

THE JOURNEY: A Special Education Perspective on Implementing Enhanced ICT in the Classroom

The implementation of enhanced ICT in the classroom necessarily involves a lot of prior planning before it can be used effectively, particularly in a special education setting. The steps outlined in the following table summarise the journey undertaken at Mary Brooksbank School to prepare for and implement the IWB Lesson Study. We hope that you may gain some guidance from our experience.

<p>1. Become familiar with the equipment and software</p> <ul style="list-style-type: none">• Participate in T&D provided through Project sessions• Participate in T&D provided by Smartboard on-site at school• Download free online version of Notebook software• Experiment with free software• Participate in ICT network meeting at Narellan PS - IWB demo and idea sharing
<p>2. Get the necessary equipment</p> <ul style="list-style-type: none">• We did not have our own IWB at the school and were fortunate enough that Smartboard loaned us a board and projector for the duration of the project• Received the Smartboard Notebook software
<p>3. Commence development of IWB resources on software</p> <ul style="list-style-type: none">• Elected to choose a different activity (to the Lesson Study lesson) to commence to use the IWB with• Chose a new activity not previously implemented to start fresh and not cause major disruption to a routine activity• Chose to develop resources for an 'English Circle' weekly activity with resources changed fortnightly based on 'the letter of the week' and general literacy skills• Find and review appropriate resources online to use as part of the lesson
<p>4. Set-up IWB</p> <ul style="list-style-type: none">• We had to initially set-up the IWB in the library as classrooms were in the process of being cabled and had no internet access• We also decided not to put the IWB straight into the classroom so as not to disrupt a familiar environment without students having previous exposure to it
<p>5. Expose students to IWB</p> <ul style="list-style-type: none">• We had our first sessions with the board in the library (these were inconsistent as we depended on when the library was free and there were times when the internet was down)• Initially used it more as a presentation tool (simply accessing appropriate online resources) rather than to its full 'interactive' capacity as we needed to first assess what behaviours would arise with it• Only those students that would customarily be engaged with TV attended to the board (half the students) the others were more interested in the texture of the board or rolling around underneath it• The minimal 'appropriate' interaction they had with the board (which was with full physical prompting) showed that students were not comprehending the cause and effect of their touch on the board• The board being portable presented its first challenges as students would lean against it or push it slightly and would become misaligned• The projector not being mounted was also a major challenge as it resulted in large shadows being cast and students not having the level of understanding to position themselves so as not to cast such a large shadow
<p>6. Develop students' pre-skills for board usage</p>

- Most of the students either had poor hand strength and/or hand control that meant they weren't able to manipulate the objects on the board so we had to work on these pre-skills by increasing the amount of time spent on Fine Motor programs (commenced implementing these sessions daily)
- Time was also spent on playing with toys to reinforce cause and effect so they could understand how their actions would result in something on the board

7. Present content using IWB

- Implemented the first 'English Circle' activities using Notebook Software with numerous links to appropriate videos and animated web sites
- We were often stunted with our use of online resources as there were days where the internet was inaccessible
- Students were commencing to attend more to the board

8. Practise managing technology use and behaviour management

- IWB + associated equipment set-up took some time initially and as glitches arose more of my time was taken away from managing the class to managing the technology, this was something we had to take into consideration when setting up the classroom environment for the Lesson Study
- A lot of responsibility was placed on my teacher's aides to manage students as we became accustomed to the software and equipment
- We needed plenty of practise in ensuring the smooth running of sessions using the IWB before using it with the Lesson Study as students are very entrenched in the routine of this session and too much stopping and starting would give rise to inappropriate behaviours
- We always had to be well prepared when using the IWB because we had to set everything up prior to the lesson or then too much of my attention and time was spent setting up rather than attending to students

9. Allow student interaction with board

- We gave students opportunities for unstructured interaction with the board so that it could lose a bit of its novelty factor and they could begin to learn using it appropriately rather than being distracted by other unimportant features
- This interaction also started giving students the opportunity to understand cause and effect and how they were manipulating objects, triggering things off, drawing etc

10. Wait for necessary equipment

- As previously mentioned we had to wait to use the board in the room because we initially intended to use the internet as part of the Lesson Study and had no internet connection
- We were also waiting on some PC laptops from the roll out to arrive to avoid having to use my personal laptop in the classroom

11. Develop resources for Lesson Study lesson

- Having become more confident with the Notebook software we began to develop the resources we had detailed in the Lesson Study write-up
- We initially had issues with sound files but soon overcame this problem
- We tried to follow the original lesson structure and utilise familiar resources as much as possible

12. Re-organise classroom set-up

- We wanted to keep the physical set-up of the lesson as similar to the original as possible but inevitably changes had to be made to accommodate for the board and for the multi-media unit containing the laptop, projector and speakers, which had to be placed very close to the IWB for the projection to fit properly, but unfortunately meant that it sat awkwardly almost at the centre of our learning area
- We had to arrange the board and existing whiteboard so that they didn't cover any of the class board area from which we use visuals (daily timetable etc)
- We tried to enclose the 'circle' area as much as possible using existing furniture to limit the

possibility of students leaving the learning area, this was to accommodate for my inability to assist as much with maintaining students seated given I'd be assisting students with the board usage

- We had to add a carpet block that students could step up on to reach the board

13. Implement Lesson Study lesson

- We didn't actually commence the implementation of the IWB in the focus lesson until late in the term when as many of the barriers had been addressed
- It was initially quite challenging for me to keep up the same energy and momentum of the original Morning Circle with the additional 'logistical' challenges posed by the IWB
- It was initially tempting to desist with the whole thing because it seemed to be taking more time and effort than it seemed to be worth. Part of the aim of the lesson was to increase engagement but it seemed to be causing more disruption and more time seemed to be spent out of seats. Students would become restless earlier in the session because they would have to wait longer for their turn as students would spend longer learning to interact with the board

14. Re-organise student seating

- Student seating became quite crucial in reducing inappropriate behaviours and maximising learning experience for students (eg. placing student who is blind closest to speakers)
- Certain students had to be seated towards the centre of the semi-circle and close to staff so they wouldn't run off, others couldn't be seated too close to the multi-media unit because they'd tend to touch the cables and/or projector, others couldn't be too close to board because they'd go up to the board whenever they liked and grab at the pens and eraser, another student sat better when he could see the laptop screen as he seemed to enjoy checking that the image on the IWB was in fact the one on the laptop

15. Model new Morning Circle routine

- The first few sessions of the Lesson Study were mainly teacher guided as we modelled what they'd be expected to do
- Despite the Notebook pages for this lesson not being as 'engaging' as in the English Circle (they contained no videos or animations, only images and sound links) students still seemed interested in the colours, sounds, images of themselves and movement of objects
- This modelling period also gave my teacher's aides and me the opportunity to become comfortable with the new demands (behavioural, logistical and time) placed before us and decide on who would address which issues

16. Students participate in new components of Morning Circle routine

- With hesitation we began giving students the opportunity to actually come up and interact with the board as part of the focus lesson. We say with hesitation because initially it didn't seem worth the trouble, we had to do so much physical prompting it seemed superficial.
- Given some of the students' 'active' behaviours, involuntary movements, and physical impairments we actually found the process of supporting their board use quite physically tiring, something we had not at all anticipated

17. Address behavioural issues

- As students became more involved with the IWB a few behavioural issues arose. First was the projector cap, many of my students with autism were not happy if the cap was off and kept trying to put it back in place which would obviously obstruct the image and misalign the image on the board
- Every single student was initially mesmerized by the light from the projector and insisted on looking straight into it. Not only was this extremely unsafe but it meant they wouldn't look at what they were doing on the board at all
- The students with less hand/limb control and/or students who are overly tactile would often bang the board causing it to move or move it as they slid their hands all over it. This resulted in a lot of time spend re-aligning the image
- One particular student was quite obsessed with the board accessories and would move out of his

chair, crawling to the board where previously this student rarely moved out of his chair

- Another student became quite territorial over the board. He really enjoyed using the board but would begin to head butt when asked to sit back down.
- Each student's turn within a particular component of Morning Circle took longer because of his or her interaction with the board, so wait time increased significantly and components that students were accustomed to being quick took longer. It took some time before the 'tempo' of the session returned closer to normal

18. Adapt resources

- As the students increased their board usage we could gauge what page set-ups they responded best to and how we could enhance and extend the pages in the future
- Initially we were going to add large easily distinguishable buttons to denote where to press to activate sound rather than just pressing the word/picture itself (they were more independent at activating sounds/actions on the online resources when there was a clear and consistent button to press) but as they became accustomed to the routine they learnt where to press

19. Increase student involvement

- Morning Circle can vary in length depending on how many components we get through. We initially started with just a few of the first and familiar components, which we repeated daily to increase familiarisation and understanding. As we have worked through we have been able to move onto new components, with each session progressing further along the whole activity
- The majority of students demonstrate an understanding of what they are expected to do and how they can interact with the board through their ability to complete tasks at the board with increasing independence