

**SPEAK
Out**

ALBERTA STUDENT
ENGAGEMENT INITIATIVE

What We Heard

Diploma Exam Mythbuster

3rd Annual Speak Out Conference
April 15 - 17, 2011

WORKSHOP REPORT: DIPLOMA EXAM MYTHBUSTER

Background

John Rymer presented this “Diploma Exam Mythbuster” workshop on April 16, 2011. John is the Executive Director for Learner Assessment with Alberta Education, and has heard many different views and opinions about diploma exams, with the most common topic being their weighting. Joel Cheverie and Fatima Hawa were the MSAC representatives assisting with the workshop.

John provided a history of diploma exams in Alberta, which began with the introduction of standardized testing in 1892 so that Alberta students could be compared to those from other Provinces. From 1892 to 1972 with the exception of about 9 years, the exams were weighted at 100%. From 1972 to 1983 exams were removed thus teacher marks were weighted at 100%. After 1983 when exams were reintroduced the weighting became 50-50. For more details about the history of diploma exams in Alberta, please see Appendix A.

It was important to seek the student voice at the workshop to see what Alberta Education can do to improve the diploma exams, as well as to provide students the opportunity to ask questions that are important to them.

Process

As students walked into the workshop, they were asked to vote on three questions and to mark their choice on flipchart paper on the wall. The three questions were:

1. What do you think of diploma exams? (love, like, dislike, hate)
2. Which diploma are you most worried about? (Math, English, Social, Science(s))
3. How do you think diploma exams should be weighted? (50%, 30%, 20%, 5% - the 5% option was not on the sheet for the second workshop)

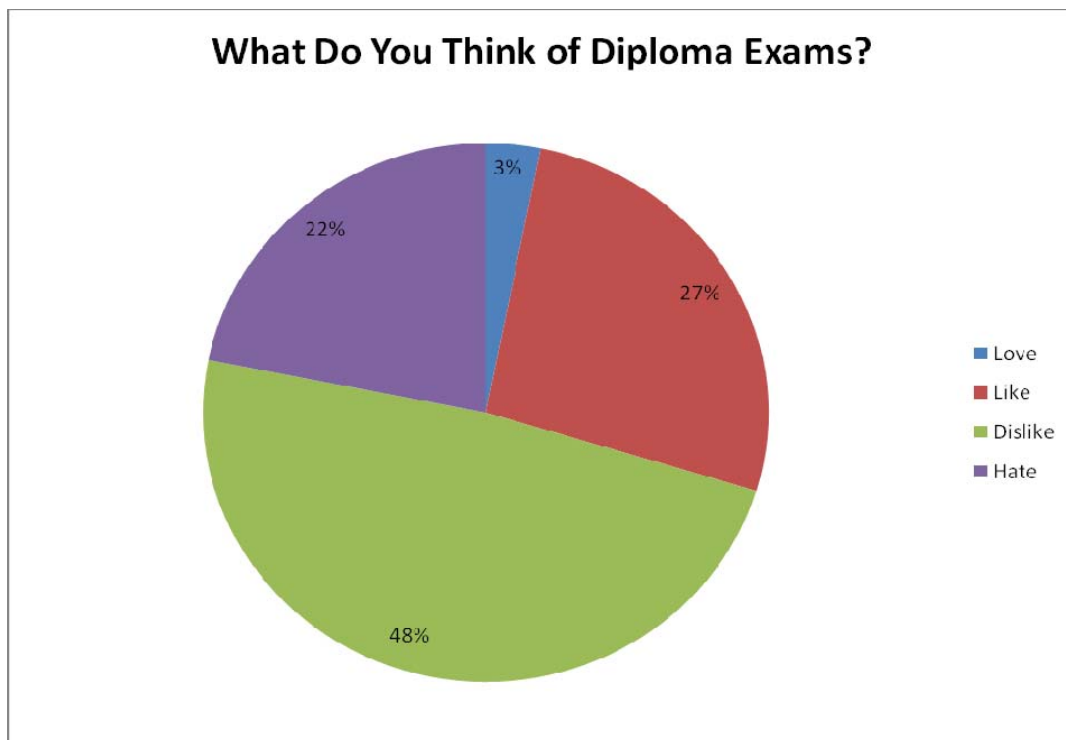
John Rymer then gave his presentation about the history of diploma exams and why they are set up the way they are now. After that, he opened it up to questions from the students in the workshop.

As students left, they were asked to answer the three questions on the flipchart sheets again in a different colour to see if their opinion had changed. Fewer responses were received while students exited the workshop than were received while they entered.

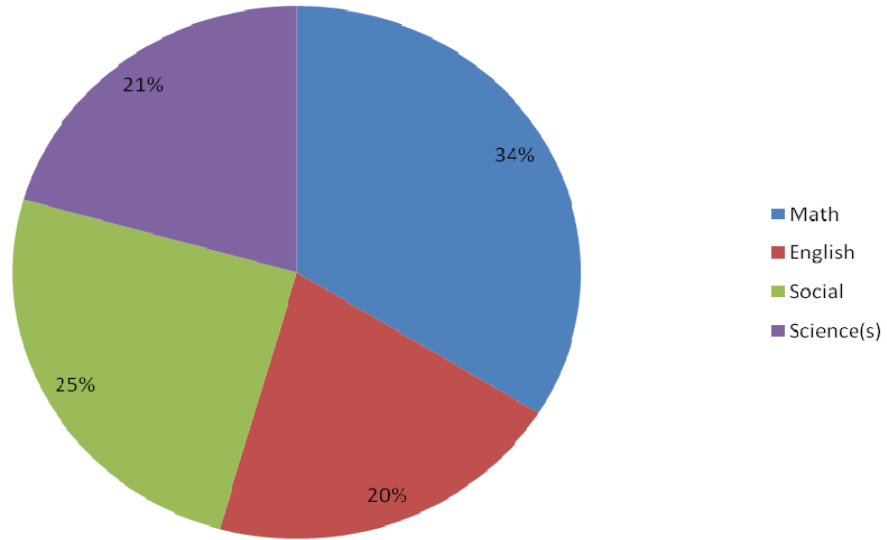
What We Heard

Flipchart Survey Results

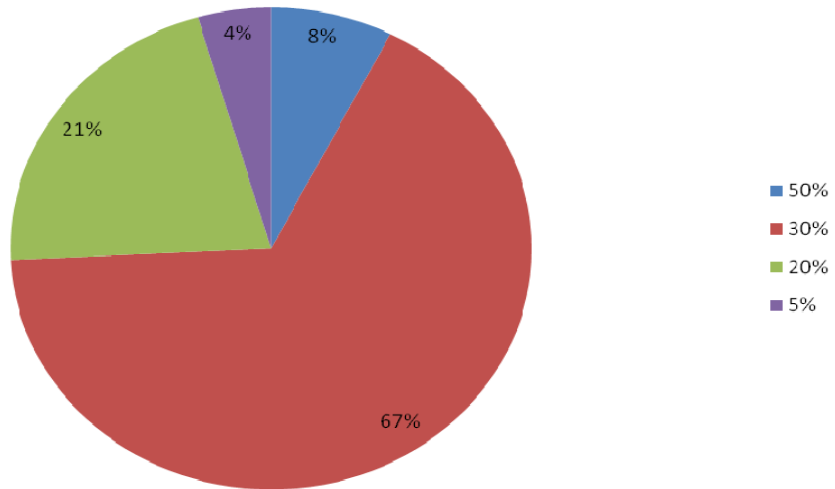
The tallies from both workshops were combined to create the following pie charts summarizing the results. As there were very few tallies from after the workshops, those results are not included, but the results were quite similar to the pre-workshop tallies.



Which Diploma Are You Most Worried About?



How Do You Think Diploma Exams Should be Weighted?



Student Feedback

The questions and comments from each of the workshops were quite different. The students in the first workshop focused on asking questions and suggesting improvements to how the tests are weighted, content of the tests, and how to relieve the stress put on students. The students in the second workshop focused on questions related to the development and marking process of exams as well as consequences for those caught cheating.

Suggestions and Concerns

Most students understood the reasoning behind having the diploma exams worth 50% of their final mark, but thought it should be split up into smaller sections throughout the year. Some ideas generated were having a diploma midterm half-way through the year or multiple "unit" exams throughout the year. Students emphasized the need for splitting up the exam so that one off-day won't ruin a student's academic future.

Students also had concerns about the way diploma exams were designed. Students mentioned that some people struggle with multiple choice questions even though they know the material very well, and there are some that freeze up during written tests. Students would like to see different types of tests created that use different methods of testing for different students so that diploma exams don't just test how well students can write tests. Students in the room wanted tests to be designed in alternative ways to enable students to show their strengths in the course.

There was some discussion in the room about possibly changing the nature of the exams themselves and using different testing methods. John mentioned that there has been talk about using problem-solving exams, but noted that there would need to be a way to standardize the marking to ensure fairness throughout the system. Students said that they would need to get a guide listing the specific criteria for grading each exam before-hand so they would know what the markers will be marking them on. Another point students raised was the fact that some tests have a majority of questions focused on one particular topic or skill set within the course (for example, the Social Studies diploma having 50 out of 60 multiple choice questions based on sources). John explained that there was a shift in the new program of studies to emphasize these skills that caused a shift in the exam blueprint. This blueprint is built through consultation with teachers. One suggestion raised by students was having more benchmarking and field tests throughout the year to determine how students do on certain concepts, which would help when deciding how many questions to spend on each topic in the diploma exam.

There was a discussion from some students about reducing the weighting of the diploma exams to 30%. Some students mentioned that students can work hard all year in class and then significantly lower their mark, or even fail the course, because of a bad mark on the diploma exam. This causes undue stress on students who need certain marks to get scholarships or be admitted into post-secondary institutions even though they have pushed themselves all year. They point out that teacher tests are better because they encourage students to apply the material in different ways, preparing students for the future.

Although students realized that a diploma exam worth 50% maintains teacher accountability and sets a province-wide standard, a 30% test would achieve the same result while at the same time putting more importance on the work students do in class. Teachers should also align their tests to the diploma exams to get them more prepared.

Students in the room also brought up the issue of stress, and how that stress can actually worsen their performance on diploma exams. One grade 11 student said she is already stressed and the exams are still a year away for her. John mentioned that students should find a way to capitalize on that stress because research has shown that preparing for exams can improve learning – to use it as a motivator to start getting prepared for the exams as soon as possible. He gave the students the advice that they should start studying for final exams in school, college or university right from their first day in class. Time limits were also pointed out as the cause of stress during the exams themselves. There was some concern that those students with Individualized Program Planning (IPPs) get longer time to do their tests, and some students were wondering why this time isn't given to all students.

Conclusion

While students would generally prefer that less weighting be placed on one (or sometimes two) exams, they understand the reasoning behind highly weighted standardized tests. If diploma exams are to continue to be worth 50% of their final mark, they would rather that they come in the form of more exams spread out throughout the year. Students also had suggestions about how diploma exams are structured – they felt that there are ways of using more creative techniques to test students, beyond multiple choice or written response. Students were asked questions about their tests being marked fairly, and John's responses reaffirmed that the measures in place for ensuring fairness are effective. Finally, students voiced concerns about the stress put on them by the diploma exams and how that affects their school year.

Implementation

Feedback collected at the workshop will be used to inform internal conversations at Alberta Education regarding exam structure. Any future changes to diploma exams will align with the transformation of education and associated curriculum changes.

Appendix A: A History of Diploma Exams in Alberta

John started his presentation with a brief history of diploma exams in Alberta. Standardized testing began in Alberta in 1892 in order for students from the Northwest Territories (what Alberta was at the time) to be taken seriously in colleges and universities in Britain and the rest of Canada. This was necessary because the Northwest Territories were “pioneer country” and students were seen as not being able to have been educated. Standardized testing proved the students were as educated as those from elsewhere in Canada. These tests were administered at the end of Standards V through VIII (equivalent of grades 9 to 12).

In 1896, the exams were stopped due to mounting criticism of teachers teaching to the test, and students being treated as products with dollars attached (as the school got \$15 for each student who passed the exam). These arguments are still used today. However, in 1905 the tests were reintroduced and were worth 100% of the mark – there was no class mark. Students took these “Public School Leaving Examinations” at the end of Standard V and then could continue their schooling if they wanted to, taking an exam at the end of Standards VI through VIII. In 1912, “grades” replaced “standards” and soon after exams at the end of grades 10 and 11 were removed. There were many arguments to keep the exams worth 100% and many arguments to remove them, all of which we continue to see today. Although the exams were worth 100% of a student’s mark, John mentioned that they weren’t that stressful, because students knew what was coming and prepared for them early on.

In 1972, exams were once again eliminated, and the class mark was worth 100% of a student’s mark, but by 1976 the criticisms resurfaced about this system. It was noted that students coming out of the Alberta school system were not as prepared for post-secondary as before, and that the school system was not challenging the most gifted children to do their best. In 1983, final exams were brought back with a 50/50 split between class mark and diploma exam mark. This split was chosen because it was half way between the 100% exam mark system and the 100% class mark system. The Alberta Government consulted parent, business leaders, and the community in reaching this decision (students were not consulted).

To illustrate the rationale for a 50% weighting system for diploma exams, John showed some graphs of depicting the distribution of class marks in Pure Math 30 and English Language Arts 30-1 in January and June for the years 2005, 2008, and 2010. The interesting thing to note was that the distributions were almost identical for every graph; there was almost no variation between the years, subjects, or even when the exams were written. One would expect that with different groups of students, the grades should be more varied. Another interesting thing to note was the spikes of students getting even-numbered grades (50, 60, 70, 80, 90) and the dips in the 3 points behind each of them. The grades roughly follow a “normal distribution curve” that one would expect but huge spikes and valleys exist at specific mark points. This is most likely caused by teachers rounding a student’s grade up if they are 2 or three points shy. There is even a rule in most schools that students who get 47-49% automatically get bumped up to 50% to pass the course. Some students commented that this should happen so that one minor mistake on a test or assignment is not the difference in a student failing or falling below scholarship level. When John showed a graph comparing in class marks to diploma marks, the line representing diploma marks did, in fact, resemble an expected normal distribution curve more closely.

Appendix B: Questions and Answers with John

In addition to the suggestions made by students in the room, there were also many questions for John. The questions and their edited answers are listed below:

- Q. Why was the written component of the Math and Sciences diploma exams taken out? Was it due to lack of government funding?
- A. The written responses weren't telling Alberta Education anything they didn't already know from the machine-scored test. Written exams should be used to test high-level cognitive concepts. The removal had nothing to do with funding issues; it started back in 2001 and has only saved about \$1.6 Million total.
- Q. How have students done comparatively in Math and Sciences since the written responses were taken out?
- A. Over the past two years there has been a "net zero" effect – roughly the same amount of students have seen higher marks than those who have seen lower marks (about 3% on either end).
- Q. What is the expected discrepancy between class marks and diploma marks?
- A. Most school's marks are within 10% of the exam marks, but there are a very few schools that have really high class marks with really low diploma marks, and vice versa.
- Q. If a student has a really bad week during exams, are they set back for an entire semester?
- A. Under certain extreme circumstances that cause a bad week (like a death in the family or a sudden injury) a student can be exempted from their diploma exams. However, any student can retake the course or the exam (or both) and take the highest mark of all the attempts, no matter how many times they re-do them.
- Q. If a whole class gets poor marks on the diploma exam because of teaching quality is there anything that can be done for them?
- A. There is nothing anyone can do about the exam results. However, in a case like this, students and parents should be talking to the school to try to find out what happened.
- Q. Is it possible for a student to re-write just one part of a two-part test they've failed (for example if an English student fails the written part but does well on the reading part)?
- A. Unfortunately if they want to re-write, they have to re-write the entire test.

- Q. If there is a question on the exam that can have more than one “right” answer, is there any way to appeal or argue the mark?
- A. Multiple choice exams never use “what is the best answer” questions. However, if a test gets through field testing with A) being the right answer but a vast majority of students choose C) during the exam, the question could be thrown out for all students and just not counted. In written exams, you will never get penalized for taking a contrary opinion, as markers are looking for *how* you argue your point. Finally, there is a certain international standard for quality that every question is expected to meet. If a question does not meet that standard it gets flagged, and if the question is determined to be unfair, the question is pulled and everyone’s diploma exam results are adjusted.
- Q. Are there questions on the diploma exams that they expect most students to get wrong?
- A. Alberta Education puts questions on diploma exams that they expect students to get right. The hardest questions on a diploma exam are expected to be answered correctly by 30% of the students, where the easiest one are expected to be answered correctly by 85% of the students. All questions fall somewhere in between. There is a blueprint of what concepts need to be taught on each exam, and all questions must fall within the 30% to 85% range.
- Q. Has a test ever been leaked early? If so, what happens?
- A. If a test gets leaked early, the whole province won’t do exceptionally well, one or two individuals will. Tests have been leaked before but it’s very rare. There are ways to determine if a student has exactly the same answers right and wrong as another student, which will get them caught if they are cheating. People who steal the exam will get a zero and have to wait a whole year before they can re-write it, and a note can be made on the student’s record.
- Q. Why can’t students see the test after they’ve done it?
- A. The questions are re-used for future exams.
- Q. Is there any auditing to make sure that students with relatives in Alberta Education making the exams don’t have an unfair advantage?
- A. There isn’t any auditing, but there are rules that say no one can take home the exams, and if someone has a student writing an exam they have to let people know.
- Q. Have there ever been instances of unfair marking?
- A. It is extremely rare. The scoring rubric is designed to look at *how* a student comes up with their answer and leaves very little room for subjective judgment. More than one marker looks at each test, and if they don’t agree on the mark it gets looked at by another marker, and another until there is agreement on the mark.

- Q. Why do students only have to take Math up until Math 20, but they have to take Social all the way up to Social 30?
- A. These are provincial graduation requirements, which is a choice the government made years ago. However, the conversation is back on the table now and they are looking at whether the graduation requirements should change or stay the same.
- Q. Can the diploma exams test you on anything in the textbook?
- A. No, they can only test you on material that's in the Program of Study. Most textbooks have more information than is necessary in the Program of Study, and are meant to be guides through the material.
- Q. What happens if your teacher chooses a textbook that doesn't follow the Program of Study and only teaches from the textbook?
- A. Teachers use their professional judgment about how best to teach a course. Because this is a local decision, this is something that would need to be brought up with the school.
- Q. Who makes the Programs of Study?
- A. They are created by the Ministry of Education after consultation from the community, and are approved by the Minister.
- Q. Do students have access to the Program of Study?
- A. Yes, the Program of Study is available at: <http://education.alberta.ca/teachers/program.aspx>
- Q. Where can I find past diploma exams with answers?
- A. <http://education.alberta.ca/students/exams/answerkeys.aspx>
- Q. Why can't current students take challenge exams?
- A. To take a challenge exam, individuals must be 19 years old and out of school for at least one year. It is a rule created by the Government of Alberta.