



UNIVERSITY OF TASMANIA

## ICT Professional Learning

Derived from action research projects undertaken in Term 3 – 2003

by

Lauderdale Primary School  
New Norfolk Primary School  
Fairview Primary School  
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And from in-school observations made as part of  
Children, Online learning and Authentic Teaching Skills

## Delivering ICT Professional Learning

1. Keep timelines short and the focus specific
2. Introduce the possibilities of ICT through
  - Meaningful products, examples of use, credible experiences
3. Build collaboration with the learning group throughout
  - Promote co-learning (learning 'buddies')
4. Arrange tutors for learners → how to use & manage ICT
5. Involve learners in planning & preparing for use in class
6. Arrange in-class support → maximize the chance of success
7. Apply and learn → learner uses ICT in class with success
  - New ways to do old things better
  - New ways to do new things
8. Share & learn & take it forward (revisit later)

## Professional learning design principles

1. Professional learning results in new and improved practices
2. Be informed → who knows, or wants to know, what?...
3. Build PL into the culture through collaboration
4. Work with meaningful groups → communities of practice
5. Extend the collaboration to teaching, technical & other staff
6. (Begin with induction)
7. Start with situated samples and credible experiences
8. Keep timelines short and the focus specific (KISS)
9. Share the load: tutoring = learning again and more!!
10. Take ICT into the classroom with modelling and support.
11. Share & review the experiences within the learning group
12. Share the experience and results beyond the learning group

## Knowledge of ICT is not enough

Professional learning leads to new, improved practices

- New ways to do old things easier and better
  - Ways to do new things, by ...
  - Managing well: making arrangements and getting organised
  - Using the technology:
  - Applying technology in the class, office...
    - Achieve purposes using known processes
  - Purposes and processes meaning for the users
- With school endorsement, support and encouragement

## Short timelines and a specific focus

- Action Research finding: shorter time lines 'work better'
- Staff appreciate the shorter timeframe: easier to manage
- More overlap of activities leads to
  - Greater consciousness of what is happening
  - Informal sharing of experience
  - More incidental learning
  - More assistance with trouble shooting
  - Greater intensity & less distraction/disruption → more attention
- More attention → more awareness → more familiarity
- Greater confidence and comfort
- More sustainable:
  - explicit focus & shared action for a shorter period

## Collaboration to build PL into the culture

- Increased collaboration makes change easier & safer
  - Learning together ... 'It is OK to have problems because...'
  - ICT → Having new ways to do old things better?
  - ICT → Having ways to do new things?
- Learning 'buddies' make a huge difference
  - Encouragement, understanding, shared perspectives, finding useful opportunities, little problems solved ...
- Mentors provide guidance, backup, trouble-shooting...
- Cultural shifts to new ways can only be achieved together!!
- Collaboration leads to more consistency & supports standards

## Collaboration (continued)

- Learning together: sharing knowledge, experiences & products
  - A more 'natural' way to go...
  - Consider ICT as a part of collaborative planning
  - Work in pairs, teams and other natural groups
  - Share within and beyond the learning group
  - Build knowledge of who knows what (the key resource!!)
- Displays of 'products' prompt exchanges of related knowledge and experience
- Collaboration results in key success factors
  - Shared purposes and use of matching technology
  - Enough working knowledge and cost-effectiveness

## Collaboration and ICT

- What is the connection between the action and outcome?
- When (under what conditions)?

Action	Or	Outcome
Increase use of ICT	→	More collaboration
Increase collaboration	→	More use of ICT

## Collaboration – increases value

- Well situated knowledge ... close to practices & learners
- Learning into practices → improved or new practices
- Into culture → community of practice → rapid deployment
  - sustainable, self initiating, accessible known resources
- Ongoing value adding from experience (action learning)
- Associated school system development & governance
  - vision, policies, infrastructure...
- Better alignment through collaboration of parties concerned:
  - governance, professional learning
  - infrastructure, applications → T&L practices and activities

## Collaboration – decreases costs

- More efficient: less waste, failure, rework !!!
- Less management required: more self managed learning
  - Mutually arrangement between learner and helper
- In response to actual needs of actual learner
  - Learning process refined & refocused in real time
  - Less disruption -> as arranged between learners/helpers
  - Tutoring & mentoring more available → closer to JIT
  - Closer to JIP (place) delivery and improved follow up
- Knowledge, experience, products more readily available
- Support & encouragement more readily available: co-learners, tutoring,

## Be informed

- Establish rapport
- Gather information – knowledge management is crucial !!
  - Who knows, or wants to know, what?
  - Confidence, hopes, intentions, needs...
  - Who can help others learn about...
  - Consider social, cultural and historical factors
- Know enough to plan the next step with the long term in mind
- Warning - surveys can be risky (best done in a workshop?)
  - Purpose & processing need to be known
  - Can imply (unexamined) expectations
  - Getting the wording right can be a challenge

## Show the potential & range of ICT use

- Share situated samples, experiences
- Explain in the current context: start from here & now
- Expose the limitations as well as potentials
- Familiarity + success → comfort (confidence, acceptance ... )
  - Comfort with ICT enables the focus to be on pedagogy
  - Lack of comfort causes the focus to be on ICT
- Understand how the concepts built into the ICT
- Knowledge and skills – 'there is always more to learn'
- Relate possibilities to actual needs and purposes: WII-FM

## Sharing the load

- Tutoring / mentoring
  - learning again + more !!
  - Hence are a form of professional learning
- Everyone has something to learn
- Everyone has something to teach & share
- Builds knowledge of available resources
- Enhances available PL resources
- Provides leadership opportunities
- What knowledge and skills - it all depends !!
  - Who knows, or wants to know, what
  - On the next step(s) in learning

## Share & review the results

- Within the group
  - Evaluation (suitability, ease of use, professional learning)
  - Range of applications: possibilities and limitations
  - Resolution of issues: troubleshooting,
- Beyond the group – integrates PL across the school
- Builds knowledge of resources:
  - Who knows what ...
  - Who is using what ...
  - Who is doing what ...and how
- Builds links with other members of the (school) outside the learning group
- Allows acknowledgment → places practices within the school

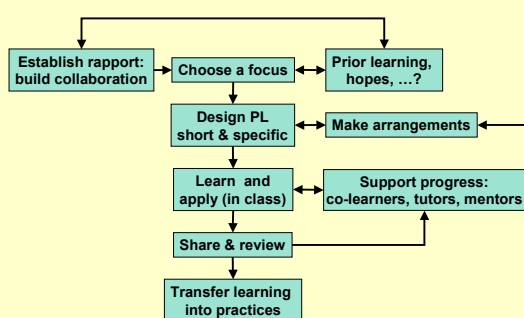
## Revisit & refresh PL

- Professional learning is ongoing
- Some loss of specific knowledge is inevitable
- To belong to a member of a profession is to
  - Be a life long learner
  - Learn from the one's colleagues and
  - Contribute to the development of profession
- This year's co-learner is next year's tutor...
- Develop collaboration leading to professional development
  - Learner becomes co-learner (buddy)
  - Co-learner becomes or tutor (as in 'learning how to...')
  - Tutor becomes mentor – 'what to do and why'

## A 'pedagogy' for professional learning

- Build collaboration
- Be informed – learner's hopes, experience & prior knowledge
- Choose a specific focus – involve the professional learners
- Design a short and specific learning task → new practices
- Make collaborative arrangements – scaffolding
- Undertake as a situated co-learning task
- Provide tutors, in-class support and mediation
- Check on learning – share and review (& share more widely)
- Transfer the learning
- Revisit and refresh as required

## PL 'pedagogy' – process model



## Professional Learning Cycle



## The Ongoing Challenges

1. Building collaboration across staff groups
2. Accommodating staff changes → start with induction
3. Providing the rationale for change: modelling ways and means
4. Selecting and arranging the most appropriate technology
5. When and how to upgrade (development is disruptive!!)
6. Creating opportunities for learning, belonging & leadership
7. Inclusion of all staff in PL (equity of opportunity?)
  - Example: part-time teaching staff

## More on-going challenges

8. Arranging release from fixed duties
  - Example: part-time hourly specialist (eg, Cat A Aide)
9. Building a 'community of practice'
10. Performance management vs professional learning
11. IPLPs vs collaborative professional learning
12. Accounting for IPLPs in situated collaborative learning

## Action research – findings (1)

Prof Learning	Traditional	Redefined
<b>Content</b>	ICT Knowledge & skills	Practices: tools, action & experiences
<b>Initiation</b>	Pre-packaged training	Negotiated, co-planned, situated
<b>Educational focus</b>	General: using software	Specific : ICT device + use + action
<b>Intended outcomes</b>	New ICT knowledge & skills	New or improved classroom practices
<b>Participants</b>	Individuals	Learning group (collaboration)
<b>Learning context</b>	Institutional (push)	Community of practice (pull)
	Largely formal & fixed	Situational & dynamic
<b>Participant roles</b>	Novice & Expert	Learner, co-learner, tutor, mentor...

## Action research – findings (2)

	Traditional	Redefined
<b>Timelines</b>	Episodic	Ongoing & revisited
<b>Learning cycle</b>	Incomplete (event)	Complete, short and integrated into classroom office practices
<b>Cost effectiveness</b>	Low (waste, rework...)	High (practices, JIT, sustainable...)
<b>Sustainability</b>	Variable (often low)	High (embedded in culture, aligned with school purposes & vision...)
<b>Information base</b>	Variable (limited)	Participants in context

## Action research – findings(3)

	Traditional	Redefined
<b>Sustainability</b>	Variable (low)	High (embedded in culture, aligned with school purposes & vision...)
<b>Information base</b>	Variable (limited)	Participants in context
<b>Transfer of learning into practices*</b>	Intended, optional, hoped for...	Built into professional learning with direct or indirect support
<b>Requirements of the institution</b>	Minimal	Sound governance, clear concept of ICT, endorsed purposes of using ICT ...
<b>Knowledge task</b>	Transfer knowledge of ICT	Organisational knowledge management: situate knowledge of ICT

## Lauderdale Primary – Inspiration

### Project goals

- Investigate a successful model for PD so that it is convenient, relevant and useful to staff
- Investigate the impact of using a buddy system for PD
- Trial: requested participating staff to keep a shared electronic journal of experiences and issues

### Project Team

- In School ICT Mentors (2)
- School's network manager (new role emerging)
- Principal

## Lauderdale – Being informed

### Initial staff survey re Inspiration showed

- Most staff had engaged in PD but had not used with students.
- Limited uses for Inspiration had been trialed in the classroom
- Staff had identified a wide range of uses for Inspiration
- Confidence with using Inspiration was low
- Staff identified time & opportunities as a barrier to expertise

### Inspiration Learning Team

- Team of 8 teachers selected to be involved
- Varying range of ICT competence
- Teachers were motivated and optimistic
- About half had already tried using Inspiration with their students after PD

## Lauderdale – Short timeline, specific focus

### Timeline - Events

- **7 Oct** Project team meeting to decide on Action Research
- **8 Oct** Staff survey
- **13 Oct** Staff workshop: how to use Inspiration introduce project
- **Interim** Staff begin inclass use of Inspiration  
Student-free day (20 Nov) staff work on progress  
Extensive informal sharing and support
- **30 Oct** Focus group session sharing with
- **5 Nov** Sharing with other staff during staff meeting
- **14 Nov** Preparation for Project presentation
- **20 Nov** Presentation by Project Team UTAS ..... Next?

## Lauderdale – Summary of Outcomes

1. Effective transferral of professional learning into the classroom
2. Stimulated interest in using Inspiration
3. 'Community of Practice' – the group helped each other to share ideas and troubleshoot problems.
4. Buddy system was highly motivating for staff
5. Timeline – intense period of activity effective and welcome
6. Alternate way of looking at current classroom activities
7. Many unexpected positive outcomes, eg, leadership
8. Adequate resources need to be provided
9. Ongoing learning

## New Norfolk – Kid Pix 3 into the classroom

**Background:** a proud history in the use of ICT but difficult to maintain with loss of skilled practitioners & reduced resources

- **Aim:** integrate ICT professional learning into teaching and learning

### Action Plan:

1. Find out where staff are 'at' (survey)
  - Confidence, interests with applications and devices
2. Meaningful starting point and use 'buddies' (workshop)
  - Short (40 mins), focused, simple - Kidpix 3
3. Plan for the staff to take learning into their classrooms
  - Provide modelling, co-teaching & backup

## New Norfolk - findings

1. Staff expertise varies across the staff & for an individual
2. ICT knowledge and skills are quite specific & initially abstract
3. Keep a narrow focus, achieving confidence one item ...
4. Build community support (collaboration) for linking professional learning to teaching and learning
5. The questions we ask imply expectations
6. Address the needs in 'natural' teams where possible
7. Confidence starts from being good at something
8. Challenges (on-going)
  - Catering for P/T, casual staff
  - Stretching the resources –
  - Moving on from a focus on ICT (teacher comfort critical)

## Fairview –Staff purposes & confidence

### Results of open ended teacher survey re ICT in class

- **Teacher purposes for ICT**
  - Information: Acquire, Present, Supply and Store
  - Communication
  - Extending and Motivating Students
  - Tools for activity
  - Learning – skills in ICT
- NB. The above were not consistent throughout the school
- **Teacher Confidence → use of ICT**
  - Low → specific, controlled and reliability a higher level of concern.
  - High → generally more integrated approach and more inclusive view of the technology.

## Fairview – ICT Staff purposes & concerns

### More results - Concerns

- **Technology**
  - Availability & reliability
  - Expertise related to the technology
- **Teacher**
  - Knowledge Application – match to old or new purpose
- **Student use of ICT**
  - Significant products
  - Time use
- **Class Operation**
  - Groupings
  - Noise
  - Time management

## Fairview – Authentic Learning (2 classes)

### Authentic teaching & learning: real investigation & products

- Interviews of older citizens revealed neglected local cemetery
- Site visit led to discussions of issues with of local council staff
- Efforts by class & council began improvements
- Class prepared fliers to promote community awareness
- Class submitted proposal for a community development grant
- ICT enabled the classes to
  - capture and share important information from the local environment,
  - organise, process and then present it in a 'professional' form
  - ensuring that the local community took the student's seriously
  - thus enabling these to experience the democratic process first hand
- Curriculum categories? Take your pick!!

## Evandale – The staff ICT profile

### Goals of the ICT Audit Process

1. Provide staff with appropriate ICT tools, sources & PL
2. Get better value from SACS: collating all info about children, use SACS for anecdotal info, e.g. behavioural issues.
3. Support teachers
4. Ensure that teachers are well informed.
5. Encourage and support teachers to use the available ICT tools, eg, email, internet, Discover, newsletters...
6. Aim to have teachers using ICT for their own purposes in an integrated way, including use of digital camera, email, internet
7. Use ICT effectively to support teaching & learning in classes

## Evandale – ICT Audit

### Start with ICT practices

*"We can better understand current practices in our school by*

- Mapping the current staff use of ICT (what, how recently)
  - Applications (software)
  - Devices (camera, projector...)
  - Purposes (knowing what is happening, about children...)
- *And then, with the long term in mind, we can establish arrangements and procedures that facilitate a greater focus on T&L."*

## Evandale – ICT Audit (2)

### Also gathered information re...

- Colleagues who act as an ICT mentor to others
- Level of ICT certification
- Hopes for more ICT training
- Use of fault reporting system provided by the school
- Use of technical support within the school. How satisfactory?
- The ideal classroom provision
- Present level of comfort with ICT
- Staff access to ICT at home
- Capacity to carry out common ICT tasks

## Evandale – ICT Audit (3)

### RESULTS - some preliminary findings:

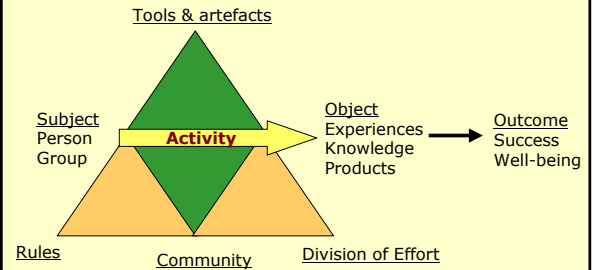
- Some staff are yet to achieve accreditation at any level
- All staff members indicated the need for more training – many in use of programs such as FrontPage and PowerPoint – others in classroom management and use.
- Teaching staff generally felt comfortable and knowledgeable to an average degree, whilst most ancillary staff were not so.
- Half of the staff considered 3 computers in their class were sufficient; others thought 5 would be preferable though space was an issue. One staff member considered 25 would be the ideal situation.
- Every staff member indicated they had a computer at home ranging from an eight year old Macintosh to very up to date models, most had access to the internet, digital and video cameras and colour printers.

## A little 'academic theory' – CHAT

### Cultural Historic Activity Theory (CHAT)

- Based on Vygotsky et al
  - Learning (v.) is a social activity
  - Learning (n.) is socially constructed
  - Knowledge, learning and activity cannot be separated
  - Scaffold action and mediate experience and meaning
  - Zone of Proximal Development → pedagogy
- To incorporate new practices requires alignment with/of:
  - Social – largely relationships..., eg, power, support...
  - Cultural – ways things happen, what they mean...eg, PCs
  - Historical – current context, arrangements...eg, IPLP, resources,

## A little more 'theory' – Activity System



## Professional learning

