

Wednesday, May 14, 2008, 6.45-7.15PM

The National Mathematics Advisory Panel Report: Summing Up and Taking Stock
Deborah Ball

Summary:

In this talk, Deborah Ball spent half of her time talking about the background of the institute and the conference, and a little bit about the structure of the conference. She stressed the goal of this conference as a convener for people who are not close to the mathematics education community. The other half of the talk was dedicated for discussing some of her views on the report and some of her disappointments.

Details:

The talk started with an overview of the conference and a little bit about the history of MSRI and ended with a discussion about the Mathematics Advisory Panel Report.

Background and Goal of the Institute and Structure of the Conference:

She went over the background of the institute and the conference around critical issues in K-12 education. The conference has been around for six years. With the help of past directors of MSRI, in particular David Eisenbud, the initiative for education began to take hold. Education became a new part of the portfolio and for the first time education was included in the board of trustees. The education advisory committee, who is supervising the conference as part of MSRI, is to provide guidance nationally around issues of education. So is there anything special that the institute that can do for the mathematics education community?

She then went over some of the past topics discussed in the annual meetings.

Two of the past meetings focused on mathematical knowledge on teaching.

She asked for suggestions for future topics, but for now she goes over why we pick certain topics. As a side-note, she mentioned how increasing support in funding might suggest a sign for support for the annual meetings that we have.

With respect to goals of the MSRI meetings, first it acts as a convener, especially for those who might not be as close to mathematics education community. One way MSRI is structured is that it is supported by mathematics departments and affiliates. So it is of a particular interest and goal to have mathematicians to come to these meetings. In addition, books and videos are available to the community to be used after the conference.

In the past, different critical issues emphasize different goals of the institute. Shaping research and developments agenda is particularly true for the meeting on assessments. On the other hand, "raising the roof" focused more on research activities, as that's the focus of the topic. She asked Robert Bryant, Herb Clemens or Hyman Bass to add to what she has included as goals.

Side note: she was hoping for people to talk because she doesn't want to talk about the

math panel stuff.

She proceeded to thank Al Cuoco for organizing this conference. She then went back to the core questions for the workshop. She went over the structure of the three day conference.

The National Mathematics Panel Report:

There were two initial presentations by Deborah Ball and William McCallum then Roger Howe and Hyman Bass were going to comment on this.

She said that it's interesting because it's the first time she can talk about it after being released of her responsibilities of being on the panel.

In talking about achievement gaps she gives the example of the ability of determining student achievement using their zip code and skin color. She also emphasized the changing population and its effect on the multiple languages spoken by students.

On the same slide the second question was attempted to be answered by forming the panel. Algebra is in the executive order from the start. She highlighted the scientifically based research. Having a standard about what could be said, she said, would be helpful in a very contentious way.

-Elements of the report:

The following elements of the report grew more than the other ones: assessment, standard of evidence, survey of algebra teachers and instructional materials. There is a lot of writing. The actual report does not include the details included in some of these writings.

-Headlines

She offered her take on some of the headlines around the report:

1. The committee that she was in was the most diverse and complex committee but it's amazing that there was agreement on certain issues. She noted that it is an accomplishment that there was an agreement.
2. People became so involved in the discussion of procedural and conceptual knowledge, and this report says that these two types of knowledge are intertwined and this is the second report that says this.
- 3.
- 4.
5. They simply could not support so dichotomous claims. They are false dichotomies.
6. It has been very difficult to show this empirically but it also shows their license and how many years do not indicate how much mathematical knowledge they know. The closer assessment and less superficial way would better assessed teachers.
7. The design of research does not allow the panel to do this. There are as many differences between teachers within one program.

Some people in the panel wanted to conclude that because research seemed inconclusive then teacher education does not matter. But this is not wise because we do not know

enough or it has not happened yet. This suggest that there are more work to do with teacher education.

-Rational for what is included:

- 1.
- 2.
- 3.

-What's missing?

There are two reasons why they were not in the report. One reason is that some things are not part of the charge. In addition, as mentioned earlier sometimes there was not sufficient evidence to make conclusions from research.

- a. All the left bullet points are important but they were not included in the charge.
- b. For the right bullet points, they are not productive debates for curricula:
Third bullet point on the right: They were disappointed to say something about this because they cannot say what specifically which knowledge is important.

What's missing because of lack of...

1. There are definitions but nothing on work to do these things.
2. We just could not do them
3. It is very important that teachers deployed to teach

-Summary/ Content Knowledge and Skills

1. We need to be more clear about what needs to be learned and when.
2. On the next slide: these are the things that students need to move to algebra
3. Foundations and benchmark. This is not about practices but more about content.

-Learning Processes:

Includes other things besides those that she highlighted.

-Instructional Practices:

It is difficult to determine anything about instructional practices. Maybe not being able to say anything about instructional practices is no use. There is no real research on student centered or teacher centered. Labeling is confusing and misleading. With the exceptions of formative assessment there isn't any strong claims made about these instructional practices.

Side-note: part of the challenge for the panel is to pick an area that would be fruitful to pursue.

-Instructional Materials:

This section of the report is very brief. Very few members have no conflict of interest on materials. This is not an area where they could go very far because of limited research and conflict of interest.

-Assessment:

The section on the report that she chaired is on teachers and teachers education. There really are teachers' effects even within same schools. Teachers really matter, but the research that we have does not allow us to say very much about it.

-Teacher pay:

There is evidence that paying more attract more people to become teachers. But then at the same time there is not one that looks into how teacher pay improves quality. Also different types of teachers pay might pit teachers against one another.

-Mathematics specialists:

1. They frame it less of a result but more of a logical consequence.
- 2.
- 3.

Side-note: One thing that bothers her she mentioned was the talk about teacher quality vs. teaching quality. Interventions have a lot to do with the quality of student learning.

-Next steps:

What we can do to actively use the NMP report.

1. We should not focus our time arguing because someone might pass by and make a decision while there are more experts at this conference who might have more knowledge on some of the things.
2. She would like to see more links between teaching and learning.
- 3.
- 4.
- 5.
6. There are so many good projects but not the ones that allow us to say more.

-Disappointments:

1. Core issues = equity
4. These are really crucial parts

She concluded by encouraging people to look into the reports as there are some things in the report that are worth looking into but also it might be useful as a good lit review.