mEducation

Etisalat: making learning innovative and relevant

Etisalat is working with Ministries of Education and educational institutions across the Middle East, Africa and Asia to enable the use of innovative technologies to enhance teaching and learning for students and teachers. They consider the use of computers, game platforms and mobile phones to be a natural part of students' lives today – part of a welcome transition from traditional textbook teaching to a more exciting way of learning through AR (Augmented Reality), web-based materials and eBooks. Their creative initiatives use interactive learning to improve understanding of complex and abstract issues and provide access to training materials in local languages through an intuitive interface enabled by state-of-the-art connectivity.

This case study focuses on Etisalat's projects with:

- Augmented Reality-based interactive learning in the United Arab Emirates (UAE). For more information visit **www.ogle.ae**
- distance learning and online books in the UAE and Sri Lanka.

Augmented Reality – making learning more exciting

Imagine visiting the outer reaches of the universe or dissecting a snail… Students can enhance their understanding of complex issues by learning through observation and investigation rather than by instruction.

Using Etisalat's Augmented Reality application – OGLE – students access a special interactive information layer by 'scanning' the pages of a schoolbook with the camera on their mobile device. OGLE automatically superimposes a virtual interactive layer over the printed materials enabling students to interact with audio, video and 3D animations using any iOS and Android smartphone, device or tablet. So, for example, learners using a schoolbook and phone/tablet for a biology lesson can see the human body become 3D and start to dance.

OGLE is used by learners aged 7-12 in UAE schools which follow the UK national curriculum in subjects including history, music, maths, design, PE, geography, ICT, languages and physics. All the content is syllabus-based and Etisalat has a team working closely with schools and academies to develop new lessons tailored to individual schools. Teachers and students can also create their own content, such as videos and images created outside of school, and incorporate this directly into the lesson provided. All new content is immediately accessible and shared between schools – giving access to a constantly expanding collection of 3D models.

Teachers are particularly keen because expenditure on new books is not needed. They can use this technology to transform the use of existing schoolbooks. OGLE also allows teachers to continue using familiar traditional learning materials at the same time as introducing exciting new technologies.

Examples of activities for students provided by Ogle in addition to the material printed in textbooks include:

- Pond Ecosystem – Explore the animals and fauna of a typical pond-water environment, with the ability to isolate individual life forms. Dissect creatures, examine lifecycles and study their place within their environment.
- Geology/Geography – Study an extensive range of geographical phenomena from the hydrological cycle to glacial formations, at a pace controlled by the user and with full interactivity.
- Physics/Engineering – View a fully working car model with an operating combustion engine. Study the actions of steering and suspension, highlighting the forces involved.

Forensic scientists: Using Augmented Reality to solve 'a crime'

Etisalat, OGLE and technology partner Engine Creative have developed a unique learning activity using Augmented Reality. Based on the UK Science curriculum for Years 7 and 8 (learners aged 11–12), it allows teachers to assess students' understanding of Particle Theory in a way that is highly engaging for the students and measurable for the school.

Students are taken out of their normal lessons to become forensic scientists for a day, seconded to a 'crime scene' investigation in the school environment and tasked to solve the fictitious theft of a valuable artwork.

The students are first introduced to AR when they are asked to use their mobile phone or tablet computer to scan the security briefcase holding the case files. The scan reveals a unique code, which allows them to unlock the briefcase and access the confidential information.

During the 'investigation' they then have to scan for fingerprints, analyse the crime scene and research different scientific theories including Particle Theory in order to compile the evidence required.

Alongside the technology-led activity, students record their findings and submit them as evidence for the 'courts' via their mobile or tablet device. If they are successful in their investigation not only will they have completed an interactive refresher on Particle Theory but also convicted their principal of an ingenious heist!

Distance learning and on-line books

Etisalat is also working with Ministries of Education in UAE, Sri Lanka and Pakistan, to enable many learning materials to be published for the first time electronically in Arabic, Sinhala, Tamil, Urdu and English on the Etisalat eBooks portal.

Introducing educational content in local languages is one of the key strategic differentiations in their eLearning programme. Students can access Etisalat's portal directly from their mobile device, choose the books they want, and directly download them to their smart phone, tablet or any PC.

In Sri Lanka, Etisalat has developed distance learning with the launch of 'Web Patashala', an on-line eLearning programme that provides students grade 4-10 (age 8–14) with access to online classes on their mobile devices through Etisalat's 3G network. The service is offered in conjunction with the Ministry of Education and State Engineering Corporation and aims to change face of education in Sri Lanka.

For more information see **http://etisalat.lk/sinhala/webpatashalacomputers.cfm**

Using new technologies for learning means students can attend lectures and download course materials wherever they are, whenever they like, while teachers and faculty can increase their reach and interaction. Web Patashala provides students and academic staff with enhanced mobility and flexibility, giving them instant access to courses and content on their handheld devices.

Lessons learned

Government buy-in: Etisalat worked with Ministries of Education and the educational community for the AR and distance learning projects. This has helped to ensure their sustainability and reach.

Repurposing existing resources: As well as being engaging and exciting, the AR projects transform the use of **existing** schoolbooks – a boon for both teachers and schools.

Coverage and seamless connectivity: Etisalat's 3.5G network covers over 99% of the populated areas in the UAE making mobile learning, both inside and outside the classroom, truly viable.

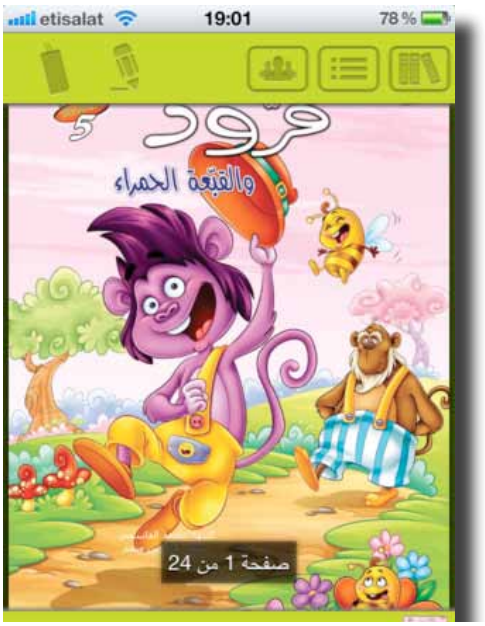
Global reach: By not restricting access to educational materials to the customers of any particular network operator, Etisalat opens up access to highly localized and relevant educational content to a global audience.

Etisalat's vision for the future of education

"Etisalat is proud to serve the education sector through innovative solutions and applications … I invite all members of the education sector to take full advantage and use our modern technological services to help them achieve a knowledgeable and prosperous future."
Khalifa Al Forah, Chief Digital Services Officer, Etisalat Group

"eBook readers and eBook stores have become a global phenomenon, but their benefits have eluded Sri Lankan readers, writers and publishers. This innovation [Etisalat's eBooks portal] will change that, and change the way that people read, purchase and publish local material, making it in our opinion one of the most innovative locally developed Internet-based products. We have also chosen not to make this product operator-dependent, making it accessible to anyone, anywhere in the world, so that Sri Lankan content can finally have a global audience."
Dumindra Ratnayaka, Chief Executive Officer, Etisalat Sri Lanka

"The Ogle Augmented Reality application allows students to enjoy interactive, digitally enhanced learning. This gives students the opportunity to access relevant and engaging content in a new exciting format. We are currently actively involved with education institutions locally and internationally who are implementing this technology, ensuring content is relevant and levels of teaching and learning enhanced. We have also identified education facilities where students have started developing their own augmented pieces of work, creating a new employment industry for future generations. In 2013/2014 Ogle will launch accredited academic qualifications for students associated with Augmented Reality applications."
George Held, VP/Commerce, Etisalat Group



About Etisalat
Etisalat is a Global telecommunications company with headquarters in the United Arab Emirates (UAE). It has committed more than 1 billion US dollars in its fibre-optic network which helps to connect 268 schools and universities in UAE and its 3.5G network covers over 99% of the populated areas in the UAE, making mobile learning truly viable.

For more information visit: **www.etisalat.ae**
Contact: George Held, VP/Commerce, Etisalat Group - **gheld@etisalat.ae**

About the GSMA Connected Living programme
Connected Living is a three-year market development initiative whose mission is to help mobile operators accelerate the delivery of new connected devices and services. Our target is to assist in the creation of 700 million new mobile connections, while stimulating service trials and launches in the Automotive, Education and Healthcare sectors. The Connected Living programme is also working with the city of Barcelona, the Mobile World Capital, to develop and showcase smart city services. We are working in mEducation to help bring the operator and education industries together to address market barriers, foster collaboration and speed up the adoption of mobile education services.

For further information please contact us at **meducation@gsma.com** or visit **www.gsma.com**

Connected Living

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