

Assessment SIG Meeting 7<sup>th</sup> August 2015 (10am – 4pm)  
Royal Society, Wgtn



**Theme: Measuring student progress and achievement: new understandings and challenges**

**Present:** Peter Rawlins (MU), Jenny Poskitt (MU), Alison Gilmore (Otago Univ), Kerry Mitchell (Educ Group), Anna Sullivan (Eval Assoc), Megan Anakin (Otago Univ), Anil Kaushik (MU), Rose Atkins (MU), Graeme Cosslett (NZCER), Roseanna Bourke (Vic Univ), Ben Laybourn (Eval Assoc), Sharon Cox (MOE), Mary Chamberlain (Eval Assoc), Mary Hill (Akld Univ), Linda Bonne (NZCER), Jane Hall (Open Poly), Earl Irving (Akld Univ), Peter Sanders, Robyn Caygill (MOE), Heleen Visser (MOE), Robert Stratford (Waik Univ), Beth Dungey (Waik Univ), Chris Cockerill (MOE), Jan Martin (Waik Univ), Vicki Thorpe (Vic Univ), Bronwen Cowie (Waik Univ).

**1. Welcome/introductions**

Participants were welcomed by a mihi from Peter Rawlins, and safety/administrative matters by Jenny Poskitt, the co-convenors of the Assessment SIG. Attendees were then invited to introduce themselves and to briefly share their current projects/thinking in assessment.

HV (MOE): Manager of research and evaluation; President NZARE – acknowledged and thanked Caroline Strachan for organisational work and support for NZARE. Current issue is understanding progress and achievement over time and through the school years; idea that many students not making sufficient progress year on year.

SC (MOE in HV team): Manage contract of National Monitoring project. Interested in assessment generally and currently conducting a small evaluation of teen parents in mainstream schools – the purpose being to retain them in mainstream schools to achieve at least L2 NCEA. The study is looking at their achievement outcomes and lots of challenges for vulnerable groups of students. We are exploring outcomes beyond the academic ones too.

Ben (Eval Assoc): I work with teachers at the chalk-face.

A Sullivan (CEO at EA): We are working on several strands of assessment including a partnership with Auckland University. We work with schools directly on assessment for learning, e-asTTle support to schools – including workshops, online and in school support); some work with Māori medium and kura; and provide OTJ workshops on behalf of MOE around the country.

EI (Univ Akld): I previously worked on e-asTTle, and more recently on the Start-up project – a longitudinal project spanning school years 9-13 and linking to tertiary enrolment. I am working on two papers at the moment linking to set targets: disaggregating PI student data and an interesting paper coming through on explaining some of the related myths.

Jan (Waik): Director and Associate Dean of Professional Learning (kura, mainstream settings – progress/ach/wellbeing and how they come together.

BD (Waik): I am working with schools on leadership, system coherence in relation to assessment in schools; management support, as well as some time in schools.

KM (Educ Gp Ltd): I previously evaluated, with Jenny, ATOL. My current interest is in partnership of parents and schools especially with Pacific Island students and their families.

RC (MOE): I am the National research coordinator for the trends in international mathematics and science (TIMSS) in schools – with a current interest in resilient students (and lack of in NZ – according to an international report!). We are concerned about student understanding of maths and science and poor progress in conceptual understandings.

RS (Waik – based in Wellington, a doctoral student): I have a weak link to assessment; previously in ERO and wrote national evaluation reports (assessment for wellbeing, science). I will discuss my PhD this afternoon.

MC (Eval Assoc): I have had assessment interests for a long time. My current focus is on school's graduate profiles. Schools often contain statements about desirable graduate profiles and yet they only assess maths and literacy. If they are serious about their profiles how do you focus on it and assess? It is an area ripe for collaboration. My other interest is in modern learning environments – what are the affordances from the massive building project? What are the implications for assessment and what is the assessment of that investment?

VT (Vic Univ): I am a music lecturer (recently completed PhD).

My research was an action research project in secondary schools that investigated group composing at Year 11 level and NCEA assessment. NCEA L1 practitioner research and team taught, grappled with NCEA individual grades within collaborative products and assessment of the collaborative process in creative environments. I am currently working on conceptual models for meaningful work for students; and using activity theory to tease out complex relationships.

RA (MU): I am a doctoral student and a lecturer. I am currently on a TLRI project with Michael Johnson and Rowena Taylor in which teachers are enacting Social Studies concepts and assessments. My PhD is focused on assessment practices in junior high school Social Studies. I have a passion about assessment in a learning oriented way.

AK (MU): I am a doctoral student at the writing up phase. My PhD is related to conceptual understandings in science. I will explain it later.

CD (MOE – comparative international research studies): I have responsibilities overseeing projects such as PISA, PiRIs, Taills. I have been at the MOE for one year.

MA (Otago): I recently joined the National Monitoring unit and am a PhD student.

AG (Otago): I am in the assessment and NMSSA unit and will talk more about the projects later.

BC (Wai): My current assessment interests are exploring the different ways children represent what they can do and what they might do next. I am interested in the development of teacher and student mathematical thinking; data literacy and statistical literacy and how it intersects with maths knowledge. I am interested in capacity building in assessment and making sense of it; also continuity between early years and role of assessment in smoothing transitions.

MH: (AklD): My current passion is in teacher education in assessment -of, for, as learning. I got into this space from the TLRI project across the country and found internationally we are doing a very good job of teacher preparation in assessment. We have equity issues – and there is room for improvement through assessment. I am working on an international project between Boston and Auckland in which we are rethinking ITE. We have synthesised international literature on how to promote equitable outcomes. We are in the process of publishing a paper about practices for equity to inform our teacher education programmes. It highlighted one practice of using evidence to scaffold learning and enhance teaching. The practice as a whole can be thought of with a whole range and pattern of teaching. Working in our Masters of Learning and Teaching – our research is looking at use of evidence to scaffold learning and teaching. I am advising a project in South Africa on equity with assessment for learning. We must be able to crack it. Equity is my focus.

JH (Open Poly): I lecture in the Education Studies department. My focus is on ECE and adult education – two certificates for teacher aides and after school care. Teacher aides work with students who are not achieving and it is very important they are as skilled as possible to help the children. Last year I was involved with NZQA in a teacher aide qualification working party. Because we are a distance provider and our teaching is online – how do we assess using online means as effectively and in the same depth of probing as with face to face assessments? We have multiple intakes during the year which complicate matters so I am hoping to get information and ideas today.

RB (Vic): I am responsible for an intern programme with educational psychology. I am interested in how we move from diagnostic to dialogic assessment. I have completed a pilot study (in which we use 25 forms of assessment) with the predominant form moving into observations and interviews and away from psychometric assessments. My ongoing interest is in self-assessment – until we can support children and tertiary students to self- assess they will rely on external sources. I am on a mission to liberate learners through self-assessment! As an aside I have a niece who told me she had been selected to represent NZ – it turned out she is one of the selected students for the current PISA study! Motivation is important in assessment. Students' motivation in assessment and their understanding of NS in primary school is another interest. Children have brought us to the point of learning – and taken it back to teachers. The teachers then brought the kids' perspective back to NS – teachers conceptions are bounded by curriculum.

GC (director of NZCER): I am doing a research project with NMSSA between paper and online versions of assessment – lots of questions for schools. Reading assessments first and what that means for schools (going completely on-line); exploring computer adapted assessments in secondary schools – assessments better targeted to student knowledge and experience. I am conducting a collaborative inquiry with a cluster of schools – how they understand, use data and tools they use.

LB (NZCER): I am exploring resilience, well-being, moving beyond achievement to other affective aspects affecting student achievement and maths efficacy (PAT on-line with some self-efficacy longitudinal data). I am exploring

relationships between achievement and self-efficacy; what progress looks like with PAT maths. In national monitoring we are exploring new grounds in maths.

PR (MU): My interest is in student progress, measured by things other than data. I am also interested in the interplay between PISA and policy and subsequent impacts on learning. How these factors filter down the system and drive the raising of student achievement without dropping the ball on other things. I worked in a team who did a literature review on IES – ontology – what evidence informs policy – can policy be contextually and politically free? Tricky space at moment! TLRI project – we are using your (Hill et al) surveys to do a parallel study within our ITE programmes.

PS: I am a doctoral student through Victoria with a secondary school background. My research interest is in the assessment of Pasifika students in NCEA.

JP (MU): My research interests relate to assessment and professional learning. Are you aware of the Special Edition on assessment in *The Curriculum Journal* 2014 25(4) that arose from last year's International Conference on Assessment? From that conference two edited books are to be published early next year. One of them is focused on the issue of implementation processes with assessment (Laveault & Allal) and the other (Volante) related to the impact of international testing on their country's assessment policies and educational focus. You may be interest in the NZ chapters in the books:

Poskitt, J. (2016) Communication and collaboration: The heart of coherent policy and practice in New Zealand assessment in Laveault, D., & Allal, L. (Eds). *Assessment for Learning: Meeting the Challenge of Implementation*. Series: The Enabling Power of Assessment (Series Editor: Claire Wyatt-Smith), Canada: Springer.

Poskitt, J. (2016). Global perspectives in New Zealand. Volante, L. (Ed.) *The intersection of international achievement testing and education policy: global perspectives on large scale reform*. Canada: Routledge.

In other writing I am exploring the notion of OTJs and the involvement of students in devising those judgments, to address injustices in some assessments, especially in years 7 & 8. The area of achievement in years 7/8 also intrigues me so I am exploring that, at the moment through the impact of technological device use on student learning and achievement.

## 2. Updates from the Ministry of Education: international studies and priorities in assessment

10.49am

### a) Overview of Comparative Education

Chris Cockrell (Manager of Comparative Education Research unit - international assessment unit in the MOE).

Chris indicated the range of international testing in which NZ participates and is managed by his unit: PIACC (adult skills via computer skills – 1<sup>st</sup> study), PIRLS, PISA, TALIS (teacher and principals, Nov 2014), TIMSS.

1. Just published TALIS (international version) and getting data out – interesting insights but not yet ready to publish in relation to the NZ data and its implications. Interesting findings on new teachers, classroom management and ITC use.
2. Why do we get involved in international studies which require a high quality pool of talent and expertise to build them? Comparability – identifying common factors across the various educational systems. It is easy to make comparisons; powerful to show where we are in relation to other countries. However it is not just an assessment of achievement outcomes. Other factors such as home background and student motivation are captured that provide richer contextual information for interpreting each country's data. There are guidelines for participation and there is increasing difficulty in getting participation (cost, time, timing...)
3. PISA (administered by the OECD) is currently underway with gathering of data from 15 year old students in 190 schools in NZ. PISA samples a range of factors such as student behaviour, efficacy, delivery of curriculum, equity, ethnicity, gender. The current focus is on science with collaborative problem-solving being assessed for the first time. PISA reporting tends to reflect the OECD focus on economics and the effects of division of labour. This year it is the first time PISA testing is completely computer-based. For more details access the OECD website – the full report is an interesting read (OECD, vol 1-1v 1951 pages). Look out for upcoming reports on students and computer use, low performing students, student confidence – to be released between October and December 2015.
4. PIRLS – Next round of testing is to occur in Oct/Nov this year and it gathers data on Year 5 students. Be aware it is called PIRLS 2016 due to different testing times in northern hemisphere. New Zealand findings show our large tail and large head in achievement.
5. TIMSS (IEA) Most recent testing was in Nov 2014. TIMSS gathers data from Yr 5 + Yr 9 students. In those results NZ was stronger on questioning on data displays, weaker on geometric shapes, algebra and

measures (similar to other similar countries). Asian countries show a different profile in maths results. Last round revealed a gender gap and decline in science.

6. Policy brief – can be found on the website: [www.ieas.nl/policy%.....](http://www.ieas.nl/policy%.....) International testing functions on agreed assessment frameworks. PISA, PIRLS, TIMMS show reasoning to be a strength in our NZ system but what about the detail/knowledge? There seem to be some gaps there.
7. TALIS (OECD) – 163 schools (principals) and 3000 teachers. First time in NZ Nov 2014; data just received. Data were sent to OECD – data quality checks are undertaken. We get our data back just before release of the international data; so we can absorb our trends. But with TALIS we have to do our own analysis (ITE, professional development, feedback, job satisfaction and so on).
8. OECD publish TIFs (Teaching in Focus) similar to PIF – recent one on teaching with technology. NZ seems to be ahead of the curve on that. NZ participates to gain information on how we can lift aspirations and raise educational achievement for every New Zealander.

#### b) Heleen Visser:

1. Minister Parata uses data and trends from these international tests such as TALIS to ascertain trends (how NZ is doing compared with other countries, but also how we are tracking compared with earlier administration of various international tests). TALIS indicates there are issues with equity in most countries.
2. Comparisons drive us – if countries are doing better than us that triggers a response from us to instigate some changes. International testing has a push and pull effect. The push is key information into the MOE; the pull is policies being worked on are informed by information to which we can contribute. Equity is a focus and the MOE has high interest in equity data.
3. A lot of data on the OECD websites and NZ MOE are available for reporting. There is an application process to go through but MOE are very willing to share information.
4. NZ statistics are linking data across agencies. (You need to go into a particular room and submit data to get it checked). Subsequent outcomes of tertiary data on employment are linking education and IRD information. It is governed by Statistics NZ. There are huge opportunities there [for further research and analysis]and we are happy to facilitate some of those things.

#### Research in MOE

1. Structure of MOE:
  - a) Evidence Data and Knowledge (EDK) is a new group in the MOE led by Deputy Secretary Lisa Rodgers (person dedicated to this information at the MOE leadership table)
  - b) EDK comprises three groups: data and information stewardship; analyses and research; evidence, syntheses and communication.
  - c) Research and evaluation team (Heleen Visser) and the Comparative Education Research Unit (Chris Cockrell).
2. Priorities for assessment research (improving our understanding of student progress; supporting communities of schools, improving the use of assessment data in evaluation; Māori medium assessment research; maths – due to recent work and current investigations)
  - a) Student progress – we need better information in our own system about student progress against our own curriculum. The expectation for students at primary school is to progress on average one curriculum level every two years (half a curriculum level per year). From a measurement perspective where is the 'at' e.g. by end of year 6 at level 3. The difficulty is our curriculum levels were never thought of as halves – by implication we expect students to progress half a curriculum level each calendar year. By the end of Yr 8 students are expected to be at L4 but what does 'at' mean (near, middle top)? So there is challenge in there for us.
  - b) A note of caution when we make international comparisons with our system. We need to think about what sort of country we want to be and proportions of time spent on writing and maths (some other countries spend more time on formal learning than in NZ).
  - c) NMSSA – science most Yr 8 students are performing at emerging L1+L2 science (which is effective 3-5 years behind in learning at schools). These trends broadly line up with NS data – the bulk of our Yr 4 students are performing at Level 2; and the bulk of our Yr 8s are performing at L3 (not the expected L4). We look at these patterns and what they might be telling us, as well as the spread of achievement. There are some interesting trends, such as in critical thinking in health & PE our Yr 4 students are above curriculum expectations (L3 not L2), yet by Yr 8 most are performing at L3, some L4).
  - d) The proportion of students NOT achieving at the level expected by curriculum is greater in later years in primary. At Yr4 most students are on track, but Yr 8 more are below. There are large disparities in

achievement by school decile, ethnicity and gender (literacy only). We need to be cautious though as proportions of students achieving at the level expected by curriculum varies across datasets. How do we make those judgements? People need to understand judgments are a human process. Data on progress suggests our average annual progress is not sufficient to reach expectations of the curriculum in the higher years of primary schooling. To complicate matters, there are more difficulties in curriculum areas without a history of alignment or progressions.

Q: What differences in achievement do you notice between full primary and intermediate schools?

HV: There is a slight trend in full primary of slightly higher achievement gains than in intermediate schools, but they are minor and were not evident in previous NEMP data.

- e) MOE talks about one year of learning for one year of progress. According to our secondary schools, there are a bigger proportion of students at L4 in Yr 9, (compared to the expected L5).
- f) Challenges – how to continue to improve our understanding of progress against NZC; where should we set the ‘benchmarks’ for measuring progress; what does a year’s progress look like; how does progress differ for different learning areas; how to communicate this information, support a productive dialogue, improve our understanding of the curriculum and build assessment capability across the education sector? (The big challenge is to have positive dialogues that improve what we do).

MC: Our challenge is to connect across curriculum information, such as our student engagement and suicide rates as well as other schooling outcomes.

PR: Concerns about accountability forces

- g) We have some student perspectives, such as the NMSSA has a survey shedding some light also from PISA data.

KM: we have conducted research in Auckland schools that provide some insights from a Pasifika student point of view.

- 3. IES and Communities of Schools
  - a) Development of achievement challenges; leadership; TLIF, principal recruitment allowance. How do we support schools in building assessment capability and purposeful collaborative inquiry across the community of schools? MOE produces aggregate data as conversation starters – but needs to move to more sophisticated place to assess progress through the pathways. What does good data use look like?

MH: question around inquiry compared with innovation? Is there any harnessing of data around it?

HV: Panel led by Robyn Baker – two part process of applications – first an expression of interest which is judged to be worthy (or not) and on the basis of feedback from the panel those applications considered to be worthy and worthwhile are asked to improve their applications and to develop them to a full proposal (again based on further feedback from the panel). Data are being collected and monitored on the process.

BC: (Waik) I am involved in one. It is a different sort of involvement and good discussions been had.

- b) TLIF is truly teacher-led – and involvement of academic is at behest of the teachers – empowering teachers to do the work. Robust process. Let’s make it work as well as possible and support them with it.
- c) Challenge: Improving use of assessment data in evaluation – importance of developing criteria for ‘expected progress’; how to measure ‘accelerated progress’ in evaluation; appropriate methods and tools. Like teen unit – goal is to have them achieve L2 NCEA – but there are other important goals in the process too.
- d) Challenge: Māori medium data - need to do better.
- e) Challenge: maths – as an example in international data our performance is dropping in maths (more than just the Numeracy project) added is the NMSSA and NS data (supporting the evidence that performance is dropping in maths). We have an issue with maths that has us worried about direction of trend. We need research to help us understand what is going on – where do we change our policy, teacher education, PD, curriculum, society attitudes.

AG: Who might be involved in thinking through the issues? In NZ we need more cross-sector meetings to identify strategy to move forward on the issues.

HV: Research helps us, but is not the only source of information.

- f) TIMMS data – score in number domain did not change – it was other areas like geometry and statistics went down. People have taken focus off where number is used in context (but we may be doing okay in

number). We did well in teacher dialogue about maths, more talking about maths and investing PL on maths.

### 3. National monitoring (NMSSA)

Discussion led by Alison Gilmore

1. Purpose of NMSSA is to assess and understanding student achievement across NZC at primary level from national representative samples at school Years 4 and 8.

Cycle	Year	Focus
Year 1	2012	Science, English writing
Year 2	2013	Health & PE, Maths
Year 3	2014	Social Studies, English reading
Year 4	2015	The Arts, English listening and viewing
Year 5	2016	Technology, Learning Languages

2. Group administered assessment (GAT) and individual assessments (IA). GAT up to 25 students/school (paper and pen and computer); IA 8 students/school (1:1 interviews and performance tasks). Total GAT 2,220 students; IA 800 students per year level (Yr 4 + Yr 8)
3. The monitoring programme is evolving. Its focus is on understanding achievement – students (attitude, self-efficacy; engagement; opportunities to learn in school or outside school time; amount of English spoken at home; absenteeism or lateness to school; demographic variables).
4. Teachers’ (self-efficacy statements; opportunities provided to learn, professional support to meet differentiated needs of students; professional support for teaching, PLD; demographic variables; - not representative samples but snapshots with teachers.
5. Principals – provision for learning and teaching; professional support for teachers; curriculum priorities of school.
6. Generic contextual information collected per cycle:
  - a) Key competencies in the classroom
  - b) Classroom climate
  - c) Individual SES
  - d) Home support for learning
  - e) ICT
  - f) Cultural responsiveness; relationships with family/whanau (teachers and principals)
7. Exploring datasets
  - a) Datasets contain all the variables; achievement/attitude scale scores, scores on IA tasks, responses to questionnaires, extensive demographic data
  - b) Original sources – students’ GAT responses by item; students’ responses by IA tasks – digitally stored, accessible in the NMSSA offices
  - c) Application form for accessing data on NMSSA website.
  - d) Visual data, video recorded, PDF of written responses, computer delivered tasks.
  - e) Access the website for an application form to enable you to inquire about access to data.
8. Contributing to NMSSA
  - Specific research questions that might be accommodated within the design for data collection in NMSSA
  - Development of instrument e.g. research and development of ‘home support for learning’ measure
  - Development of assessment tasks – many staff have been involved in curriculum advisory panels (particularly challenging in the arts – describing elements of performance)
  - Develop resources for teachers and principals
9. NMSSA Reports are primarily for policy makers (on website - a good read); and summaries for teachers in Gazette. This year publishing an overview report containing big picture of variables; and a technical report to support investigation of findings; and summary of findings for priority learner groups; brief reports on other aspects. Report on contextual factors (questionnaire information) and looking at relationship with achievement. This year multi-level modelling to investigate data in more intensive way and to produce resources for teachers.
10. Advantage of database:
  - Extensive data already collected

- Appropriate for researcher, teacher, ITE, PG study
- Qualitative and quantitative approaches to research
- NMSSA datasets linked to other datasets via NSN – on application to MOE
- Re-analysis of data to answer your own research questions
- Commissioned studies by NMSSA team
- Support for accessing data, analysis and writing for publication

To contact a [alison.gilmore@otago.ac.nz](mailto:alison.gilmore@otago.ac.nz) nmssa.otago.ac.nz – findings (selection panel and ethics committee approval needed)

<https://www.educationcounts.govt.nz/publications>

11. Four year cycle to sample same cohort was characteristic of previous NEMP but with inclusion on all the Arts and different aspects of English curriculum too difficult to assess within four years. The NMSSA is more closely aligned to NZC than NEMP was designed to do. We can assess on growth now so e.g. SS 33 scale score differences in the four years. Learning not regular over the four years, but we can anticipate about point score shifts of about 8 per year level. We have found gender differences but not differences in school type.

#### 4. International testing

Robyn Caygill (MOE) – Using the IEA International datasets for informing policy and practice

Robyn attended an IEA workshop on IEA International Databases (International Association for Evaluation of Educational Achievement – founded in 1958).

- NZ has been involved in TIMSS (since 1994); PIRLS since 2001; (ICCS, SITES, Rg Lit Study, CompEd, SIMS, Six subject study) – all available for access. Other studies include: ICILS, TIM, e-PI
- Access more information from: [www.iea.nl](http://www.iea.nl)
- Key questions: what can IEA studies tell us about education systems and what can't it reveal? What are most appropriate methods to reach policy and practice recommendation from data?
- Can be applied to OECD studies, NMSSA
- Taking results of research to policy and practice – not straightforward, not linear and requires hard work. Policy recommendations can be like a menu of possible interventions, some universal and some targeted. All have different costs; levels of feasibility, what give up to do it? For many countries policy recommendations may be different for individual countries – see resilient students' paper for example (NZ had insufficient numbers of students being called academic resilient– needed at least 2% to qualify). The study used a particular definition of disadvantaged and resilient). Their summary recommendations are not necessarily applicable to each country so data interpretation needs to be individualised for each country and its context.
- You should not make causal statements with basic analytical data (e.g. achievement vs books in the home) to do so requires sophisticated analyses and you have to make strong assumptions in order to make any causal links. (e.g. propensity score analysis, rubin causal mode).
- Focusing on A+ countries' (Finland, Singapore, Korea) can be detrimental. Policy x in place in the A+ country does not mean that implementing that policy will lead to success in NZ. Take a holistic view that incorporates other policies and practice in countries that aren't doing well. Look at trends and patterns, not just at snapshot data.
- For further information check out the following websites:  
<http://www.iea.nl/policy-briefs.html> (find policy brief on resilient students)  
<http://www.timss-sa.org.za/>  
<https://crell.jrc.ec.europa.eu/?q=publications/teaching-practices-primary-and-secondary-schools-europe-insights-large-scale>  
[www.educationcounts.govt.nz/goto/timss](http://www.educationcounts.govt.nz/goto/timss)
- Mention of changes in curriculum to European Union studies.

#### 5. Doctoral student project reports and discussions

a) Rose Atkins (MU) – assessment practices in Social Studies to promote learning – how do teachers use assessment to improve learning in years 9 and 10? Two phases – intensive AR exploring with teachers how they formally and informally assess learning in SS and how they might adapt/refine their assessment practices to align with what they assess and why, as well as self-assessment and how we might portray student progress. Teachers have played with conceptual understandings to show progress. Experimented with concept diary with the

students – what went well and what we needed to adapt. Another member looked at formal assessment tasks. Other phase conducted national survey 464 completed surveys to analyse. (Surveyed teacher assessment practices, views on assessment, types of teacher respondents). My contribution is in a year group in which there is little research.

Discussion arose about how Rose gained such a high response rate:

- Timing – early November could be good for secondary school questionnaire distribution.
- Use of Survey monkey
- Tapping into supportive networks – support by the SS Association
- Brief discussion ensued on paper versus electronic versions – problematic in some circumstances and NZCER doing an investigation on it.

b) Anil Kaushik (MU). His topic is centred on assessment of collaborative and individual work in secondary science. Does computer-based collaborative concept mapping (CCCM) affect conceptual learning in science? Students had practice sessions on sample concept maps. Anil designed assessment rubric for concept maps - proficient, intermediate, novice. Designed individual assessment test based on Anderson and Krathwhohl (2001) revised taxonomy table. He measured lower and higher order cognitive skills; and showed some exemplars of various levels of the rubric.

Questions were raised about treatment group. Only the experimental group used concepts maps. Discussion occurred about the formative assessment processes and clarification of understandings.

c) Megan Anakin (Otago) accessed EARU – mostly interrogated existing databases. 132 students at each of year 4 and year 8 missing answer questions – misunderstand = sign in algebra. The doctoral study is using a combination of cognitive perspectives and socio-cultural theories. Students' conceptions of equality and their mathematical understandings as they solve the mathematical problems is the central focus. Megan wants the research to be useful at classroom level. She has used mixed methods – qualitative and quantitative analysis. Maths is about the ability to generalise.

Our department measures maths knowledge on entry of student teachers and we have found they are declining in their knowledge of maths. Some colleagues are exploring affective and contextual factors. Treasure trove of data in the NMSSA and it works with kids in classrooms. Accessing such data overcomes issues of recruiting research schools.

Questions/discussion: Different concepts of equality and students who 'don't know' – usually have considerable more knowledge than those who give a quick (wrong) answer. Possible tensions in the assessment system – of surface responses compared with deep learning responses (depending on the types of questions posed) and how to access notions of creative responses.

Need to encourage classroom conversations to deepen knowledge on mathematics.

NCEA – new adaptations – some new options and multiple possible answers may access deeper conceptual answers (only if students are not taught only procedurally).

d) Rob (Waikato) – PhD not centred in assessment but rather on notions of ecology and well-being. Asks questions about how we view education and responsibilities in the way we view and act in the world. The doctorate has personal and societal elements as well as concepts around humanity. Rob's purpose is to rewrite the tertiary education policy framework away from economic to ecological and radical alternatives.

2.55pm Big questions; potential collaborations....

## 6. Questions/discussion/potential collaborations

Earl Irving – we have developed massive databases in secondary school and links to tertiary institutions. Mostly lower socio- and Pacific and Maori students. The databases are anticipated to be available around March 2016. Starpath project 10 yrs of data. Quantitative data, mostly student achievement data (especially those students who are performing 'not at' expected curriculum levels) and NCEA data. Qualitative – interviews with teachers, students, principals, parents, counselling youngsters to help them have better outcomes.

PR – relationships (peer-peer, peer-content) key in first year university students (PhD study), importance of relationships between teacher and student; others have high motivation to pursue.

PISA Collaboration problem solving – child and avatar on computer – so it is not collaborative learning.

PR – IES – student outcomes are more than achievement data. There is potential exploration to look at other types of data and favouring of achievement data.

NZCER – wellbeing in school survey database (70,000 students). Anonymous – open to being explored further. We are looking at establishing/monitoring the database in relation to bullying in schools and other topics. (Graeme Cosslet)

AG – It seems in New Zealand we may need a new set of skills to utilise data we have around investigating large databases.

MOE – manager of stewardship of data – part of the intention of that role is to make data available for access.

EI – concern about schools holding data about a student that is not available to the student or other schools. Need for central database about their (achievement) learning (discussion underway online about the potential for that). Schools can still tailor it to suit their needs. The only SES data we have is at the school level. We would like to know how kids within schools are doing – to have some SES indicators to overcome current crude indicators.

MOE – Growing up in NZ is a huge database and increasing education indicators (7,000 children about to turn 6). Those data will enable us to link education to health and other domains.

## **7. Other business**

PR – would it be valuable to list those databases on NZARE website, protocols surrounding them and who to access for them? Email Jenny/Peter with the databases and contact people.

MH – *Assessment Matters* – next one coming is about fairness. 2015 regular issue closed. 2016 open for contributions – special section on social risks. The journal is growing strongly internationally.

PR – Would you like an Assessment SIG meeting at NZARE conference?

Brief discussion decided the SIG would like to have a meeting and there was a desire to revisit available databases. A half day meeting was likely to keep the community momentum going.

PR: An advanced notice that Massey and NZCER are sponsoring international visitors Creswell and Johnston (mixed methods). There will be a one day seminar talking about mixed methods during the week of the 7<sup>th</sup> -11<sup>th</sup> December this year in Palmerston North. The seminar will be a golden opportunity to learn from those experts.

Caroline Strachan was thanked for her administrative and organisational support. The co-convenors Jenny Poskitt and Peter Rawlins were thanked by the NZARE President for their organisation and chairing of the day.

Meeting finished 3.20pm