

Highlights of Meeting of the Monitoring and Evaluation Colloquium

Using ANAs results for reflective teaching and learning practice

10 November 2015



Setting the scene

The final Monitoring and Evaluation colloquium for 2015 was held on 10 November. The colloquium explored the topic, 'Using ANAs results for reflective teaching and learning practice'. In her presentation, Nicky Roberts discussed how question-by-question analysis of ANA assessments has been used in the Focus on Primary Mathematics project (2011-2014) to monitor learner attainment, diagnose areas of common difficulty and support teacher professional development processes. The analysis has particularly been used in improved marking, collaborative lesson planning and reflection cycles in relation to Foundation Phase mathematics.

The colloquium comprised various academics, researchers in Maths education and evaluation specialists as well as CSI practitioners. We also heard perspectives from programme managers and government officials.



Overview of presentation

The aim of the Foundation Phase Maths Project was to improve performance within foundation phase mathematics using the ANAs. The main area of concern was that there were a lot of errors in marking, but also totals being reported to the province did not correlate. A key reflection was on how to improve the quality of data and use it to improve the quality of education. The improved data was used as a diagnostic tool for teaching and development. The project was carried out in two schools in the Western Cape area.



Background to the two schools

- 2 schools are equal partners in development project, chose to be named at school level
- Capricorn Primary School (CPS)
 - 700 learners, 2011 below provincial mean (ANA and systemics)
 - Township, backyard dwellers, poverty, gangsterism and taxi violence, drugs (Tic), alcohol (FAS). Mostly households in poverty.
 - Minority not English main lang, LOLT is English
- The Grove Primary school
 - 700 learners, history of excellent attainment (ANA and systemics)
 - Suburban, model C, mostly affluent households
 - Majority English main lang, LOLT is English

Key components of the intervention

- Established school-based mathematics teams for foundation phase teachers.
- Structured programme around mini seminars at least twice a term to have discussions across the grades within a phase to talk about technical issues related to mathematics, and after that established interventions around mathematics.

- From that, teacher interventions were identified. Sometimes they involved teachers teaching and observing one another and reflecting and sometimes they involved the researcher teaching and then passing on more and more responsibility to the teacher.
- Teachers were also involved in an accredited mathematics thinking course which linked core teaching and reflective practice. This was a 10 day intensive residential course that enabled teachers to improve their mathematical thinking and their own approach to mathematics. As part of the course, teachers needed to try something out in their classrooms, share the experience with peers, reflect on it and submit an assignment on it.

What did this process help with?

- ✓ There was much better and accurate data to share with the province.
- ✓ Grade summaries per year were created which enabled the comparison of two years by looking at particular topics. This enabled the revision of the teaching and development plans from the first term.
- ✓ Across the grades there were planning lessons, a week of teaching and then reflection.
- ✓ After reflection teachers wrote up those for presentations at conferences like AMESA – presenting what they found from the ANAs, sharing lesson studies, their reflections and what they had learnt.

Conclusion

The ANAs are a major investment in the South African education system. There is a need to work collaboratively to improve the quality of the data resulting from them. We can achieve this through designing them properly and including anchor questions. Through proper design, the schools can have an opportunity to use their own data and therefore respond quickly to issues that can be handled immediately. The ANAs give a very rich data set for error analysis as long as it is looked at item by item.

Click [here](#) to view Nicky's full PowerPoint presentation.

“You can't understand what is happening in the education system when all you have is the matric results. We now know a lot about early interventions ... which is the result of having data – sometimes patchy, but we do have data.”

Discussion

- Developing a relationship of **trust with the teachers** is vital. In this case a two pronged approach worked:
 - i) Working with one teacher in each grade, initially teaching the whole lesson and later co-teaching.
 - ii) Afternoon clubs which involved voluntary sessions with learners



- Also important is the **development of trust amongst teachers themselves**. School management plays a critical role in facilitating buy-in and building trust amongst the teachers.

“Trust - only after I had done it could we have conversations about how they were doing it”

- **Combining academic and peer to peer support** gave the teachers much needed confidence and increased their level of commitment. When teachers knew they were being marked, there was much deeper commitment. The teacher being marked was highly motivated and the rest of the team got together to support their peer. Teachers were also motivated to try new things once they noticed improvement in children’s performance.

“We teach children, we do not teach CAPS!”

- **District involvement** cannot be undermined. In this case, the district maths subject advisor became involved as a result of the evident improvements in the systemic results. This led to the formation of communities of practice driven by the district as well as collaboration with the two schools. The province also got involved and got teachers from the two schools to make presentations at national level.

- **Professional development** was one of the key outcomes of this intervention. Teachers became more confident. They realised that they had things that they could share and that it was worthwhile getting together with other teachers and sharing.

- **Sustainability and building institutionalisation** is always an area of concern for short term interventions. School-based communities of practice encouraged engagement within the school resulting in ownership of the intervention by the schools. This has become a powerful way of ensuring sustainability of the intervention.
- **Timing of the ANAs** continues to be a sensitive area. Suggestions were made for ANAs to be done early in the year which will in effect provide sufficient time to address the issues through the year.

Other areas of discussion covered during the colloquium are highlighted below:

| Experiences and Challenges with ANA | Ideas for dealing with challenges presented by ANAs |
|--|--|
| <ul style="list-style-type: none"> ❖ Grappling with getting a standardised measurement or comparison. ❖ There is a lot of negativity around ANAs. Teachers feel that ANAs are a burden to them. ❖ Teachers don't understand how to analyse the data. They need skills in Excel as a starting point. By the time they get to analysis, they have lost interest. ❖ Performance of principal and teacher is not pegged to ANA results thus no accountability. ❖ Teachers focus on teaching to the ANAs rather than concepts. | <ul style="list-style-type: none"> ❖ Compare against schools and mean – will show whether there is improvement or not. ❖ Include as a performance measure by reporting to parents and integrating results into promotion requirements for learners. ❖ Use ANAs to identify concepts and focus on learning areas where improvement is needed ❖ Teachers should follow the intervention plan from the beginning of the year to give more time for intervention, thus less pressure on teachers. ❖ More focus to be given to Foundation Phase rather than FET Phase. ❖ Use them as a baseline for teacher performance and determine the support needs from there. |



Facilitator Reflection on the CoP

In reflecting on the study and group discussions, the facilitator highlighted some key principles that we need to look at going forward:

- It is important to involve teachers in the process of analysing, interpreting and dealing with ANA data.
- School management needs to take a leadership role and role model a willingness to deal with the implications of the ANA data.
- The role of the external party who intervenes in the process is to build the capability of the key role players and stakeholders to shape and bring about change.
- Data is neutral and its value depends on how we use it. The value of the ANA data lies in the extent to which teachers are willing to break it down, to look at the detail and to learn from this.
- The importance of not losing sight of the particular purpose of the ANAs, which is to diagnose problems and improve teaching and learning.

Annexure

| Name | Organisation |
|---------------------|---------------------------------|
| Barmby Patrick | University of the Witwatersrand |
| Basson Mariette | Brainwave Careers NPC |
| Bisgard Jennifer | Khulisa |
| Chetty Mark | DBE |
| Clack Darren | Pearson |
| Dale-Jones Barbara | BRIDGE |
| Elibiary, Amira | Tshikululu Social Investments |
| Johnson Craig | BRIDGE |
| Khan Zarina | Facilitator |
| Madida, K | Wits |
| Matumba Fannie | PROTEC |
| Mayet, Aneesha | JET |
| Mbokazi Zakhele | Zenex Foundation |
| Miya Duduziwe Irene | Izibuko Primary School |
| Mosiuoa Busisiwe | Pearson Education |
| Okelo Benter | BRIDGE |
| Roberts Nicky | Presenter |
| Smith Camilla | Merseta |
| van Wyk Astrid | iSchoolAfrica |
| Vorwerk Margie | Bridge |
| Webber, Kate | Pioneer Academy |
| Williams, Edcent | DHET |