

Empowering A Digital Learning Environment



TRANSFORMING LEARNING AS A WAY OF LIFE

School of Science and Technology, Singapore (SST) is a Specialised Independent School, under the Ministry of Education (MOE), that offers a four-year programme leading to the Singapore-Cambridge GCE 'O' Level examination. It is the sixth school in the FutureSchools@Singapore programme. The school strives to be at the forefront with the use of Information Communication Technology (ICT) in teaching and learning, and to incorporate ICT as part of the students' day-to-day learning experiences through the applied learning approach. Experimentation and problem-solving in disciplines such as Innovation and Entrepreneurship, biotechnology, design, media, and environmental science are part of the school's curriculum to nurture future entrepreneurs and innovative leaders.

SST adopts the 1-to-1 learning programme where every learner is equipped with a learning device that is connected wirelessly to the network in the school. Campus-wide wireless connectivity not only enables students to leverage on the rich resources available in the Internet for learning, it also facilitates online interaction and collaboration between teachers and students. Through the well-connected web-based environment, students could collaborate with international students, engage in online discussions, share group projects and have access to a wide range of online learning resources, anytime, anywhere.

To translate the ICT learning strategy into actions, SST has selected NCS as the services integrator to plan, deploy, manage and support the network infrastructure and the 1-to-1 computing implementation.

CHALLENGES

- Enable a digitally integrated teaching environment by incorporating Apple MacBook and best-in-class collaborative web-based solutions on Mac platform
- Provide a seamless and hassle-free experience for the students/parents to procure, acquire and use the computing devices

SOLUTION

- Deploy a secure and scalable network infrastructure to incorporate a Mac platform environment
- Manage seamless 1-to-1 computing programme:
 - Procurement and distribution
 - Set up on-site service centre & support hotline for the students
 - Conduct trainings and workshops
- Customise web-based collaborative solutions suite

KEY BENEFITS

- Enable a seamless, interactive and enriching teaching and learning environment
- High level of satisfaction among students with the seamless support and management of the procurement of Apple MacBook
- Scalability and flexibility to evolve and expand with future technologies
- Enable ease of use and enjoy a highly efficient teaching environment

A PRODUCTIVE AND ENRICHING LEARNING JOURNEY WITH 1-TO-1 COMPUTING

Learning anytime, anywhere with technology is what every student will experience in SST. Leveraging on 1-to-1 computing, SST draws on the advantages and benefits brought about by technology to enrich students' experiences in both instructional and co-curricular programmes.

NCS together with SST devised a full-fledged 1-to-1 computing programme to enable the students to procure their respective Macbook bundled with applications and a suite of maintenance services seamlessly.

The NCS' 1-to-1 computing programme for SST includes the following activities

- a) Backend planning together with SST and Apple to put together 2 bundled options that are specially available to SST students.
- b) NCS prepared the units which are customised accordingly to what is desired for the school's learning programme and physical environment. This means that the student can start using the laptop from Day One without the need to do any additional configuration to access into SST IT framework.
- c) NCS has provided a one to one notification to the parents via emails/SMS making separate provisions for parents who are unavailable to collect the laptop on the day allocated.
- d) Training sessions are also conducted for both SST Students and parents. NCS has taken the additional effort to orientate both parents and students on the features, applications and tips in taking care of their learning devices.

To ensure support is always available on campus, an on-site service centre is also set up in the school to provide repair and maintenance services for the students. A hotline is also made available for the students to support technical queries.

By taking away SST's ICT operational challenges, NCS is able to ensure that students and teachers can focus on learning and teaching without worrying about the technical and logistical details.

ENABLING A SECURE YET SCALABLE NETWORK AND COLLABORATIVE WEB-BASED SOLUTION SUITE

The backend is supported through deployment of a Mac platform environment based on Apple's Open Directory Infrastructure. This is coupled with ANTLabs ezXcess solution and customisation of Google Applications to provide a standards-based directory and network authentication services to allow single signed-on (SSO) log-on authentication and account management of the school network. Teachers and students can connect to the network without any configuration changes to their computers.

Using Web 2.0 technologies, NCS as a service integrator, has deployed a truly flexible web-based solution that can relevantly support SST's objective of enabling a collaborative learning environment. Today, the SST learning community can now seamlessly connect via a single touchpoint using Mac OS and GoogleApps Environment. NCS solution for SST is also "future-proof", where it can support any new Web 2.0 applications, thus ensuring the agility and scalability required to support SST's application of ICT as part of its learning journey.



"We are at the beginning of our journey to evolve and change the way education is taught by incorporating ICT creatively into academic subjects.

Together with NCS, we successfully implemented the 1-to-1 computing seamlessly. We have seen remarkable efforts by NCS in providing end-to-end services to ensure a hassle-free head start for the students to be digitally connected. The students will be exposed to a whole new way of learning and in time, to become inquisitive and discerning individuals where technology is injected into their daily lives and learning experience."

Mr CHUA CHOR HUAT
Principal, SST



"The selection of a right partner to meet our ICT demands was important in ensuring success in SST's ICT journey. Through excellent cooperation from NCS, we have enabled effective implementation

of 1-to-1 computing services and network infrastructure accordingly. We have the benefit of working with a team of dedicated, competent and responsive professionals from NCS. These coupled with the domain knowledge, enabled operational efficiencies and quality delivery of the project. Nothing beats the relentless team spirit that underlies the success of our partnership."

Ms LOH KWAI YIN
HOD, Information and Communication Technology