

Intel® Teach Evaluation: Exploring Implementation at the Provincial Level

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1. INTRODUCTION

Intel® Teach was in its fourth year of implementation in South Africa in 2006. The programme underwent major changes moving into year four. These were:

- *Revised materials* – the South African localized programme consisted of a four-day modularized course. In addition, modules could be used stand alone material for specific workshops. The online Thinking Tools were integrated with Essentials to form one programme.
- *New training model* – The train the trainer approach is no longer being used. Instead two senior trainers from each province were trained by SchoolNet South Africa (SNSA) with the aim of running training in schools in their province. In some instances this training is funded by provincial departments of education (PDE). Well resourced schools also independently request SNSA to run training in their schools. In addition, PDE employees were encouraged to become senior trainers to provide training at schools in their province and also support for teachers' implementation in the classroom.

The objectives of the Intel® Teach evaluation for 2006 were to:

- Track implementation progress using the new training model, including: number of provinces involved, number of senior trainers trained, number of schools at which training has taken place, numbers of educators trained, and extent to which ICTs are being used to support teaching and learning following participation in Intel® Teach.
- Evaluate implementation of the provincially-based training model in order to:
 - Understand the role(s) that the Provincial Department of Education (PDE) plays;
 - To identify factors supporting or hindering PDE involvement and through this to learn lessons for other provinces;
 - To document how PDE training and orientation sessions take place;
 - To review responses of PDE officials to this training; and
 - To assess the value of training PDE officials – i.e. does participation in training or orientation sessions translate into training in schools, and support for teachers.
- Understand how the revised Intel® Teach materials are being used – for stand alone workshops, three day course, four day course etc.

A mixed-methods approach to data collection was used. This included qualitative and quantitative data collection, including surveys, observations, semi-structured interviews and focus groups. The table below summarises the data collected during the course of 2006.

Table 1 Summary of data collected

Data Source	Number Of Responses
One day conference evaluation forms	298
Annual impact surveys	58
Provincial orientation workshop evaluation	177 ¹
Post training evaluation forms	51
Provincial representative interviews	15
Interview with National DoE representative	1
Training observations	2
Focus groups with training participants	2 (21 participants)
Focus group with learners (case study school)	1 (7 learners)
Interview with teachers (case study school)	1
Trainer reports	5
Provincial orientation training follow-up email survey	8
Senior refresher distance course evaluations	8

This short report focuses specifically on summarising the main findings in the area provincial level implementation.

2. PROVINCIAL CONFERENCES

During April and May 2006, SchoolNet South Africa worked together with provincial education departments to hold one day Intel® Teach conferences across the country. Conferences were held in all but two provinces.

The purpose of these conferences was defined as follows:

- To give large numbers of teachers the opportunity to attend a conference with little or no costs involved;
- To introduce the new Intel® Teach materials to teachers and Provincial Education Managers;
- Encourage the Provincial Managers to fund training for poorly resourced schools as part of a well managed implementation agency for educational ICT teacher development;
- To reach well-resourced schools that could fund their own training; and
- To involve Provincial education managers in the process of organization, where possible.

The table below summarises the conferences held and attendance at each.

¹ Although a total of 177 forms were submitted, several different formats were used by trainers making analysis of the full set impossible. The analysis presented below is based on 105 responses using the survey specifically designed for this workshop. All versions of the forms included space for participants to make general comments and to note highlights and difficulties of the training. This qualitative data was analysed for all 177 responses.

Table 2 Overview of provincial conferences

Province	Venue	Number Of Delegates
Gauteng	St Mary's School for Girls	39
Western Cape	Wynberg Boys' High School	86
Eastern Cape	Rhodes University	17
KwaZulu-Natal	Kearsney College	96
North West Province	St Conrads College	260
Limpopo	Polokwane Training Centre	112
Free State	Grey College	99
Total		709

At the end of the day, consisting of various workshop activities, all conference delegates were requested to complete a conference evaluation form. A total of 298 evaluation forms were completed (a response rate of 42%).

The data available from the conference evaluation forms shows an overall positive response of participants to both the conferences and the revised Intel® Teach programme. With a total of 706 people having attended the conferences it seems reasonable to conclude that purpose one – providing an opportunity for teachers to attend a conference – was achieved. Based on the responses provided in the course evaluation forms it is clear that the conferences also succeeded in introducing the revised Intel® Teach materials to South African teachers and education managers. Further, this introduction reportedly inspired teachers to consider implementing projects in their classrooms. The majority of conference evaluation form respondents reported that the conferences increased their understanding of assessment, learner support, questioning and projects integrating ICT. Many participants seemed particularly excited by the possibilities of the online Thinking Tools. Further research is needed to assess the extent to which the conferences influenced teaching practices in the classroom, however, it does seem that holding provincial conferences of this nature is beneficial and likely to support programme rollout.

3. PROVINCIAL LEVEL IMPLEMENTATION OF INTEL® TEACH

Since the role of the provincial education department has become increasingly important for programme implementation, careful review of this approach as well as identification of key successes and challenges is important. Provincial representatives who took part in the research were assured of the confidentiality of their responses. Commonly this is done by not including names in the research report. However, since the number of people involved in programme implementation in each province is very small it might be possible to identify a person based on their province and affiliation. For this reason in the quotations presented below the province name is not included. This is a limitation as the context from which a person speaks is important and adds to the interpretation of

the response. However, maintaining confidentiality was deemed to be of greater importance.

Progress regarding use of Intel® Teach at the provincial level differs widely across provinces. All provinces reported having some form of ICT in education strategy in place, although some provinces have developed their strategies and plans more than others. Seven of the nine provinces saw Intel® Teach as supporting provincial strategic priorities. The stage at which the province is with respect to infrastructure rollout and basic ICT skills training for teachers determines whether Intel® Teach is part of the short or longer term provincial planning for teacher professional development.

3.1 STRENGTHS, WEAKNESSES AND IMPLEMENTATION CHALLENGES

Provincial representatives were asked to reflect on the strengths and weaknesses of Intel® Teach. Their responses are summarised below. In some instances the provincial representative was more involved in management or implementation and less so with the training itself. In these instances, interviewees did not provide specific comment on programme strengths and weaknesses. Several participants also provided commentary on, and support for, the revised materials.

The most commonly noted programme strength was the focus on ICT integration and the fact that the programme is curriculum based, for example:

Intel® is coming at the right time. We talk of integration but we have no idea how to integrate.

It is not just about ICTs, it is more about portfolios and computers are just a tool.

Teaching ICT within context, in an educational environment.

It was also noted that participation in Intel® Teach provides opportunity for teachers to develop and share learning resources. One participant felt that the main strength was that the programme was not subject specific:

The Intel® model is generic and accommodates all learning areas.

Few of the participants reported specific programme weaknesses as much of their experience related more to implementation challenges (see below).

Three provinces specifically reported challenges with rollout of infrastructure and/or technical challenges which impact on success of programmes such as Intel® Teach. For example:

The orders for computers have been placed but none of the schools have received computers yet. At most schools they are still busy with all the security arrangements, building burglar bars. We are aiming to have all IT and CAT schools with computer rooms by the end of the financial year.

We do not have sufficient infrastructure to implement what the teachers have learnt in the training. They don't have access and what has been taught is lost or partly lost.

Technical problems, but this is now being attended to. Several people are employed to go to schools to help with technical problems. Only a few educators implement what they learned in the training.

In the case of these three provinces, Intel® Teach was seen as part of the longer term strategy for the province and was still regarded as supportive of provincial goals.

Three specific areas in which challenges were experienced across most provinces emerged clearly from the data. These were, staff shortages, budget allocations within the province and teacher training fatigue. Each is briefly described below.

(1) Staff shortages: In most provinces there remain only a small number, in some instances only one person, responsible for ICT in education. This clearly limits what is possible with respect to implementation, even when clearly defined strategies are in place. For example, interviewees noted the following:

Staff resources are also not available in the province. Once we identify schools in the province there is a delay in terms of implementing. Coordinators time is full, the DoE should employ someone at district level, this would make rollout much better. We need dedicated people to assist.

We have been hamstrung with lack of funding and human resources up to last year. We have only had three or four people working on ICT in the province. Now we are busy appointing people. At the moment we only have two strong districts but hopefully this will improve.

I have trained most of the learning area managers. However, their workload is too much for them to be able to concentrate on ICT integration. They focus on the new curriculum in the learning area.

(2) Budget allocation to support training: Some participants noted that the extent to which provinces are willing to commit budget to ICT integration training is a reflection of commitment at the provincial level.

A challenge is the mindset thing, at the head office level. People need to change their mindset to come to see the role of ICTs in education. We have trained the people and most now see the value so it is not about training people but about how resources and budgets are allocated which demonstrates the level of commitment. We are still not there yet in this area and it is difficult to access budgets for ICTs.

Budget is always an issue so unless you make the programme part of what provinces are doing then provinces are not likely to have budget. There have been some issues raised around funding. I have heard people say things like, 'Intel® and Microsoft have so much money why do we have to fund it'.

There has been very little progress, we do not have a budget at the moment and are totally reliant on donor funding. Everything is at a planning stage. Next financial year there is a budget.

ICT, unlike other programmes was not budgeted for. Only now has the national treasury set aside money which will be divided amongst the provinces.

The challenges of funding and human resources in provinces was also emphasized during an interview with a national department of education representative.

(3) *Teachers' training fatigue:* Several provincial representatives reported that teachers were currently taking part in so much training due to the introduction of the new curriculum that teachers are experiencing 'training fatigue'. Related is the challenge of when training takes place. In most provinces training may not take place during school time which means that teachers need to take part in training during school holidays or over weekends.

We also face the major problem of teachers being trained in the holidays. There is such a lot of training that teachers need to take part in. However, if you ask teachers to choose between ICT training or curriculum training then many of them select ICT training. So, ICT and curriculum people need to coordinate their training.

Since teachers are complaining that training is taking up too much time, the province is looking at having a training day in schools where a pool of teachers come in to take classes for teachers who are taking part in training on that day.

Some interviewees also remarked that teachers' level of ICT skills was a challenge to implementation, for example:

They [teachers] tend to say that they have the basic ICT skills needed to take part in Intel® but when the training starts you see that many don't actually have these skills. Some fear that if they don't have the basic skills they will be overlooked and will lose out on the opportunity.

This was, however, not a very common response as even where teachers were reported not to have basic skills in place, provincial representatives saw Intel® Teach as a longer term strategy and part of a professional development pathway for teachers to follow as they worked towards integration of ICT in the classroom.

3.2 ASSESSMENT OF INTEL® TEACH TRAINING PROVIDED AT THE PROVINCIAL LEVEL

During 2006 one province embraced Intel® Teach, and working with Intel® and SchoolNet South Africa was able to train 263 provincial officials (mostly curriculum and subject advisors) and 70 teachers. Two forms of training were provided with Intel®'s support. A two-day Orientation to Intel® Teach workshop was provided for most of the curriculum departmental officials. The purpose of the orientation session was to introduce curriculum staff to the programme so that they could better support ICT integration in schools. The two-day participants were not trained to become trainers as this was an overview of the programme only. In addition to the two-day orientation, a four-day training session was provided for a group of teachers in the province. These were teachers who had been identified as exceptional teachers in their subject areas. The aim was for these teachers to become provincial trainers and/or to develop learning materials in their subject areas.

The data collected during the 2006 research provides a useful starting point for exploring provincial level implementation in more detail. Based on the responses on the course evaluation forms, it seems that most participants (curriculum officials) found the orientation training to be useful. The data shows that most (98%) reported that their understanding of projects integrating ICT had improved during the two-day orientation. Most participants noted that a four-day version of the training would equip teachers to implement projects integrating ICT (94%). Interestingly, 88% reported that projects integrating ICTs could be successfully implemented in classrooms. However, during focus groups discussions with teachers, many reported that implementation in the classroom was still unrealistic.

One of the most common difficulties reported by those who took part in the two-day orientation session was related to the time constraints of a two-day session, the volume of material to be covered in this time, and the challenges of lack of ICT skills when working within very tight timeframes.

In addition to learning about projects integrating ICTs, most of the curriculum officials also reported learning new perspectives on assessment strategies (94%) and learner support (93%). A review of trainer reports supports this data as trainers commented that participants benefited from the training in terms of pedagogical understanding.

While the two-day orientation for curriculum advisors was well received and reportedly raised awareness and understanding of ICT integration as well as increased understanding of project based approaches and assessment strategies, several participants felt that this session was too short to provide a real foundation for supporting schools and teachers. This might be overcome to some extent by providing more detailed information prior to the session so that participants could arrive with some initial ideas formulated. However, it is likely that departmental officials who have not been specifically working with ICTs arrive with a wide range of ICT skills levels, making a two-day session more challenging. If possible within time constraints, it might be worth considering a one day basic ICT skills introduction prior to the two-day Intel® Teach workshop.

When considering the four-day training of a specific group of teachers, the data highlights the importance of carefully considering the type of teachers invited for training. Where teachers had little personal experience using ICTs for teaching and learning they tended to find Intel® Teach very challenging. As for the two-day orientation workshop, the provision of detailed information prior to the training is important in order to avoid the creation of expectations that cannot be met – for example that Intel® Teach is about developing one’s ICT skills. It is also clear that running training over three instead of four days should not be considered in future as this does not allow sufficient time for participants to engage with the materials and hence the quality of learning and outputs (portfolios to take away) is compromised.

Overall, the response to workshops was positive. One trainer noted that:

It is interesting to note that both sessions were attended by individuals who attended under duress and were intent on finding fault with the programme. On both occasions they left with positive attitudes and an appreciation of the potential value of the programme (Trainer report).

Participants in the workshops noted a wide range of highlights. A few examples are provided below.

I think the project can add value to the classroom teaching situation. It was a very good opportunity to reflect on teaching practice and to review how project work can be employed constructively. Thank you it was valuable.

Various tools available to teachers. Links to various web resources. Forms question section was enlightening.

The material is sound and can be used with or without ICT support.

I think the training was very informative. Well presented. Learnt more on Questioning strategies.

Strong emphasis on critical thinking - very positive step!

I was made aware of many concepts!

Excellent: clear, integrated, coherent, thorough, relevant etc. You are good.

Opened up a pool of skills and tools that I was not aware of. My computer skills improved! I felt safe in group and that created an openness to share and learn.

The discussion on the Sprite and Pepsi mixture really shows how one's mind can be changed through your own and others thoughts. I really enjoyed the way members of the group initially agree on certain points but, as they heard other's ways of reasoning, they start to change their opinions.

Gave me a different perspective on projects; became a bit enthusiastic as to how teaching can become different if all role players in education really come together and make certain ideal situations realistic.

3.3 ANTICIPATED IMPACT OF PROVINCIAL TRAINING AT THE SCHOOL LEVEL

Ultimately, the aim of Intel® Teach is to impact on teaching and learning in the classroom. Participants in the provincial interviews and training sessions were asked to reflect on what they saw the anticipated impact to be in schools. When working at the school level, school selection tends to be linked to other programmes being implemented by the provincial education department. This is partly to ensure that Intel® Teach can build on programmes providing basic ICT skills training and also to ensure that schools have the required infrastructure to benefit from a programme like Intel® Teach. However, this decision is also often related to funding of Intel® Teach, as training budget from various programmes can be used to fund Intel® Teach training where this is aligned to the objectives of the specific project.

One provincial representative anticipated a great impact in schools:

The impact will be enormous. From [province name removed] point of view, we would have had to develop training on ICT integration ourselves, but since we didn't have to invest in this ourselves we have been able to focus on some of the other important details needed to make ICT integration successful, such as access to and training in specific software. Also, the training provides teachers with a tremendous sense of empowerment and improves their self image. It provides a rich background, especially for GET educators who have more scope to work across the curriculum. In addition to supporting teachers in their jobs, they have also been enriched personally.

Similarly, when asked in an interview what effects the training of provincial officials has had, one interviewee remarked that:

It has given them insight, actually, it was like an awakening to computers and what the potential is. These people are now taking more interest in the schools and what is possible with computers in the different subject areas. Many of those who took part in the training are quite new to computers.

The feedback from subject advisors and curriculum people who took part in the orientation training was very positive and all see the role that ICTs and the Intel® programme could play in schools. They have recognized that this is what is needed in the classroom. The challenge is how to get people trained. I think we need to locate this within professional development for teachers.

Not all teachers agreed with the positive statements made above, for example in focus groups it was noted that:

The programme is totally different to what is being done in schools. Is this just a waste of time or is this the new way in which projects will be taught in schools? (Participant teacher)

The underlying principles of the course imply that learners will have access to certain resources. It is very difficult to get hold of resources. Where we are, getting to the library is a 3 hour trip (1.5 hours there and 1.5 hours back) and in some cases 3 hours to get to school. Time is an issue! (Participant teacher)

To increase interest in Intel® Teach training at schools and hence improve impact at the school level, teachers emphasized the importance of some form of recognition for teachers who take part in training.

You get teachers who are very petty and small minded. When we try to train the teachers at our schools they will say 'who do you think you are?' The Department could write letters to the schools to recognize that we have completed training.

When asked specifically what role the provincial department of education could play in supporting ICT integration and participation in the Intel® Teach programme most teachers highlighted the provision of resources as well as further training as the key support needs.

4. CONCLUSION

This short report has summarised findings from the 2006 Intel® Teach evaluation particularly relevant to provincial level implementation. The following key findings emerged from the research:

- Seven out of the nine provinces saw Intel® Teach as supportive of their provincial ICT in education agenda.
- Depending on the status of ICT rollout and teacher training in basic ICTs, for some provinces Intel® Teach is relevant in the short term, while for others this programme is part of a longer term teacher professional development pathway.
- The one-day provincial conferences were an effective and very well received means of raising awareness regarding ICT integration.
- Response to the revised South African Intel® Teach materials was overwhelmingly positive.
- The most commonly noted programme strength was that Intel® Teach is not simply ICT skills training, but is curriculum aligned.
- The three main challenges to implementation experienced across provinces were: staff shortages, budget allocations and teacher training fatigue.
- While two-day orientation programmes for curriculum staff in provinces was well received overall by participants, the evaluation findings highlight that two days is too short for meaningful exploration of Intel® Teach.
- Similarly, the four day training workshop should not be shortened to three days, as it is not possible to cover the material in sufficient depth to produce good quality portfolios in less than four days.
- Several provincial representatives noted the positive potential impact of Intel® Teach in the classroom, although many teachers remained concerned about the practicalities of implementing what they learn back at their schools.