

18 September 2016

To Whom it may concern,

I am writing on behalf of the Mathematics and Statistics Faculty at Rangi Ruru Girls' School to express our disappointment and deep frustration with the quality of the Day 2 MCAT examination on Thursday 15 September.

Regardless of the rhetoric that is already coming from NZQA I would like you to understand the effect that this traumatic event has on students (and teachers). Students of all ability levels work very hard preparing for this assessment (for most of them it is their first experience of an NZQA external in any subject) and their confidence has taken a huge knock. It is now up to maths teachers to try and defend/justify their subject and to rebuild confidence for the November examinations.

An article from stuff.co.nz includes this quote from NZQA. *"(The 2016 MCAT) was developed by an experienced team with expert knowledge of mathematics assessment and reviewed by several current secondary school teachers"*

I would like to know how is it that for external Achievement Standards this "experienced team" seems to have now become the determiner of the Standard?

This standard has remained pretty much identical since version 1 in 2011. However the paper has changed drastically over the last two years.

Rather than writing in detail about the actual paper I would like to concentrate on some points where I believe your "experienced team" is moving in a particular direction with no consultation on how and why they are moving in such a direction.

- The obsession with solving problems in context when it is obviously extremely difficult to write such questions so that they are clear and fair. 2016 Day 2 Q1 is a case in point where the experienced team perhaps doesn't realise that a rectangle with a specific area can come with an infinite set of dimensions. I have seen weak students fall into the correct answer to this problem by factorising the expression with little or no real understanding of the context while stronger candidates have overthought the situation and gone awry.
It is an example of "answers looking for questions".
- Literacy and Clarity.
With the increased emphasis on what the "experienced team" considers solving problems comes increased literacy demands and challenges to clarity. In several standards open-ended and vague questions mean that students have to read the examiners mind as to what is required. (Remember that this is under pressure in a one hour examination)

The MCAT Day 1 2014 Q2b takes the cake and was staggeringly bad

- An examination paper is not the right place for an investigation. Investigations take time. No worthwhile investigation can be developed and resolved in 10-15 minutes under pressure, particularly when the problems are unfamiliar. Students need to have the opportunity to try various lines of thought, make mistakes, consider and improve new strategies and develop their working, before putting a logical, well worked answer on paper.

On top of the inappropriateness of an investigation the only warning that teachers have had is this statement from the 2016 Assessment Specifications. *"In any of the level 1 external assessments, candidates may be expected to demonstrate evidence through a simple investigation."* NO examples of such investigations. NOT ONE!

There has been a lack of communication, exemplars, debate and explanation of the change of direction of the standard and its assessment and this continues to generate frustration and anger.

If there is a philosophy for change then teachers should be consulted.

I will finish with reminding you of the effect that this experience has had on students.

Irrespective of how the marking schedule gets adjusted to accommodate the students' results, this year's MCAT has caused our students a lot of stress. The message they have been given is that the external exams in no way reflect what has been taught, and thorough revision and study will make little difference to how they experience the exam. Their self-confidence, and thus future attitude to maths, has now suffered a major set-back, and, as their first external exam ever, it is likely to increase their stress when facing the final exams later this year.

Regards

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Leader of Mathematics and Statistics Faculty

Rangi Ruru Girls' School