

# 2011 ICT Development Plan

## Introduction:

In late February the ICT group; Rachael Laming, Brian Waddell, Justine McDonald, Sarah Vrede and Sue Gordon, met to discuss how we could enhance and advance our schools approach to the use of technology. We were excited about the possibilities and opportunity to pursue a strategy for KNS to become an "ICT enabled knowledge school". We recognized that there is a wide range of new digital technologies which can support our curriculum and pedagogy to ensure life long learning for our students. We recognized that we needed to do more than just introduce new ICT tools and infrastructure into our school we need to work through a number of areas, including culture and leadership, teacher professional development and community engagement to embed and get the most from any investment in technology.

This draft plan states the future state we would like to achieve and steps we believe we need to take to get there.

## Future State:

In three years time there would be the *seamless, integrated, interactive* use of technology by the KNS School community to support all aspects of the curriculum. Consistent with our wider learning goals our children will be taught through the use of technology to be inquiring, discerning, critical life-long learners.

The use of technology would be *seamless* in that it would be part of the way things are done in KNS. Devices and content would be transferable between home and school and within the school itself. The infrastructure supporting the use of technology would be well managed and maintained to ensure that all hygiene factors (security, ergonomics, system availability and reliability) are addressed.

The use of technology will be *integrated* in that its use would be designed and implemented in a manner that is age appropriate. Developments in the application and use of technology will be tracked and opportunities for adapting new technologies explored.

The use of technology would be *interactive* in that staff and students would be supported to have the skills to appropriately use the technology. Opportunities would be created for them to learn from each other and the wider community.

Underpinning this would be a culture and leadership which is open to and supportive of the ongoing adoption and use of technology as an enabler. It is also recognized that there will need to be a degree of resilience built into the school systems and processes to manage when technology isn't available or appropriate.

## Our Areas of focus:

To achieve this state there are a number of areas that we will need to build on and focus our effort. These are:

- School culture and leadership
- Teacher professional development
- ICT infrastructure
- Teacher – student interaction
- School – community- business partnerships

Attached below is a summary of the approach we are planning to take in the next three years to build our overall ICT Capability. This approach will be embedded in our overall Annual Plan. Specific actions have been highlighted where appropriate.

| School culture and leadership   | Why this is important?  | How we will achieve our objectives in 2011  |
|---|---|---|
| <p>We believe we need a school leadership and culture that supports:</p> <ul style="list-style-type: none"> <li>• innovation and continuous professional development</li> <li>• critical thinking and discussion among staff about the purposes and practices of curriculum and pedagogy</li> <li>• student leadership/service</li> <li>• teacher-student co-responsibility for learning (and a view of learning as a two-way process)</li> <li>• a commitment to developing a “21<sup>st</sup> century learning culture”.</li> </ul> | <p>Ultimately, the leadership and culture of a school are key determinants of whether our vision for the seamless, integrated and interactive use of technology will occur.</p> <p>It will be important to build a shared Board and Management understanding of the overall approach for the use of technology.</p> <p>The ICT committee believes it will be important to take all staff on this journey. We would like to do this by sharing the vision and the supporting actions with the whole team and creating opportunities for all staff (and the wider school community) to be exposed to what is expected and possible.</p> | <p>Consistent with the steps in the strategic and annual plan the school leadership will be integrating the use of technology with future development of curriculum, pedagogy and assessment in the school. <b>See annual target 1.3 To use ICT tools effectively across the curriculum and annual target 3.1 learning conversations feed into the teaching and learning cycle</b></p> <p>Rachael Laming and Brian Waddell will be working with Justine McDonald to ensure that specific opportunities are created for supporting the development - and diffusion - of curriculum and/or pedagogical innovations.</p> <p>Sue Gordon and Justine McDonald will work with the Board to ensure that the wider vision is understood and supported</p> |

| Teacher professional development   | Why this is important?  | How we will achieve our objectives in 2011   |
|--|---|--|
| <p>We will support Teacher ICT professional development that:</p> <ul style="list-style-type: none"> <li>• links teachers' ICT learning to their understandings of teaching and learning;</li> <li>• takes into account individual needs and understandings – that is, starts where teachers are “at”;</li> <li>• introduces ideas about the roles of digital technologies in a 21<sup>st</sup> century “knowledge age” learning environment</li> <li>• emphasises a view of ICT not as a “tool”, but as an “environment” for learning</li> <li>• challenges teachers to reflect on their existing ideas about curriculum and pedagogy, and to compare these to ideas about 21<sup>st</sup> century curriculum and pedagogy</li> </ul> | <p>To be successful in implementing our vision it is critical that teachers' ICT PD is grounded around these ideas.</p> <p>We will design learning opportunities/programmes for teaching staff to cater for two distinct needs. The first will be about understanding the basics and equipping staff with the skills and understanding to effectively and efficiently use new technologies. The second will be to showcase the work of “early adopters” to ensure that best practice and new ideas and ways of working are identified and shared.</p> <p>Teachers will be given the opportunity to compare their existing ideas and practices with “21<sup>st</sup> century” ideas, to debate these ideas, and to accept constructive challenges to their own ideas and practices. This is likely to be a gradual process requiring ongoing shared professional learning among staff.</p> | <p>Brain and Rachael will work on the design and delivery of co-ordinated programmes that are designed to develop the school as a professional “learning community”. One of the aims of this learning community should be to develop a <i>collective</i> sense of the “way forward” for the school. This overall approach may get broken down into more syndicate specific initiatives where appropriate. <b>See annual target 1.3 To use ICT tools effectively across the curriculum and 7.4 Technology supports student achievement in English and Mathematics</b></p> <p>We estimate that this staff development time will cost ???</p> |

| ICT infrastructure | Why these are important? | How we will achieve our objectives in 2011 |
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## Schools need

- reliable, high-speed internet access in all teaching areas, and a reliable school network. This is important both in terms of establishment and maintenance of this core infrastructure.
- prudent investment in high-quality, flexible, upgradeable, multimedia-capable hardware. We recognise that in the future this may mean the free movement of personal devices (owned by students) between home and school.
- an emphasis on purchase and use of software that allows students to be authors and creators, has the potential to encourage creativity and higher order thinking skills, and enables students to do more than they could by any other methods.
- investment in other digital equipment that supports the authoring and sharing of knowledge by students and teachers – visually, aurally, and textually. (e.g. digital cameras or video cameras, data projectors, sound equipment, etc.)
- at least one “multimedia” room in the school which is accessible to all students and teachers.

Fast internet and a reliable network enable students and teachers to produce, store, and share digital information, both *within* the school, and with audiences *outside* the school. Computers that are too slow or not powerful enough won't be suitable platforms for good multi-media software: the kind that supports students to be creators and authors of new ideas.

As the amount of digital material produced by students and teachers grows, it is likely that a school will encounter issues connected with digital storage and archiving capacity (multimedia items require large storage capacity), and issues regarding intellectual property rights over material created for the purposes of teaching and learning, and finally, personal privacy issues related to the storage and use of these materials beyond the contexts in which they were created

These issues will become increasingly common for schools as they increase their use and reliance on technology. This has policy and funding implications both for our school and across the sector. Over time, collective solutions may emerge, as educational policy and funding adapts to this changing environment.

We need to make wise decisions about investment in ICT, designed to service our needs both now and into the future. ***See Strategic Goal 7.4 Develop our ICT Infrastructure (note this goes beyond the annual target 7.4 Technology supports student achievement in English and Mathematics***

We already invest in an ICT maintenance contract. Our provider gives advice on current and best practice in schools and also assists with implementation of our infrastructure investment. This costs ?? per annum. While the service level has been adequate for our past needs we believe we may need increase the expenditure on this contract to support some of the additional activity we have underway. We will be increasing our ICT support by \$x

Our long term aim will be to fully equip all the learning spaces in a school; but in the meantime we will need to prioritise areas for investment. This year we have identified the following quick wins:

- wireless internet connection for the whole school (cost \$x )
- ensuring the all interactive whiteboards have a minimum spec'ed dedicated laptops to ensure there reliable day-to day use (cost to purchase and/or upgrade the existing laptops \$x)
- investment in some administrative support to ensure effective filing and archiving practices in the school ( \$x)
- purchase and installation of a fit-for purpose fixed data show projector in the Hall (cost \$x)

The ICT group propose to do further work to identify the best options for the school around the supply of mobile devices for students, over and above the existing arrangements. We believe that increased access to mobile desktop devices would be an advantage but have yet to form a clear view on the best way to provide those devices and the appropriate ratio of devices to students. (eg: pods). There is an opportunity when we plan our refit of classrooms to take account of our preferred options for providing different mutli-media equipment in the classroom. Brian and Justine will work with the teaching team to identify these preferred options.

One option which we explored but were not vet

| Teacher-student interaction   | Why is this important?  | How we will achieve our objectives in 2011  |
|---|---|---|
| <p>Schools need to provide</p> <ul style="list-style-type: none"> <li>• opportunities for two-way learning, and co-learning between teachers and students.</li> <li>• an emphasis on student-led, self-paced learning with teachers as mentors, coaches, and guides to student knowledge-building.</li> <li>• recognition and valuing of students' interests, prior knowledge, and experiences (including their experiences as a child of the "digital generation") in the development of curricular and pedagogical planning.</li> </ul> | <p>A "21<sup>st</sup> century/knowledge age" learning environment should foster the development of students' critical thinking, their ability to find and evaluate knowledge, their ability to communicate their ideas to other people, and their deep understanding of how knowledge is constructed, tested, and used in various subject domains and disciplines. They need to know how they and others learn, and how to work together with all kinds of other people to achieve their goals.</p> <p>Students' school learning should provide opportunities for them to develop and practice these in contexts which are engaging and relevant.</p> <p>One powerful way to do this is to unsettle familiar patterns – for example, by creating opportunities for "reverse mentoring", and/or by promoting the idea of students learning in teams, and/or encouraging teachers to step back and make observations and reflections on the characteristics of learners, groups of learners, and the dynamic processes of learning.</p> | <p>Much of our work in the 2011 Annual Plan focused on embedding our practices to extend the learning of cross the curriculum through the use of ICT. As part of these actions we will identify ways for our students to be active in this space. <b>See Annual target 3.3 create a powerful learning environment for fostering leadership and learning opportunities for children</b></p> <p>Students and people from the school's community need to advice, participate in, and be part of these groups. These people, in partnership with the school's teachers, need to participate in the process of making the school as a whole a "learning organisation", a knowledge-producing, not knowledge-consuming, entity. <b>See Annual target 6.1 involve parents in teaching and learning</b></p> |

| E. School-community-business partnership principles   | Why are these important?  | How can they be achieved?   |
|---|---|---|
| <p>Schools need to build</p> <ul style="list-style-type: none"> <li>• relationships between the school and community and/or business partners who can support the aims of "21<sup>st</sup> century" learning within the school</li> </ul> | <p>It will be important to actively encourage broader encounters with the wider community through these students encounter new knowledge and ideas and learn to accommodate these into their overall understandings.</p> <p>Community and business groups can provide</p> | <p>In terms of our broader interactions we will look for ways in our teaching programmes to engage with community groups.</p> <p>In terms of our communications activities we look for ways to showcase our school achievements and activities with the wider community, in this we will look</p> |

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knowledge and expertise that may not be available within our school, and in turn these people and groups become a “real” audience to whom students must learn how to engage and communicate. People and groups outside the school can provide authentic and engaging learning contexts (including real problems to solve).

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to use technology as an enabler. ***See annual target 6.3 communicate openly with the school community***