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K-12 EDUCATION TECH

Inside a Public School in Beijing

Longquan Primary School

| 630 Children
| 6-12 Years, Age Range
| 53 Teaching Staff, 14 Admin/Management
| 26 Classrooms and 20 Multifunction Rooms

" The school has managed the challenge of merging three very different schools in five years. Teachers are very positive about technology and the school now has significant budget spend on Augmented Reality, Virtual Reality and the Internet of Things"

Executive Summary

The School: We spoke to the head teacher at Longquan Primary School a medium sized public school in Beijing. The original school was founded in 1952. In 2011, 2 schools merged, and then another school merged in 2013. The technology adopted in each school was very different, so they set up one-to-one help groups and assigned teachers who were more advanced with technology to help teachers from the school which didn't use much technology.

Technology Background: In the 7th national annual IWB competition (2014), they won 7 first prizes in different subjects. Since the 4th national IWB competition they have won first prizes in different subjects each year. The IWB competition allows teachers to submit lessons they have taught using IWBs. As they are ahead in technology they help other schools as well. In 2017, they will update all the IWBs.

Hardware Assets:
2 ICT suites with 80 Desktops
189 Desktop Computers (Inc suite)
each teacher has a desktop PC
200 Tablets (5 Classrooms)
16 Laptops
46 Interactive Whiteboards each with a Projector
10 Printers
3 Digital Signs, all in Playgrounds
1,000 Voting Handsets (each classroom has 40)

Total of 464 Assets
(plus the 1,000 Voting Handsets)

What are the Key Technology Points of Your School Development Plan?
During 2016-2020, the 13th 5 year plan period, the school plans to invest 20 million RMW ($3m) into a 'Smart Campus' project, with creative class, augmented reality (AR) and virtual reality (VR) features integrated, all based on an 'Internet of Things' infrastructure. The fund will be used to purchase sensors, facial recognition device, control system, school management and monitoring.

How Does Technology Support Your Learning Outcomes?
Teachers design lessons to be more interactive, utilising interactive whiteboards and voting handsets to enable student participation. The school believes increased participation in class offers students positive reinforcement for learning and a greater opportunity for self-expression. Teachers are very positive about the technology in use. There are few problems and they keep exploring, developing new classroom strategies.

Biggest Lessons:
School leaders must have direct experience of using and an understanding of how technology can assist learning. The school recommends teachers attend national competitions on technology application, or tech seminars. This can be especially beneficial if teachers win prizes, it helps teachers to gain confidence and to improve their skills.

Benefits of Technology:
Teachers are using more platforms and are finding more ways to improve teaching skills. Students get more involved in their studies which broadens their vision. Parents have efficient communications with teachers via QQ and Wechat. For example, the school sent out fraud warning messages on Wechat to warn parents, fraud texts are particularly popular around the new term period.

Downsides:
Eye sight, there were concerns that using mobile devices could harm a child's eye sight. Parents were less concerned once it was explained to them that during each lecture there are only 5-10 minutes that the teachers ask students to use mobile devices. Teachers find it hard to monitor time spent on gaming with mobile devices.

Finances:
Finances have increased dramatically; this is the same with all public schools. The school creates a budget plan but the local education authority which provides the budget has final authorisation on any proposed spending. Textbooks and other courseware will be purchased by both the school and in some cases the local eduction authority. Most teachers are also using free to acces web based materials in the classroom.

Computers:
One-to-one computing depends on the families' ability to afford the devices, most families will not be able to. Some students already have tablet/ smartphones. Tablets would be the preferred devices as they are easy for the student to carry and manage. Children are not allowed to take devices home at the moment because of security and charging issues and some students don't have Wi-Fi at home meaning devices cannot be utilised effectively.

Digital Content:
Students mostly use free content, playing online learning games like 'Yiqizouye' and 'Limixuexi' is often set as homework. The school doesn't set homework for grade 1 or 2 students (6 to 8 year olds). Students in grade 3-6 (9 to 12 year olds) will typically get one hours writing homework per day. Where digital content is purchased, individual subject teachers or the head teacher will typically recommend content to buy. The school has no ongoing subscriptions for digital content.

The school is forward thinking with an IoT infrastructure but shows relatively low adoption of digital content (mostly free - no subscriptions). Chinese people are not used to paying for any content, i.e. online video streaming sites provide lots of free movies and TV shows (all TV episodes are free).

Networks and Wi-Fi:
Broadband is supplied by Gehua which is sometimes a little slow. The local education bureau buys the data plan for the school. Pupils and teachers have access from home. There is Wi-Fi coverage across the whole school.

Software Platforms:
They use software from Beijing Songbo Tech company for administration and school management. IWB has its own software from Honghe.

Decisions:
To learn about new technology they attend trade shows, read magazines and communicate with other schools and teachers. The local education authority will also influence this process and will often handle procurement with an open tender and bid process.

Training:
For new equipment, vendors will provide training on usage. Teachers will teach each other, if a teacher is ahead, they will share their experience with others in dedicated training sessions.

IT Support:
The school has a contract with a local IT company - 'Weicheng Tech Company'. They have an annual maintenance contract covering the schools ICT portfolio and are happy with the service.

Advice for Suppliers:
For software, features need to be practical and suppliers need to consider what they really need and require. Teachers show a strong affinity for solutions in use - how can suppliers exploit this and develop the eco-system in use? Both teaching staff and the local authority influence purchasing - suppliers must target both.

Future:
Make digital campus possible, transfer from traditional management to digital.