ST MICHAEL’S PRIMARY

BYO (BRING YOUR OWN) IPAD PROGRAM

Children must be taught how to think, not what to think’. Margaret Mead, cultural anthropologist

This quote states very clearly the way we need to approach education to ensure our students are equipped for the future. St Michael’s School is planning for a program in which students bring to school, for their own individual use during learning time, a personally owned iPad. The prospect of introducing a BYO (Bring your own) iPad program in 2017 (for Yrs 5 & 6 initially) was proposed at the open Council meeting earlier this year.

RATIONALE

At St Michael’s, we believe that it is our responsibility to provide quality education which allows all students to develop to their full potential. It is important that teaching and learning reflects the needs of our students today. Our educational context should be oriented to their futures, not our past. We cannot ignore the development of technology and the opportunities it affords our students to create, communicate, solve problems and work collaboratively across all learning areas at school.

All schools must cater for the diverse needs of learners if they are to achieve their intended educational goals. Our staff continue to investigate ways to further enhance the school’s capacity to cater for diverse learning needs, using technology to promote student-centred and self-directed learning opportunities.

St Michael’s has included the development of this program in our management plan for 2016. In order to address this goal, considerable background work has occurred over recent months, in conjunction with the Catholic Education office, including the significant upgrade of cabling and other infrastructure.

The Melbourne Declaration on Educational Goals for Young Australians (MCEETYA, 2008) states that “rapid and continuing advances in information and communication technologies (ICT) are changing the ways people share, use, develop and process information and technology. In this digital age, young people need to be highly skilled in the use of ICT; while the Australian Curriculum (ACARA 2013) states that ICT will “transform the ways that students think and learn and give them greater control over how, where and when they learn”. Both of these key national statements on education in Australian documents acknowledge that the use of ICT is crucial in meeting today’s educational outcomes. It is also noted in the Melbourne Declaration that schools must “promote personalised learning that aims to fulfil the diverse capabilities of each young Australian” and that successful learners “have the essential skills in literacy and numeracy and are creative and productive users of technology, especially ICT, as a foundation for success in all learning areas.”
The use of ICT is an integral part of contemporary teaching pedagogy and the expectations with regard to the role of teachers in using ICT are articulated in Standards 2.6, 3.4 and 4.5 of the Australian Professional Standards for Teachers. The effective use of technology is also embedded in the Archdiocesan Transforming Teaching and Learning Framework and the Quality Teaching Framework, for teachers in Archdiocesan Catholic schools. It is no longer the case that the use of ICT is a helpful addition to learning or a part of the wider curriculum; ICT is now shaping and transforming how all subjects are learned and how teachers facilitate the educational context.

As educators we need to teach our students skills for learning in the 21st century. Researchers point to the importance of a focus on the 4Cs of 21st Century Learning. Tucker (2014) suggests that education systems need to infuse the “4Cs (communication, collaboration, critical thinking and problem solving, and creativity and innovation)” into their practice, to assist in preparing students for their role in the world and support them in developing the capacity to cope with “accelerated technological change”. This perspective is reinforced by Donovan, Green and Mason (2014) who argue that the 4Cs are “learning and innovation skills necessary to prepare students for increasingly complex life and work environments in today’s world”.

At St Michael’s the implementation of the BYO iPad Program will further integrate the use of learning technologies into our classrooms to create a collaborative, student-centred learning environment leading to improved learning outcomes. We will do this through supporting our students to develop deeper knowledge and skills around the use of ICT, and application to the real world.
WHAT DOES THE RESEARCH INDICATE?

There is quite a range of research about iPads in the classroom available. One of the most comprehensive studies, yet simple and easy to understand is the work of Karsentoi & Fievez (2013). In a review of 359 academic works they found the following commonly reported benefits of using iPads in the classroom were:

1. Increases motivation;
2. Facilitates access to, management of, and sharing of information;
3. Fosters student learning and performance;
4. Allows a wider range of teaching strategies;
5. Fosters individualised learning;
6. Improves the reading experience;
7. Encourages communication and collaboration among students and between teachers;
8. Improves computer literacy skills;
9. Nurtures students’ creativity;
10. A highly portable tool;
11. Facilitates student assessment;
12. Improves the quality of pedagogical support;
13. Facilitates learning how to write;
14. Makes it easier to organise schoolwork and assignments;
15. Students can make versatile and vivid multimedia presentations.
16. Significant benefits for students with learning problems.

‘TECHNOLOGY IS JUST A TOOL. IN TERMS OF GETTING THE KIDS WORKING TOGETHER AND MOTIVATING THEM, THE TEACHER IS STILL THE MOST IMPORTANT.’
BILL GATES
OUR SCHOOL PLAN

The school has adopted a four phase process: Planning; Preparing; Implementation; and Evaluation. As part of the preparation phase a number of issues were considered. These have been categorised into two areas:

- Pedagogical Considerations
- Technological Considerations

PEDAGOGICAL CONSIDERATION

The implementation of any technology program within a school must be based upon a sound pedagogical rationale. St Michael’s Primary School has a number of strategies and programs in place to cater for the variety of learner needs within the school.

As a number of schools within the Archdiocese have implemented similar programs, visits have been arranged to see BYO iPad classrooms in action. Both the Principals and the class teachers spoke positively about the impact the program had on their students including the high levels of engagement and changes in pedagogy.

Critical to the success of the St Michael’s BYO iPad program will be the pedagogy used to create an environment that accommodates diverse student needs. Our teachers are competent and experienced in integrating multiple technologies into the classroom.

At St Michael’s, we acknowledge that the successful implementation of any technology program is reliant on quality professional learning (PL) linked to the Australian Professional Standards for Teachers. We will continue to ensure that professional learning around the implementation of BYO iPads:

- has a strong focus on pedagogy;
- allows time for teachers to become familiar with devices and applications;
- provides the opportunity to attend formal professional learning sessions;
- engages in informal collaborations with other teachers;
- uses the support of a Learning Technologies Officer from the Catholic Education Office;
- builds a professional community of practice as a platform.

As illustrated in the literature, iPad technology has an inherent capacity to be personalised and when used in a 1:1 environment allows easy, sustained and consistent access for individual students. When students use their own personal iPad it can also create links between learning at home and school. The introduction of BYO iPad is consistent with the pedagogical literature that has been informing our program.
The SAMR Model is used at St Michael’s to build teacher understanding of how technology can be used to enrich learning opportunities.

**THE SAMR MODEL**

- **Redefinition**
  - Tech allows for the creation of new tasks, previously inconceivable

- **Modification**
  - Tech allows for significant task redesign

- **Augmentation**
  - Tech acts as a direct tool substitute, with functional improvement

- **Substitution**
  - Tech acts as a direct tool substitute, with no functional change

The SAMR (Substitution, Augmentation, Modification, Redefinition) model is also used to help teachers evaluate how they are using technology. The first two stages - substitution and augmentation - accomplish “traditional” tasks that have been enhanced by the use of technology. It is in the next two stages - modification and redefinition - where technology can be used to transform learning and involve rich, open-ended, student-centred activities. It is our belief, based on the current and emerging research that BYO iPad represents the next step in the transformation of our educational context from one in which technology merely supports the initial stages of learning to one where students are genuine participants and co-creators of knowledge, skills and values.
TECHNOLOGICAL CONSIDERATION

Discussions were held with Catholic Education Office (CEO) technicians early in 2016 and this process was formalised when the school enrolled in the T4C program in Term 2. All technical considerations were discussed with the T4C team with the capacity of the current wireless system being the main infrastructure issue identified. The CEO evaluated the system and found it would not be capable of dealing with the expected number of iPads. The technicians have planned a new system to ensure that this dimension of the project was within the capacity of the school.

The choice of platform (i.e. iPad) was determined by the provision of a stable technical support infrastructure provided by the Catholic Education Office.

The CEO has also sourced favourable pricing regimes for iPad Apps. While it is recognised that a variety of tablet devices now exist and each has its own strengths and limitations, the option of system wide support and the capacity to transfer learnings and successful innovation across schools was determinative.

The school also investigated which iPad would best meet the requirements of the project. Through discussions with the Apple Store, Mac 1 and the technicians on the T4C team it was decided that the Apple Air 2 32 GB or greater was the most cost effective option for meeting the identified requirements. This will allow for storage of all work, music, video and photograph collections. We also recommend that families purchase the WiFi only model (without cellular capabilities). These models also have AirDrop capabilities which are important for the program. However, as part of the implementation period in 2017, ipad Air 1, with any storage capacity presently owned by families may be used to determine their effectiveness on the system and inform our future decisions.

SAFETY AND SECURITY

Internet traffic at St Michael’s is filtered by the CEO Internet filter 'Z-Scaler'. All iPads will access the Internet via this filter thus blocking access to inappropriate material. Please note that when students use the Internet at home (or anywhere else) access will be filtered by whatever system is in place in that location. Parents would need to monitor home use the same way they currently monitor home computer access. Parents have the ability to easily control access to a wide range of functions including Internet access and messaging. This feature is password controlled by the parent.

Most social media sites have an age limit of 13 years and are therefore blocked by the school’s filtering system. If parents choose to allow access to these sites at home then they must monitor this.
Safe and responsible use of technology is an essential part of participation in this program. Ongoing education about cyber safety and how to be a responsible digital citizen will be an integral part of the BYO iPad Program.

All participants (parents and students) in the program will need to sign and abide by the school’s BYO iPad Acceptable Use Agreement.

**FREQUENTLY ASKED QUESTIONS**

**WHY THE IPAD AND NOT, OTHER (CHEAPER) ANDROID DEVICES?**

Information technology is the most rapidly changing and growing industry in the world. The choice of platform (i.e. iPad) was determined by the provision of a stable technical support infrastructure provided by the Catholic Education Office. The CEO has also sourced effective App management systems and favourable pricing regimes for iPad Apps. While it is recognised that a variety of tablet devices now exist and each has its own strengths and limitations, the option of system wide support and the capacity to transfer learnings and successful innovation across schools was determinative. It is just not possible for a teacher to teach effectively if students have a range of devices with different capabilities.

The iPad will not replace all books, writing, drawing, sport or art. The iPad will not be in constant use - it is intended to be a learning tool to complement and support the learning and achievement not TO BE the learning.

This YouTube video puts it simply:

https://www.youtube.com/watch?v=Bq9yss1KRwE#t=68

**WHY DO THE STUDENTS NEED THEIR OWN IPAD?**

As iPads were developed as a personal user device, the school has experienced some challenges having multiple students’ use the one device for open ended long/term projects. As the iPads are shared across 8 classes. It is not always possible for students to work on the same iPad and to continue work begun previously, nor has the personalisation potential of the technology been able to be developed. Students using BYO iPads will be able to store their work and personalise their device to alleviate this problem, while at the same time enabling more effective teacher facilitation and monitoring of individual needs and progress through the technology. Also the student has the opportunity to continue work at home, that was commenced in the classroom.
WHAT TYPE OF DEVICE WILL BE REQUIRED?

The school also investigated which iPad would best meet the requirements of the project. Through discussions with the Apple Store, Mac 1 and the technicians on the T4C team it was decided that the Apple Air 2, 32 GB or greater was the most cost effective option for meeting the identified requirements. This will allow for storage of all work, music, video and photograph collections. We also recommend that families purchase the WiFi only model (without cellular capabilities). These models also have Airdrop and quality camera capabilities which are important for the program. However, as part of the implementation period in 2017, iPad Air 1, with any storage capacity presently owned by families may be used to determine their effectiveness on the system and inform our future decisions. Please note there must be enough storage to save the students work, therefore some existing personal apps may need to be deleted to create the storage required.

PURCHASING AN IPAD AND ACCESSORIES

Families can make their own decision regarding where to purchase a device from. iPads can be purchased directly from the Apple Store or from major electronic retail stores.

Each student will need to have a protective cover of choice that stays on the iPad at all times as well as an additional protective bag/case to transport the iPad in. Name labels will also assist students to identify their own device. Earphones for use at school will also be required.

INSURANCE & DAMAGE/THEFT

Our school will make every effort to ensure that students understand the routines and expectations for the safety and care of the devices brought to school. The school will not be liable for loss or damage to personal electronic devices either at school or in transit. iPads can be purchased with an Apple Care and Protection Plan for further support and warranty of devices and this is encouraged. iPads may be covered by families’ Home and Contents Insurance if families choose to take out the coverage. As it is a personally owned device, the school will not be responsible for insurance.

DO I REQUIRE VIRUS PROTECTION?

At this stage iOS devices (iPads) do not have any problems with viruses.
WILL THE ICT LEVY REMAIN THE SAME?

Yes, all families will continue to pay ICT levy in the school fees. The levy goes towards all areas of technology access, including infrastructure costs, security and other resources.

WHAT ABOUT APPS?

In 2016 we implemented a new system called AirWatch. AirWatch is a Mobile Application Management System that allows us to deploy and manage applications while protecting user privacy and security. Families will be asked to download a free App which the school then uses to deploy the required Apps on the student iPads. When the student leaves the school, the App can be easily deleted. The school will cover the cost of the Apps in 2017.

CAN MY CHILD PURCHASE OTHER APPS TO USE AFTER HOURS?

As the family owns their device they can purchase other Apps at their discretion using their own iTunes Account. Parents will be required to set up an iTunes account (with an email account used for the Apple ID) for their child. In accordance with Apple’s terms and conditions, parents are asked to manage the Apple ID for children under 13 years of age. **It must not be linked to their parents own Apple ID account OR credit card. It is our strong recommendation that any additional Apps be purchased using iTunes cards.**

HOW WILL THE SCHOOL ENSURE RESPONSIBLE USE?

iPad use by students will be monitored by their teacher in the same manner as current classroom practices. Students will receive ongoing instruction on responsible use and Digital Citizenship. The St Michael’s Student Acceptable Use Agreement is in place for all students, and there will also be an agreement for the use of personal devices for the BYOD program.

CAN STUDENT USE GAMING APPS AT SCHOOL?

As part of the ‘BYO iPad User Agreement’ students and parents will have a clear outline of our school’s policy in regard to the misuse of their device or use of inappropriate Apps. If a student breaches the agreement, teachers will have the authority to delete the App, take the iPad off the student for various periods of time and will notify the parents.
WILL STUDENTS STILL USE BOOKS, ECT TO COMPLETE WORK?

Yes, the students will still use books every day; the iPad is viewed as another tool to enhance learning.

WILL THE STUDENTS STILL COMPLETE HANDWRITING?

The iPad compliments what students are doing in class rather than replacing key aspects of learning such as handwriting. At times students may be able to type notes on their iPad, however, this is not be the primary use of the iPad, nor are students permitted to do this all the time. Handwriting will still be an integral part of the curriculum and a core skill for students to develop.

HOW MUCH TIME WILL BE DESIGNATED TO IPADS EACH DAY?

This will vary, depending on how the teacher & student decide to use the iPad to support their learning. It may be used for drill & practice during a Maths or Spelling/ Literacy lesson, organising and creating work as a result of an inquiry/research task in a work flow situation, story-writing, using a dictionary, referring to the Bible, searching for a location using Google earth, creating during a music lesson, internet searching at the various times of need during the day, collaborating on a task, participating in a virtual excursion (e.g. Art Gallery, zoo etc.) taking photos to use in a task, the potential is endless. But remember, it is about using the best tool for the activity, and this may not always be the iPad.

WHAT HAPPENS IF THE STUDENT BRINGS THEIR IPAD TO SCHOOL NOT CHARGED?

The battery life of the iPad Air 2 is 10 hours of normal use (including web-browsing, watching videos etc.) It will be a highly recommended requirement that each student charges their iPad each evening or every couple of evenings and brings it to school 100% charged. Students should bring their own labelled charger if they know their iPad is low on charge. The school will only have a few emergency chargers available BUT if a particular student is continually not responsible with charging their iPad each night then they will not be able to use it during class time and the parents will be notified.

For tips on how to conserve battery see the following website:
### What happens if a student forgets to bring their iPad to school?
If a student forgets to bring their iPad to school then they will have to complete their work using other tools of learning, a school iPad if available. If this occurs more than once the parents will be notified.

### What iPad security will be in place in the classroom?
The *BYOD Acceptable Use Agreement* sets out the expectations of students, parents and school in ensuring that devices are kept safe and secure. This will include routines and expectations that involve keeping them in bags when travelling to and from school, keeping them in specific locations in the classroom when not in use, limiting access to the classroom at all times when teachers and students are not present and during breaks.

Our school will make every effort to ensure that students understand the routines and expectations for the safety and care of the devices brought to school. The school will ensure that a safe location is provided for their storage during the day and that they are used at times that reduce the risk of damage. Insurance is an individual responsibility.

### What security will be available at after school care?
Students will not be allowed to use their iPads at ASC unless arranged by the parents and staff for homework purposes. ASC will also negotiate storage for iPads/school bags to support their safety and security during ASC hours.

### Are the students allowed to use their iPads at recess and lunch?
No. Students will only be allowed to use their iPads during class time. They may take it to their library, music and Indonesian lessons if required. They will also not be permitted to use their iPads on their journey to and from school or on the playground.

### How will teachers access student work for assessment?
There are various ways teachers can access their students work for assessment which will depend both on the task and the teacher’s preference for how they wish to view the assessment. Teachers can use apps, such as ‘Edmodo’ or ‘Google Classroom’, which enable them to assign, collect and review student work. The teacher can manage these and control who has access. Teachers may request the items be emailed or stored on the drives at school. Teachers will have copies of submitted work but otherwise student work will be stored on their iPad or in cloud based storage spaces within apps or Google drives.
WILL THE USE OF IPADS/DEVICES CAUSE EYE STRAIN?

Students will not be using their iPads for the entirety of the day. The amount of time spent on an iPad will vary each day, depending on how the teacher and student decide to use the device to support learning.

Eye strain is caused by concentrating on a fixed point for a prolonged period of time. This could be a screen or a book. The American Optometric Association suggests adopting a ‘20-20-20 rule’. This means taking a 20 second break at least every 20 minutes and looking at something 20 feet (6 metres) away. This happens naturally in a classroom where students are working collaboratively, moving around the room and looking at other student’s work.

The closer the screen resolution is to the human eye itself, the better it is in terms of visual comfort. At the normal distances for tablets, the human eye's resolving power is about 240 ppi, the new iPad's retina screen display is 264 ppi.

‘COMPUTER SCREENS HAVE BEEN BLAMED FOR A WIDE RANGE OF HEALTH PROBLEMS. HOWEVER, THERE IS NO EVIDENCE THAT SCREENS CAUSE DISEASE OR PERMANENT DAMAGE TO EYES.’ AUSTRALIAN GOVERNMENT COMCARE (2012)

HAVE THE ERGONOMIC EFFECTS OF IPAD USE BEEN CONSIDERED

According to researchers at the Harvard School of Public Health, a new study published in 2013 was among the first to look at the possible ergonomic impacts of tablet use, and there’s good news and bad news. The good news is that tablet users seem to shift position and move around more than people locked in to traditional desktop and notebook computers. The bad news is that most common ways of holding and using tablets seem to put considerable strain on user’s neck muscles — especially compared to typical desktop setups.

To ensure that we are supporting students we will encourage the standard ergonomic recommendation of moving every 20-30 minutes. We will encourage quick mini breaks and constant reminders for correct posture.
HOW DO I MANAGE MY CHILD’S USAGE AT HOME?

BYOi is a partnership between the school and the family. Whilst educational use is the primary function of the device it is also available for use at home however the family wishes. BYOi use is built on trust and responsibility – at school and at home, the child needs to show that he/she is a responsible user who can be trusted with the device.

At school, students abide by a BYO iPad Acceptable Use Policy. After school, parents are in control and they set the parameters of acceptable use at home. The device should not be used for anything or in any way that parents are not comfortable with.

Parents should set boundaries for where, when and for what purpose the device is used. Generally, this will be in line with current boundaries already set for computer use at home. If you are not comfortable with a school related task being done at home, then discussion this with your child’s teacher.

If you wish to limit the functionality available to your child then the iPad has a comprehensive selection of controls where access to the internet, messaging, App purchases and other functions can be blocked.

WILL IPADS CHANGE THE CURRICULUM THAT IS BEING TAUGHT IN THE CLASSROOM?

As mentioned previously, the iPads do not replace the important skills or curriculum already being taught. Rather, they are used to complement what is being taught when they can add value to the learning experience. This means that in some subjects they are used more than others. There are still plenty of lessons where the iPads are not used or are used for only a short period of time.

THE OUTCOME FOR PARENTS WHO CANNOT AFFORD TO PURCHASE AN IPAD

For the use of ICT to be most effective, all students will have their own iPad. The school will always support families in genuine need. If families cannot afford to buy a device outright there are other options open to them. These include the arrangement of personal leases or finance arrangements from their store of purchase. However, families experiencing significant difficulty with the purchase of a device can make contact with the Principal to find a solution.
‘WHAT THE IPAD DOES IS IT OPENS PEOPLE'S MINDS TO A NEW WAY OF DOING THINGS. THEY'RE ACTUALLY THIRSTING FOR IT.’ MIKE MCCUE

St Michael’s primary acknowledges the support and advice of the Principal and staff of the following schools in the preparation of this paper, and other documentation and support materials, in the planning and development of our 1:1 BYOD program thus far:

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*St Monica’s Primary School, Evatt*

References


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St Michael’s-BYO iPad Program Parent Information


