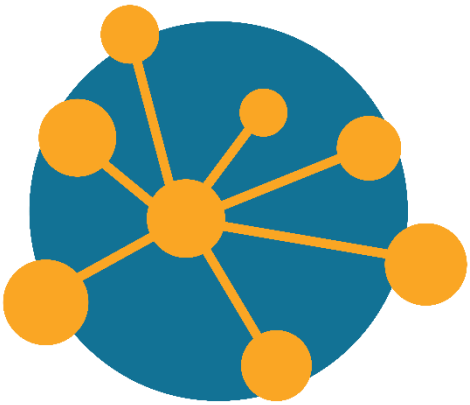
Digital Technologies in focus:
Supporting implementation of Digital Technologies



St Mary's Primary School
Moruya, NSW
Final project report

acara AUSTRALIAN CURRICULUM, ASSESSMENT AND REPORTING AUTHORITY

Initiative of and funded by the Australian Government Department of Education and Training

Project title: Future directions in digital inquiry learning		
School name	St Mary's Primary School	
School profile	Number of students	252
	Location	Remote/Regional
	Sector	Catholic
	School type	Co-educational
	Year range	K–6
	Proportion of students who are Indigenous	16.7%
	Proportion of students with disability	20.6%
	Proportion of students who have EAL/D	1.9%
Year level(s) involved in project and reason for choice	K–6: a whole school approach to ensure upskilling of staff	
No. of students involved	Whole school	
No. of teachers involved	21	

INVESTIGATING AND DEFINING

Research question

How can Digital Technologies (DT) and ICT Capability be implemented across the whole school in an integrated manner to provide opportunities for authentic learning experiences that are student driven and celebrated/shared with real audiences?

How has the research question evolved over time?

The project has moved from a whole school lens and gradually centred in on developing staff and meeting them at their point of need via providing professional learning experiences, professional networking opportunities and mentored lessons/sessions to support as requested/required.

How has your understanding of the question evolved over time?

The understanding of the question has moved from a whole school centric view to a more educator centred one. This has occurred as a result of feedback, observations and needs. The staff have shaped the manner in which the lens has shifted as a result of their skillset, ability levels, willingness to participate and opportunities to become involved.

Aims: Reflection

Have the aims changed? If so, how and why?

Yes. The aim has shifted from whole school to an educator-centred view. Our staff required the opportunity to develop their own learning and become confident with this dynamic and very new concept, theory, knowledge and skillset.

Research

If you conducted research describe it.

Action research was conducted, indicating growth in attitude and skills in staff. This was obtained via surveys (ACARA and internal), interviews, observations and conversations with staff.

How has your project improved implementation of the Australian Curriculum: Digital Technologies?

We have worked on developing our capacity as teachers in understanding the curriculum and its specialised language in order to be able to create a whole school scope and sequence for DT and ICT. This document is being finalised and should be ready for staff consultation in early 2021.

From this we hope to improve the capacity and skills of staff, which will increase their confidence in delivering authentic and student-centred lessons across KLAs which have DT & ICT embedded into them. The big picture was to develop a whole school showcase where all classes work on a project that has a point of connectivity to showcase to our community. Whilst this did not occur, some stage groups and teachers did host their own learning showcases to demonstrate some growth in ICT and DT. On reflection, the majority of these were in ICT rather than DT due to a perceived notion of difficulty of achievement level.

Staff are now aware of the content area, they have had opportunity to develop a unit of work, they have had mentoring from experts and have had a chance to participate in targeted professional learning. Staff have had offers to extend their own capacity in this area via being encouraged to attend professional learning provided by outside organisations (e.g. ACARA and Australian Computing Academy).

Criteria for success: Evaluating

Comment on progress against each criteria for success.

When each teacher has created and delivered one term's worth of programming and teaching using an integrated inquiry learning approach with a view to use DT & ICT in an authentic manner, culminating in a whole school celebration where students showcase their learning to the community.

This criterion was not met in its entirety. Staff were not and still are not confident enough to obtain this. We have, however, had small successes with teachers creating lessons where they have used elements of DT to show a developing confidence and familiarity in using the tools required to use digital technologies.

The focus on the success criteria warrants revisiting to meet the changes to the overall project aim. Using attitudinal data (school and ACARA) and student work samples, we can see some development in this area. Staff do, however, need to become more proactive in taking on this new part of the Australian Curriculum and the updated NSW Science and Technology Syllabus. The fact that this is not yet a reportable aspect of our role has certainly had an impact upon the 'urgency' in relation to this. I believe the specialisation of the content is also overwhelming for staff, irrespective of the support offered or available.

GENERATING AND DESIGNING

What actions/steps were undertaken?

1. Professional development
2. Professional reading
3. Professional conversations
4. Learning opportunities ('Tinker Tables')
5. Staff meetings
6. Collaborating on the creation of the scope and sequence
7. Collaboration on the creation of a 'big picture' lens (e.g. inCURiATE: in = inquiry CURATE = to put something together i = i-learning)

To what extent have the proposed actions been implemented?

1. Professional development: in school and external opportunities. Development of Techspresso.
2. Professional reading: frequent emails inviting staff to learn more about the content, tools, pedagogy and curriculum
3. Professional conversations: staff were approached 1:1 and generally in conversations
4. Learning opportunities: Tinker tables, staff meetings with external experts, PL opportunities promoted
5. Staff meetings: targeted Digital Technologies
6. Collaborating on the creation of the scope and sequence: one staff member supported with this, staff were not keen to become involved at all. It has since become a one-person task.
7. Collaboration on the creation of a 'big picture' lens: this was not met

What are the effects of these actions?

1. All staff are more confident and some are now taking action to include DT & ICT in a more authentic manner.
2. Limited
3. Limited
4. All staff are more confident and some are now taking action to include DT & ICT in a more authentic manner. Students are now producing some work samples demonstrating a developing understanding of some content areas. Data collated from ACARA suggest that the content is not being taught through an explicit lens, rather an 'add on' or 'fun' lens whereby the language and concepts surrounding computational thinking, systems thinking and design thinking are not being given due consideration.
5. As per above (4)
6. Limited
7. Limited: some staff are showing some knowledge or skills and are now attempting to integrate DT and ICT at a substitution level.

Were there any challenges which arose in negotiating actions with others, or in negotiating time and resources?

1. Change in leadership
2. Change in strategic management plan
3. Change in staffing
4. Change in allocated time
5. Fear of failure by staff
6. Resistance to seek support from support networks (ACARA or school expertise)
7. Attitude to the relevance to teaching and learning
8. Lack of resources
9. Lack of uptake on professional learning opportunities offered

What were the intended and unintended effects of your actions? Explain why they may have occurred.

I have had the opportunity to develop as a professional and have learnt to be resilient. I have learned the value of seeking out a like-minded PLN. I have increased my skillset and knowledge. Staff are realising now (suddenly) that I am leaving that the knowledge and skills (which have been available for 5 years) are now leaving.

This has resulted in requests to continue Techspresso and some request from staff to stay in touch in case they need support.

Another unexpected impact was COVID. This 'made' staff step into using technology they had never experienced and has opened their eyes to the fact that technology really is not to fear … rather a tool to enhance.

Explain why they may have occurred.

As above

Data collection: Evaluating

What strategies are being used to collect data and monitor progress?

1. Attitudinal surveys
2. Student data
3. Student work samples
4. Anecdotal notes

Were there any ethical problems which arose in negotiating access to, and release of, information? How was this resolved?

Chasing down forms was ridiculous at a whole school level. Staff did not want to be responsible for this and it became a monumental task. Some work samples were simply not used because of the logistics around chasing up families and staff for signed forms.

COLLABORATING AND MANAGING

Resources

Identify the resources used in the implementation of the project.

1. Access to professional development providers
2. Advice on best items to purchase to best meet a variety of learning needs
3. Access to program templates and scopes and sequences that may offer guidance
4. Advice as to how to shift the project when engagement was minimal

Challenges

If there were challenges, what were they and what were the causes?

1. Staff did not independently seek out any PL. Limited staff attended recommended PL.
2. Items obtained have not been used to their capacity.
3. These templates have provided a great framework for the school. This is almost complete and will be handed to the leadership team to consider as they move into 2021.
4. This is ongoing.

How have you handled these implementation challenges?

With support from ACARA and through being consistent yet pragmatic. For example, continuing to send out PL opportunities and to encourage staff to try new things through Tinker Tables or Techspresso.

Milestones and deliverables

Provide revised milestones and deliverables for the sustainable implementation of Digital Technologies in your school.

1. Introduction of scope and sequence in 2021 for all staff to use.
2. Embed DT in Science (as per the Syllabus) as staff are reluctant to merge into other KLAs.

PRODUCING AND IMPLEMENTING

Describe how Digital Technologies is being implemented in your school.

Through incidental teaching or substitution style lessons.

There is some evidence of augmentation and modification in one or 2 classrooms.

How does this differ from your original plans? What contributed to this change?

The integration across KLAs via inquiry has not occurred at all beyond my own classroom. Some staff have started to use modelled lessons I have provided to help them to start to implement just this year. This is a huge modification from our original hope to have integrated and purposeful inquiry learning with DT and ICT embedded in a purposeful manner. Staff prefer a silo approach.

If you intend making further changes to your implementation plans, please describe.

I am moving to a new school. I do not feel it is my place to impose further plans other than the implementation of a scope and sequence moving into 2021.

EVALUATING

Evidence of student engagement

Record a statement or describe attachments, e.g. Appendix 1: Student work samples etc.

https://www.facebook.com/stmarysprimaryschoolmoruya

https://twitter.com/BeckKeough1

Next steps

What goals do you need to set as the next step as you work towards achieving sustainable implementation of Digital Technologies in 2020–23?

	Action	Who?	When?	How?
Short term	Scope and sequence finalised	Rebecca Keough	End of Term 4	Use of ICT time to complete
	Future directions for funding: survey and data	Rebecca Keough/ leadership team/staff	End of Term 4	Survey to staff and data to leadership team for future planning
Mid term	Staff member to drive future of ICT and Digital Technologies	Leadership team	2021	Meeting and consultation with staff
Long term	TBA	Leadership team	2021	Meetings and consultation with new ICT coordinator

Thank you for your time and commitment to the Digital Technologies in focus project.