

Bits and Bytes

Volume 6, Number 2
February 2014

From the President

Gerald Logan

I hope you are enjoying winter. It has been interesting here in Grande Prairie. We had record snowfall in November and December, followed by three weeks of warm temperatures, and now we have hit the deep-freeze. The good thing is winter will soon be over.

I hope some of you were able to attend Building a Culture of Innovation for the Digital Age on February 5. With Simon Breakspear, Dennis Shirley and Phil McRae presenting, I am sure it went well. I got struck with the bug du jour and was not able to attend.

With the curriculum redesign process proceeding and contracts accepted, it will be interesting to see the role that educational technology plays in the accepted proposals. Alberta Education continues to mention educational technology in every information release. I hope it is not seen as a cheap solution to a funding problem, as I perceive the summative e-assessment pilot by LightSide Labs to be. You can see my article elsewhere in the newsletter.

Alberta Education has released the Educational Technology Framework. It will be interesting to see their vision of future classrooms in the province.

Stay warm. 🌨



**EDUCATIONAL
TECHNOLOGY
COUNCIL**

of the Alberta Teachers' Association

In This Issue

- 🌨 E-Assessments and Machine Scoring of Student Essays
- 🌨 E-Assessment: Lifeline or Mirage?
- 🌨 Notability
- 🌨 Socrative Is So Creative
- 🌨 Sessions of Interest

ETC Executive 2013/14

President

Gerald Logan
Bus 780-532-0743
gerald.logan@gppsd.ab.ca

Past President

Arlene Dutchak
Bus 780-922-2066
adutchak@shaw.ca *or*
arlene.dutchak@ei.educ.ab.ca

President-Elect

TBA

Secretary

Marion Rex
Bus 780-962-1585
mrex@ecsr.ca

Treasurer

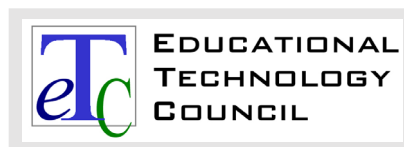
Danny Maas
Bus 780-989-3002
daniel.maas@ecsd.net
or maasdw@gmail.com

Political Liaison

TBA

Conference Director 2014

Gerald Logan
Bus 780-830-0502
gerald.logan@gppsd.ab.ca
or glogan@me.com



Postsecondary Liaison

Carol Tonhauser
Bus 780-492-7355
carolt@ualberta.ca

Student Liaison

Kandise Salerno
Bus 780-489-5490
kandise.salerno@ecsd.net

Webmaster

Dean McKinney
Bus 780-460-5442
dmckinney@gsacrd.ab.ca
or deanmck1@telus.net

Communications

John Korassa
Bus 780-989-3041
john.korassa@ecsd.net
Gail Reid
Bus 403-543-5074 *or* 5070
greid@esl-almadina.com

PEC Liaison

Chris Kohlman
Bus 403-834-3783
chris.kohlman@teachers.ab.ca

ATA Staff Advisor

Philip McRae
Bus 780-447-9469 *or*
1-800-232-7208
philip.mcrae@ata.ab.ca

Alberta Education Representative

Bette Gray
Bus 780-427-1509
bette.gray@gov.ab.ca

PD Directors

Calgary

Richard Tapp
Bus 403-777-7190
rtapp@cbe.ab.ca

Edmonton

Ryan Layton
Bus 780-467-5143
ryan.layton@eips.ca

Northwest

Jennifer Clevette
Bus 780-814-0967
jenclevette@pwsd76.ab.ca
or jenclevette@gmail.com

Southern Alberta

Luigi Pollio
polliol@holyspirit.ab.ca

Copyright © 2014 by The Alberta Teachers' Association (ATA), 11010 142 Street NW, Edmonton T5N 2R1. *Bits and Bytes* is published by the ATA for the Educational Technology Council (ETC). Unless otherwise indicated in the text, reproduction of material in this 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. Opinions expressed herein are not necessarily those of the ATA or ETC. Please address correspondence to the coeditors: John Korassa, St Peter Centre, 7330 113 Street, Edmonton, Alberta T6G 1L6 or Gail Reid, Almadina Language Charter Academy, 2031 Sable Drive, Calgary, Alberta T2B 1R9. ISSN 1718-3855

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.

E-Assessments and Machine Scoring of Student Essays

Philip McRae

Background

As announced this past spring, Alberta Education is replacing the provincial achievement tests (PATs) with digital student learning assessments (SLAs). These new digital assessments are to be administered at the beginning of each school year in Grades 3, 6 and 9. PATs will be phased out over the next three years as the new digital SLAs are phased in by 2016/17. Grade 3 PATs will be phased out first, with the new digital SLAs being administered to incoming Grade 3 students as early as September 2014. A presentation is publicly available from Alberta Education staff on elements of this move to digital assessments (http://prezi.com/dgr4tn_gn9g7/jtc-nov-2013/?utm_campaign=share&utm_medium=copy or <http://tinyurl.com/ka53b8j>).

Current Developments

The stated intent for the digital SLAs to date is to support teacher assessments in literacy and numeracy benchmarks through the digital platform offered by the ministry. The proposed SLAs in Grade 3 will include both short-response (multiple-choice, matching) digital items that are machine scored and performance assessments that will be marked by the teacher.

However, we must be aware that globally the movement toward e-assessments is driven by cost-cutting considerations, expediency of data transfer and very ambiguous visions of an efficient and effective 21st-century learning system.

Alberta Education is also piloting the machine scoring of student essays. Although the details of this pilot have not been articulated, it was confirmed at a Jurisdiction Technology Contact (JTC) event that an exploratory pilot will be conducted using student data with a company called LightSide Labs (www.light sidelabs.com), based in Pittsburgh, USA. LightSide Labs is

self-described as “invited by the Hewlett Foundation and Kaggle.com to prove the viability of educational writing assessment. Alongside education giants such as Pearson, McGraw-Hill, and ETS, LightSide matched human reliability, faster and at a fraction of the cost.”

Considerations

Several terms related to e-assessments include the following: *computer-based testing*, *computerized-adaptive testing*, *computer-based assessments* and *digital assessments*. However, the term *e-assessment* is generically used to describe computer technologies (from word processors to on-screen testing programs) that are used to assess student work. The current focus is on objectively scored digital assessment items, but examples are emerging for automated essay scoring of student-produced writing tasks.

Computer-based testing has three essential components:

1. Test item development—Hundreds or thousands of digital items can be generated in seconds within a single computer program.
2. Test administration—Tests are administered online, thus eliminating or reducing the costs associated with exam delivery and security. However, the final access costs of the e-assessments are borne by the end users (be that personal device, institution bandwidth or school computers).
3. Test scoring, analytics and reporting—Test reporting is to be fully automated and instantly reported. In terms of essays, it is claimed that 16,000 essays can be graded every 20–40 seconds. The instant reporting dimension of results is often compared to a six-week window for current tests to be returned to students. Machine scoring is currently very limited in terms of its ability to handle the semantics of complex written responses.

The e-assessment movement suggests paper-based testing is dead. It is claimed that computer-based testing will either eliminate or automate two-thirds of the testing activities that, currently, human beings (teachers) do manually.

The field of and interest in e-assessments are growing rapidly, as evidenced by a \$1.4 million Tier 1 Canada Research Chair (CRC) award in educational measurement to Professor Mark Gierl, of the University of Alberta. Gierl will specifically be researching approaches to producing a large number of test items university educators will require for the transition to computerized educational testing, also known as automatic-item generation.

Gierl (2012), as an international leader in the field, argues that the following four principles should account for the further adoption of e-assessments:

Principle #1: We will shift from infrequent summative assessments (for example, 2 midterms + final) to more frequent formative assessment (for example, 8–10 exams or more per term).

Principle #2: Testing on demand is required where students can write exams at any time and at any location.

Principle #3: Assessments will be scored immediately and students will receive both instant and detailed feedback on their overall performance as well as their problem-solving strengths and weaknesses.

Principle #4: You will spend less time and less effort implementing these principles in your large classes compared to the amount of time you currently spend on assessment-related activities—in fact, much less.

Possible Implications

While the ministry asserts that the rollout of the SLAs in Grades 3, 6 and 9 will include


classroom-based, teacher-driven assessments, there are increasing indications that the focus of government is committing resources to digital-testing platforms. This is further evident in the shift of the delivery of diploma examinations to a digital platform.

Although there are several problems with e-assessments being reductionist to only those things that can be put into a digital multiple-choice format, there are obvious additional challenges when writing tasks are coupled with machine scoring. For example, where does the student's writing in the margins or brainstorming work get accounted for in the e-assessment? Is process lost, while only final product is assessed? E-assessment, or the move toward computer-based testing in general, is fundamentally about reducing the costs associated with human beings involved in the testing process to increase efficiencies within the system. This is done by eliminating human beings from (or automating) two-thirds of the testing process itself (item generation, administration and scoring/analyzing/reporting).

Further considerations of the shift to e-assessments can be found in the following articles:

- “Lies, Damn Lies, and Statistics, or What’s Really Up With Automated Essay Scoring?” by Todd Farley
www.huffingtonpost.com/todd-farley/lies-damn-lies-and-statis_b_1574711.html
- “Computer Grading Will Destroy Our Schools,” by Benjamin Winterhalter
www.salon.com/2013/09/30/computer_grading_will_destroy_our_schools

Reference

Gierl, M. 2012. “How You Can Learn to Love Large-Scale Assessment: Let Me Count the Ways.” Paper presented at the Centre for Teaching and Learning (CTL) Teaching Big Symposium, University of Alberta, Edmonton, August, 2012. 

E-Assessment: Lifeline or Mirage?

Gerald Logan

With the recent legislated settlement came a lot of talk of workload and work-life balance. Over the years we have changed from a summative assessment model to a much more formative assessment model. We acknowledge that students learn not from the mark on the paper but the thoughtful comments that the teacher places on the assignment. Teachers often challenge the student with comments on the assignments to think deeper and present alternative points of view. This is well established, and writers have been prolific with research. The Alberta Assessment Consortium is a good place to look for leadership in this area.

Good long-answer marking is not a fast process; it is time-consuming and requires much thought to do a good job. This is an opportunity for the teacher to challenge the students' thoughts and force them to think about the assumptions they have made and the rationalization they have used. This takes a lot of

the teacher's time and energy. The balance between formative and summative assessment is hard to establish. Teachers offer formative assessment whenever they help students with their writing, not just when they formally review drafts of student writing. Summative assessment is much clearer, and it is a small part of the daily work schedule of classrooms. The percentage of classroom time dedicated to formative assessment is going to vary from teacher to teacher and change with the age of the students. The amount of time is going to be dependent on the grade level of the course and the academic or nonacademic stream.

E-assessment has not been questioned in the area of multiple-choice exams; most schools that use this form of assessment have the equipment on-site today. We do continue to argue about the optimum balance between multiple-choice and long-answer questions in assessment. But why not use the computer to mark the long-answer



assessments, too? Artificial intelligence has come a long way, and we could reduce the workload of teachers if we just fed the written papers into a computer and had the computer issue the marks. Let's face it. Most computer programs can give us a reading level, why not a writing level?

Several companies offer this service now; one of particular interest is LightSide Labs (<http://lightsidelabs.com>). When I mark papers, I look for several components, accurate facts, writing conventions, creative use of examples and convincing arguments. The LightSide Labs website is interesting. It explains that the software is fed student work that has been marked by teachers. It then looks for patterns that are characteristic of assignments that teachers gave good marks as well as poor marks. The software assigns marks by "rewarding writing that looks like the strongest," so marks will be awarded by the system not for being good but sharing characteristics with good writing. Interesting.

The software needs 500 examples to be effective at recognizing these good characteristics of writing, so you have to use the predefined writing prompts. The software ignores some of the mainstays of formative and summative teacher marking; it does not check grammar or the accuracy of the information used in the writing. The system is not considered suitable for long assignments. LightSide does not recommend this as a platform for marking creative writing because it is too subjective and not a good match.

The research has shown that e-assessments can produce data sets from assignments; the mean is often close to the mean of teacher markers. The software does not always agree with teacher markers; understand that teachers often do not agree either. They have a reliability rating of 85 per cent, while the software has a reliability rating of about 65 per cent.

With this all being considered, why is Alberta Education following the lead of many states and doing a pilot with computerized written assignment marking? It might be to stay on top of the use of technology in classrooms. It might be to help reduce the cost of marking written exams, which is about 33 per cent of the cost of a testing system much like the PATs and SLAs. With the recent reduction in the compensation given to teachers marking diploma exams, Alberta Education has created a shortage of markers. One has to wonder which came first: the idea of e-assessment with LightSide Labs or the drive to reduce the cost of exam marking?

In my humble opinion, educators in Alberta should sit on the sidelines in the lucrative e-assessment game until the software can at least check for grammar and accuracy of facts. If we are going to continue high-stakes testing, we should at least find the money to make sure the tests are marked well. The state of the art is still classroom teachers. If Alberta educators don't think we should spend the money to do a good job of this, the government should get out of the field of assigning marks to students and let the professionals do it. ■

Call for Articles

ETC would love to publish articles by its members. If you attend a wonderful technology conference, have a great review of an application (software, Web 2.0, tablet and so on) or would like to recommend an article, contact either John Korassa (john.korassa@ecsd.net) or Gail Reid (greid@esl-almadina.com). ■

Notability

Barbara Mountenay

At \$2.99, Notability offers a great deal of value for teachers who want to add to their ever-growing tool kit. Notability is a note-taking app which is available for iPads, iPhones and iPod touch devices. Notability allows users not only to take notes but also to bring their ideas to life by using retina ink while providing a variety of colours and pens to express ideas through art. Furthermore, Notability also offers users the ability to fill out forms and mark up presentations and slides, PDFs and documents.



It is a beneficial app for students, teachers and administrators because of its features, but Notability provides so much more. Users can increase their productivity with the record feature. Audio recordings are linked to the content, so individuals can record lectures and meetings to add to their notes at a later time. Students who struggle to write or type their thoughts can record their ideas or stories first and create their story with text and illustration later in the same app. This allows students to have a visual and auditory presentation to share with their peers. Another bonus that Notability offers is its ability to upload or capture an image and add notes effortlessly around it.

Notability allows users to collaborate and share through free cloud services. Teachers can hand out and collect homework from their students. Students can then work either independently or collaboratively on a project using shared notes that are available automatically through iCloud. Finally, Notability is able to automatically back up your notes to Dropbox, Google Drive or Box, making it great for accessibility. **N**

Socrative Is So Creative

Heather Tumbach



Assessment can be a teacher's best and worst enemy. How do teachers get to know all the learning that has taken place in their class for all their students? We all have tips and tricks that we do to make both summative and formative assessment effective and efficient (hand signals, thumbs up or down, ticket out the door and so on). Sometimes students are hesitant to share their true thoughts. Socrative is one tool that teachers can use that is quick, easy, and accessible and can get the job done. It is a digital tool that, if students have access to any device, teachers can check in and see what students know. It allows teachers to track student performance and provides real-time assessment to help teachers personalize and improve the learning taking place in their class. Students find the multiple-choice, true/false and ticket-out-the-door questions engaging and are more likely to take chances on questions asked. Teachers can upload their own quizzes and exams, and students get feedback immediately. It's something that can be part of any lesson. Check it out! **N**



Sessions of Interest

Differentiating Instruction Using Smart Boards and Smart Notebook Software

March 14, 2014

9:00 AM to 3:30 PM

Edmonton

www.consortiapd.ca/ei6/getdemo.ei?id=25010&s=_1B80U2I36&bulk=y

iPads for Beginners

March 21, 2014

9:00 AM to 3:30 PM

Edmonton

www.consortiapd.ca/ei6/getdemo.ei?id=25010&s=_1B80UCU4U&bulk=y

Smart Boards for Language Arts—Interactive Resources to Support Teaching and Learning in Language Arts Grades 3–9

April 11, 2014

9:00 AM to 3:30 PM

Edmonton

www.consortiapd.ca/ei6/getdemo.ei?id=25010&s=_15S0OGK2P&bulk=y

iPads and Smart Boards—How to Make the Most of Both Grades 3–9

April 25, 2014

9:00 AM to 3:30 PM

Edmonton

www.consortiapd.ca/ei6/getdemo.ei?id=25010&s=_15S0PD6GW&bulk=y

App 'n Appie Party for Math, Grades K–12

April 29, 2014

5:00 to 8:00 PM

Edmonton

www.consortiapd.ca/ei6/getdemo.ei?id=25010&s=_43G0I24U7&bulk=y

Differentiating Instruction Using Smart Boards and Smart Notebook Software

May 9, 2014

9:00 AM to 3:30 PM

www.consortiapd.ca/ei6/getdemo.ei?id=25010&s=_15S0PII6T&bulk=y



Edna Dach Educator of the Year Award

Award Criteria

Overview

The ETC Edna Dach Educator of the Year Award is presented to a classroom teacher and/or technology leader in an educational setting who works to promote technology in education through

- leadership in educational technology,
- best practices relating to technology integration and
- professional development for teachers for integrating technology into the curriculum.

Eligibility Requirements

- The nominee is a current member of Educational Technology Council of the ATA.
- The application must include 2 letters of support (maximum two pages each) stating that the nominee is a professional worthy of being considered as an outstanding educator.

Award Criteria for Consideration

- The nominee has demonstrated leadership in educational technology.
- The nominee is committed to best practices relating to technology integration.
- The nominee is committed to continuing professional development in technology education.
- The nominee has contributed to the profession by providing professional development opportunities for teachers regarding integrating technology into the curriculum.
- The nominee has contributed to the profession by presenting at professional conferences.
- The nominee has contributed to the profession by publishing articles in print and/or through electronic media.
- The nominee's work has had a significant impact on educational technology locally, provincially, nationally and/or internationally.

Submission

Please submit your completed application form to

Marion Rex, Secretary
9463 76 Street
Edmonton AB T6C 2K7
Fax: 780-962-1588

e-mail: mrex@ecsr.ca Subject Line: Edna Dach Educator of the Year Award

Deadline: **midnight April 4, 2014**

Selection

1. Nominations for the award will be judged by a selection committee composed of table officers of ETC.
2. The ETC Edna Dach Education of the Year Award shall be presented at a special meeting of the ETC. The award recipient agrees to have his/her name and biography published and to submit a photo suitable for publication in the ETC Newsletter *Bits and Bytes* and on the ETC website.



**Edna Dach Educator of the Year Award
Award Application**

Nominee's Data

First Name: _____ Last Name: _____

Educational Technology Council (ETC) Membership Number: _____

Years of Teaching: _____ Nominee's Job Position: _____

Location (Check as many as apply) Rural Suburban Inner City Urban

Nominee's Jurisdiction: _____

Nominee's Work Address: _____

City: _____ Postal Code: _____

Nominee's Phone: Work: _____ Home: _____

Nominee's e-mail address: _____

I acknowledge this nomination and agree to the conditions of the Award.

Nominee's Signature: _____ Date: _____

Nominator's Data

First Name: _____ Last Name: _____

Educational Technology Council (ETC) Membership Number: _____

Years of Teaching: _____ Nominee's Job Position: _____

Nominator's Jurisdiction: _____

Nominator's Work Address: _____

City: _____ Postal Code: _____

Nominator's Phone: Work: _____ Home: _____

Nominator's e-mail address: _____

I recommend this individual for the ETC Edna Dach Educator of the Year Award.

Nominee's Signature: _____ Date: _____

Include the following:

- Application form with signatures
- Two letters of support (maximum two pages each)



Teaching and Learning Through Innovative Technologies Grant

Award Criteria

Overview

The ETC Teaching and Learning through *Innovative Technologies Grant* is presented to a classroom teacher(s) and/or technology leader(s) in an educational setting who work(s) to promote technology in education through best practices relating to innovative technology integration. The action research focus for the Educational Technology Council for the upcoming year is personally owned devices with an emphasis on how devices owned by students are used in the classroom; however, this grant can also support a project of your choice.

Eligibility Requirements

- The applicant(s) is/are a current member(s) of Educational Technology Council of the ATA. Preservice student members are also eligible.
- The applicant submit(s) a project proposal outlining an innovative action research project that promotes technology integration in the area of personally owned devices with an emphasis on how devices owned by students are used in the classroom or a project of your choice.

Award Criteria for Consideration

- The project demonstrates effective and engaging technology integration into the K–12 curriculum.
- The project is innovative and/or reflective of emerging technologies.
- The project is topical based on new curriculum being implemented in the province of Alberta or new initiatives being undertaken with emerging technologies.
- The applicant(s) commit(s) to being prepared to share their action research based on the project, posting their project (or a link to their project) on the ETC website, and presenting at an upcoming annual conference, regional workshop, webinar and/or virtual presentation.
- One grant of \$3,000 or up to three separate grants of \$1,000 each will be offered to ETC members in support of action research projects involving technologies in education; successful applicant(s) will receive 50 per cent of the grant upon startup and 50 per cent upon completion of the project. The grant must be used to start or complete a project; grants cannot be received in retrospect, ie, when a project is complete. The number of awards being presented will depend on the quality of the proposal(s) and the financial resources available for distribution.

Submission

Please submit your completed application form to

Marion Rex, Secretary

9463 76 Street

Edmonton AB T6C 2K7

Fax: 780-962-1588 e-mail: mrex@ecsrd.ca Subject Line: Innovative Technologies Grant

Deadline

midnight April 4, 2014

Awarded

Special Meeting of the ETC

Selection

1. Nominations for the award will be judged by a selection committee composed of the ETC executive.
2. The ETC Teaching and Learning Through Innovative Technologies Grant shall be presented at the annual general meeting in the spring.
3. The award recipient(s) agrees to have their name and biography published and to submit a photo suitable for publication in the ETC newsletter, *Bits and Bytes*, and on the ETCATA website.



Teaching and Learning Through Innovative Technologies Grant Award Application

Applicant's Data

First Name: _____ Last Name: _____

Educational Technology Council (ETC) Membership Number: _____

Years of Teaching: _____ Nominee's Job Position: _____

Location (Check as many as apply) Rural Suburban Inner City Urban

School Jurisdiction: _____

Work Address: _____

City: _____ Postal Code: _____

Phone: Work: _____ Cell: _____ Home: _____

e-mail address: _____

I agree to the conditions of the Award.

Lead Teacher's Signature: _____ Date: _____

Project Proposal

Please include the following in your project proposal (application + 2 pages maximum):

1. **Award Application with signature**
2. **Project Name**
3. **Intended Grade Levels**
4. **Intended Subject Area(s)**
5. **Proposed Timeline**
6. **How technology is being integrated**
7. **How action research will be conducted and recorded**
8. **How you will document and comment on opportunities and challenges of your project**
9. **Proposed budget** (Grants may be used for hardware, software, telecommunications connect charges, teacher release time, or any other worthwhile component of the project. Hardware and software purchased with grant monies become the property of the school in which the teacher carried out the project. Projects may receive funding from other sources as long as the expenses outlined in the proposal are paid for by the ETCATA grant. No project should make a profit by acquiring funding from many sources.)
10. **School Support** (Projects with school support are preferred. This support could take the form of matching funding, teacher preparation time, etc.)
11. **Sharing the Results** (Completed projects must be shared with other educators in an appropriate format such as print, video, web sites and/or conference presentations.)
 - Description of support website and/or paper
 - Outline the title and description for the session you'd be willing to give at an upcoming annual conference, regional workshop and/or virtual presentation.

Submission

Please submit your completed application form to

Marion Rex, Secretary

9463 76 Street

Edmonton AB T6C 2K7

Fax: 780-962-1588 e-mail: mrex@ecsr.ca Subject: Innovative Technologies Grant

Deadline

midnight April 4, 2014

Selection

1. Nominations for the award will be judged by a selection committee composed of the ETC executive.
2. The ETC Teaching and Learning Through Innovative Technologies Grant shall be presented at the Spring PD Event & AGM—March 14, 2014.
3. The award recipient(s) agrees to have their name and biography published and to submit a photo suitable for publication in the ETC newsletter, *Bits and Bytes*, and on the ETC website.