e., greater metacognitive monitoring accuracy). The QEV group showed an average calibration score of 84%, which was significantly higher than the textbook (61%) and control (55%) groups. This last result suggests that QEVs assist students to better monitor and adapt their learning behaviours. Because the QEV engages students in problem solving and provides immediate (and rich) feedback on their learning, this learning modality allows students to identify gaps in their understanding and take steps to correct these gaps. The poor calibration score of the textbook group suggests that the textbook learning exercise did not provide sufficient scaffolding for students to identify and improve on their weaknesses.

Implications for teaching

The results from this study suggest that QEVs have the potential to strongly support student pre-lecture preparation. This, in turn, will allow students to benefit more from active learning during face-to-face instruction. Some of the learning gains from QEVs are likely associated with the testing effect. But as indicated in this study, some of the gains are also associated with the improved accuracy of the students' metacognitive monitoring. The authors of this study also emphasize (as others have as well[4]) the importance of providing rich and meaningful feedback for why chosen responses are incorrect.

The interested reader may wish to consult the references below for further information.

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THE PRESIDENT'S MESSAGE

Dear C3 Members,

As I enter my 5th year as C3 president and I look back on the past 4 years, I am in awe of the changes and challenges we have had to face and overcome. It is no secret that the membership of C3 provides abundant opportunities to learn, teach, mentor, and share insights for chemistry education. This has been especially true with the pandemic. We are a community that maintains a high level of chemistry education and student success by being innovative in adapting to the current reality and looking into the future.

I can't express how happy I am to be back on campus and teaching in person. If the pandemic has taught me anything about myself, it's that I am a social person. I have yet to meet a student that dislikes being on campus. When I surveyed one group the only comment I received was "I miss my cat!" Hopefully the enthusiasm for being on campus will last.

In May we held our second virtual conference. Again, it was an amazing event that ran like clockwork. The organization and calibre of presentations is unparallelled (maybe only to last years'.) I am always astonished with the enthusiasm of both the attendees and presenters. I would like to thank Yann Brouillette, Kathy Darvish, Carl Doige, John Eng, John Lee, Jimmy Lowe and Chuck Lucy for many extra hours and unwavering commitment to making the conference(s) the astounding successes they were.

This year promises to be the return to an in person conference and I couldn't be more excited. François Gauvin and his team at Université de Saint-Bonaface have been waiting / preparing since 2020. Our conferences have always provided avenues to brainstorm, give back to our communities, meet, network and socialize with friends and colleagues from across the country. I hope that every one of you will be able to attend.

At the end of the conference this year I mentioned that we are looking for volunteers for executive and board positions. Please reach out if you would like more information.

Finally, thank you members for your continued participation and enthusiasm in our professional community!

Here's to another great year!

Paula Rooksby
C3 President

C3 EXECUTIVE AND BOARD MEMBERS

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