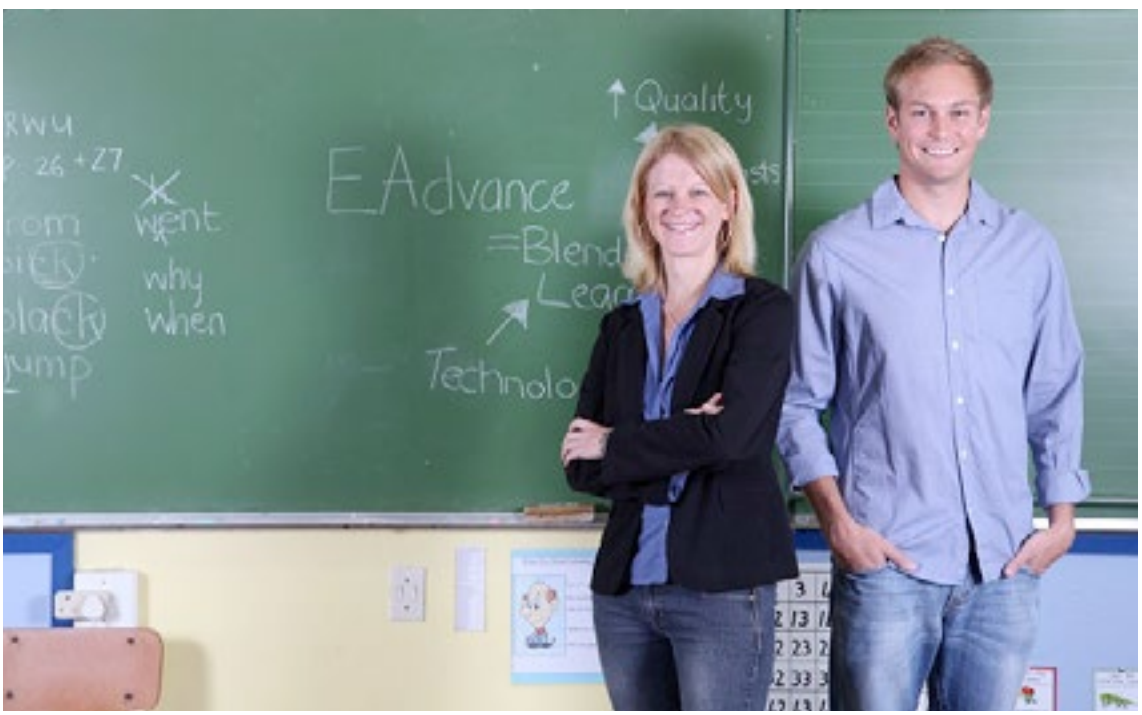
Blended Learning in South Africa

The dream of every teacher is to genuinely know each student's need and to be able to deliver on it. Spark Schools aim to do just this.



Stacey Brewer is the CEO of eAdvance, an education organisation with a mission to create systemic change in South African education. In January 2013, eAdvance launched *Spark Schools*, a network of blended-learning primary schools in Johannesburg. Stacey became invested in education reform in the course of her MBA thesis, in which she proposed a sustainable financial model for low-fee private schools. Her research involved an international search for best practises that could be replicated in South Africa to provide affordable, accessible education for all. Stacey subsequently graduated *cum laude* and received the award for top student achievement in her MBA class. Now, Stacey is dedicated to demonstrating what is possible in South African education with high academic expectations and a sustainable financial model.

Ryan Harrison is the COO of eAdvance, an education organisation with a mission to create systemic change in South African education. In January 2013, eAdvance launched *Spark Schools*, a network of blended-learning primary schools in Johannesburg. After spending some time working aboard, Ryan returned to South Africa, to ignite his entrepreneurial spirit and did an MBA degree from the Gordon Institute of Business Science; where his most notable achievements were graduation with *cum laude*. Passionate about development in South Africa; Ryan is committed to systemic change in education through promoting an innovative solution that produces high student achievement with a sustainable financial model.

Introduction: Finding the Model

South Africa needs a sustainable, low cost education model, delivering high quality education which is scalable across the country. *Spark Schools* has emerged due to this need. A hybrid of a business and an academic model is what makes *Spark Schools* a sustainable, scalable market-based solution.

Before launching *Spark Schools*, research was conducted to develop a financial model to underpin the sustainability of affordable private schools in South Africa.[1]

Affordability was considered on the basis of "the cost the country could afford". Private schooling by its very nature could not be free; however, it could be made more accessible to a larger group of the population. Thus, while affordable is a relatively loaded term, affordability at scale was considered to be about R12 000 per *annum*, approximately the same that a non-fee paying government school received. Furthermore while the model had to be an affordable private schooling solution; it was imperative that the model was also transferable to the state system in an effort to provide wider applicability as well as a viable platform for future cooperation with the state.

Key findings in the research showed that the total cost to educate a child, in current affordable private schools, is high, even if school fees are moderate. An average cost of R22 091 per annum to educate was found across the interviewed schools. However, school fees would only cover 51% of the costs. Other forms of revenue like donations contributed 20.3%, government subsides contributed 19.6% and then other revenue generating options contributed 9.1% to cover operating costs. It was evident that current affordable private schools are made "affordable" not through innovation in the education model but rather reliant on other sources of revenue, other than school fees.

The eAdvance Management Company provides centralised business functions such as procurement and financial management. It also provides specialised education services such as curriculum development and educator development.

Research was then conducted further afield to other networks of low fee private schools in Africa and India to investigate how these schools were able to be affordable.

Again, no innovation was found in terms of the education model to make it affordable. The networks of low fee private schools in Africa have emerged due to the need of providing access to education. The education model is a "school in a box"[2] model with very basic resources, therefore keeping operational costs at a minimum. This "school in the box" model allows for a high replication which results in economies of scale and hence a reduction in overall operational costs.

The emergence of low fee private schools in India is due to the need to provide access to English education. South Africa and India face different financial constraints. The majority of South African schools are perceived as 'break-even' schools to ensure that they consistently attract donor funding. However, in India, the affordable private schools are profit-making organisations. Initially, it would be assumed that the South African schools would be profitable due to the diversification of revenue sources versus the Indian concentration of revenue on one source. The schools in India are made affordable through paying teachers a low salary and increasing the number of children in a class.

Education at *Spark Schools* is made affordable through innovation in cost reduction. This is fostered in the school's 'blended' education' model and the use of centralised business functions. Cost reduction innovation is promoted through generating operational efficiencies at eAdvance Management Company. The eAdvance Management Company provides centralised business functions such as procurement and financial management. It also provides specialised education services such as curriculum development and educator development. The blended model allows the freedom to design new school models by loosening the constraints[3] found in traditional schools.

The blended learning model is a combination of classroom teaching and online educational technology, designed to meet the specific needs of each student. This combination allows for individualised learning and accelerated learning. *Spark Schools* acknowledge that teachers are heavily burdened and there are certain tasks that can be facilitated by computers, such as route mundane learning of basic skills.

Blended learning allows:
- students to get individualised, self-paced learning
- teachers to provide differentiated instruction based on data
- schools to operate at a much lower cost per pupil

Understanding the *Spark* Education Model

The teacher is the foundation for the learning process. Teachers introduce new concepts and conduct guided practice thereof. The student then goes into the Learning Lab where they practise their rote, learning online. The online practice allows for extension and review of the curriculum, and provides children with immediate feedback. Children spend 75% of their time in the classroom setting interacting with their teacher and peers, and 25% of their day practising content in the Learning Lab. Children thus spend the majority of their day learning in a classroom environment while the Learning Lab is reserved for practice of concepts.

It is important to note that the Spark education model follows the South African National Curriculum (CAPS); however, extends the curriculum and provides it with additional depth for the benefit of both the academic staff and the students.

The *Spark Schools* education model also includes daily targeted intervention, which occurs when students need special areas of attention. This is facilitated by tutors who provide intensive and focused work in small groups of at most 5 students.

More academically enabled children are able to progress without being held back and less academically enabled children are provided with support. No child is left behind. *Spark Schools* are able to reduce costs through blending teacher or class based learning with computer aided learning (the Learning Lab). A combination of the Learning Lab and teachings in the classroom has resulted in the blended learning model. The *Spark Schools* education model allows for individualised instruction. The students are further enriched at the developmental level through automation, adaptive repetition and computer aided learning. Teachers can thus focus on developing effective lesson plans, while assessment and repetitive learning is facilitated by the Learning Lab. Critical to the success of the model is the Learning Lab and the data analysis which allows for customisation or student based individualised learning. Comprehensive data analysis is possible as time spent in the Learning Lab, produces data on each child's academic performance, highlighting areas which need additional focus.

It is important to note that the Spark education model follows the South African National Curriculum (CAPS); however, extends the curriculum and provides it with additional depth for the benefit of both the academic staff and the students. By adopting the South African National Curriculum; *Spark Schools* remains relevant to the greater South African education context, as well as reinforces the possibility of broader state cooperation.

Understanding the Learning Lab

The Learning Lab combines online curricula, independent reading, and tutoring that strengthen basic skills at the appropriate level for each student.

The Learning Lab physically resembles a typical computer lab. The workstations are exclusively used to access web-based learning software. Students use the Learning Lab for 80 minutes per day, which is typically split between mathematics and literacy. The Learning Lab is staffed with 5 individualised learning specialists (tutors). Two of the ILSs tutor children who need specific attention (typically the bottom 20% of a grade), while the remaining ILSs are coaches to the students working in the Learning Lab. The Learning Lab complements the classroom environment because it provides reinforcement of classroom material and allows for repetitive learning. This approach allows students that require specific small group instruction the opportunity to receive that individualised instruction, while the remaining students are given the room to practice at their own pace.

During the Learning Lab block, students work on computers to focus on individual learning needs and general skills practice. This online learning and practice time allows classroom teachers to focus more on their student interactions on concept extension, critical thinking and skills development. They may also engage in offline activities, such as independent reading and enrichment programmes during the Learning Lab block.

Computer aided learning is only used in instances where it is effective and beneficial to the student leaving higher level teaching and instruction to professional educators.

The purpose of Learning Lab is to:

- provide 'the lift' for learners
- practise basic skills
- practise fundamental skills
- perfection
- repetition
- critical thinking and skills development

They are expected to carry out day-to-day administrative duties, handle the management of a school and exercise professional judgment. In addition, they are expected to articulate a vision and provide the effective organisational and instructional leadership needed so that teachers can succeed.

Learning Lab content is linked with the national curriculum through micro-objectives that are set by the school. The Learning Lab combines online curricula, independent reading, and tutoring that strengthen basic skills at the appropriate level for each student. Using this highly differentiated set of instructional methods translates into increased student mastery of basic skills.

Spark Schools prides itself on the generation of rich data that is used to advance student performance. The success of the Learning Lab is the generation of data. Content vendors are not adopted unless they deliver rich and comprehensive data on each child's progress. The importance of the data is critical as it provides educators with the ability to deeply understand and respond to each student's needs. Computer aided learning without data collection and data analysis, fails to unlock the true value of computer based education.

Spark Schools has dedicated onsite professionals who are responsible for the analysis of data generated in the school, as well as working with educators to understand the data and adapt teaching strategies where required. This function of data informing instruction is referred to as 'data driven individualised learning' and is recognised as a source of advantage for both the school and the student.

Spark Schools ensure that technology used does not add to the total cost to educate but rather decrease the total cost and allow for individualised learning to accelerate the learning process. This is achieved by only implementing technology that provides the school with an operational efficiency. Comprehensive business cases occupy technology implementation that seeks to promote student achievement as well as operational efficiency. Technology is seen as a tool that both promotes learning as well as has the ability to streamline the operations of a school, this technology is considered both for its impact on student achievement as well as on the total cost to educate.

Benefits for blended learning are as follows:

- ***Create more time for teachers and increase in academic achievement***

  The blended model brings flexibility back to the teachers' roles and job sustainability. This model allows schools to 'free up' teachers time while students work independently. The teacher now has the opportunity to pull small groups of students together to address learning gaps (individualisation), enhance or extend the curriculum, or spend time analysing student data (monitoring). This choice has deep implications for teacher sustainability as the teacher's job shifts from 'spending a little time doing a lot of things' to creating a space for sustained, individualised instruction. Teachers get to spend more time teaching.

Teachers have more control of their time, which has profound implications for good teaching practice, teacher innovation, and job satisfaction. The promise here is that teachers have the space to make instructional choices that allow for the most impact on students. There is freedom to do 1:1, small group, or large group teaching, depending on what is most effective. Additionally time is freed-up to allow for more time analysing and addressing learning gaps that have an increased emphasis on the students' critical thinking and other higher order skills.

The potential also exists to differentiate or modularise teacher roles. Instead of having each teacher try to do everything, the model utilises expert teachers to engage in activities that leverage their extensive instructional expertise while less experienced teachers focus on providing academic interventions, and collaborating with expert teachers to expand their practice. In practise teachers specialise in a specific subject, and only are expected to teach that subject, while less experienced educators become tutors, where they focus on intervention. The subject specialisation from an early stage has the added benefit of ensuring greater curriculum coverage. Through this system, educators are given the choice to focus on their chosen specialisation and become experts, while new educators are given the space to grow, and develop their skills before moving into the classroom.

- ***Reallocate resources to tasks that schools otherwise cannot afford***

  One of the greatest challenges for school managers is that the cost structures of traditional schools are essentially impenetrable as salaries and facilities can account for as much as 80%4 of the budget.[5] Students spend time working independently via online platforms, which requires fewer staff members and therefore frees up resources to invest in more essential components of a school. These include academic interventions (tutoring and small group instruction), professional development and extra-curricular enhancements. Blending learning allows school operators to have choices to allocate their resources to things that they previously could not afford.

- *Reduce costs to cope with declining budgets/reduction in funding*

  Blended learning offers a path to strategically reduce costs while enabling a high-quality learning environment. This can be achieved through the recruitment of fewer teachers.

  A classroom that uses guided instruction is organised into a series of stations where students work independently on different learning activities. While students are engaged in independent work, the teacher pulls groups of three to six students to provide focused individualised instruction. Hence, it is not a case of hiring more people to free up other teachers. The time students do have with teachers is in small-group, personalised environments. This strategy is in contradiction to the traditional cost-cutting of academic programmes and firing of the least tenured teachers regardless of performance. The blended learning model allows for cost savings, which can be reinvested in higher teacher salaries, leadership training, and other areas in the academic discipline.

  Expert teachers spend a significant amount of their time analysing student data, designing learning experiences, and providing targeted interventions.

  Blended learning model has created opportunities for teachers to find new ways to reach students, individualise instruction, and find more time to teach. The blended learning model allows for effective and professional teaching at the heart of educational reform.

- *Responding to real-time student data*

  Teachers appreciate knowing more about each student while reducing time spent on in-class "testing" because assessment data collected from online learning is far more abundant, informative and reliable. Teachers spend more time analysing student data rather than collecting it. The collection of data is critical in monitoring student progress in addition to optimising teacher time. The data that is collected provides robust individualised reporting on student capabilities.

- *Targeting instruction*

  The blended learning model allows for student data to be abundant, which loosens time constraints, and allows for individualisation and accelerated learning. Teachers spend more time on targeted instruction (not scripted curriculum). Teachers operate with guided instruction and/or response to intervention, because they are trained to effectively address learning gaps that hamper student progress.

- *Designing learning paths*

  Teachers facilitate the creation of learning paths for each individual student based on the student's individual strengths and weaknesses. These paths are composed of sets of standards-based learning objects designed to build mastery and provide immediate feedback to students, teachers, parents, and other education service providers. Teachers could architect these learning paths based on a student's prior learning gaps, optimal learning modalities, and/or interest. Teachers should no longer burn the candle at both ends creating their own content, but rather spend their time organising and customising libraries of high-quality learning objectives.

- *Deconstructing the role of the teacher*

  Blended learning operators deconstruct the teacher's role in new and interesting ways that supports novice teachers, makes the profession more sustainable and increases the impact of expert teachers. Expert teachers spend a significant amount of their time analysing student data, designing learning experiences, and providing targeted interventions. Other specialists are tasked with creating projects and experiences that enhance and extend the curriculum. Practically this involves expert curriculum and resource developers that work to support teachers through resources and methodology. This specialisation further promotes professionalisation in the workplace as well as allows teachers to play to their strengths.

Concluding remarks

The most effective blended learning model leverages technology to:
- help each student master the content and skills they need,
- allow teachers to get the most out of their planning and instructional time, and
- streamline operations with costs similar to – or less than – traditional schooling.

The Spark education model presents South Africa with a unique offering; an offering that offers high quality education at an accessible cost. The Spark education model thus has the potential not only to shift the private schooling environment but also substantially contribute towards the state education system.

Spark Schools look forward to transforming education, through innovation, by providing access to affordable, quality education that unlocks a better "passport to the future" for majority of South Africans. This allows for the ultimate goal of *Spark Schools* to be achieved: to create a blueprint in education for South Africa.

NOTES
1 Brewer, 2011
2 The school in a box concept refers to an education model that is highly replicable and places resource availability priority on activities and unctions that directly impact the quality of education.
3 Such as, usage hours of teachers per day (efficiency), teacher availability, teacher specialisation, financial constraints (high cost base), inability to capture rich, consistent, independent and deep data.
4 The average accounting for 75% of budget
5 Brewer, 2011: 5

REFERENCES
Brewer, S. (2011). A sustainable financial model for low fee private schools. Gordon Institute of Business Science.

Spark Ferndale at a glance

- Spark Ferndale is the first school in the network of *Spark Schools*. The School is located in Ferndale, Johannesburg.
- The students at Spark Ferndale mostly come from the surrounding areas of Randburg and the greater Northgate area. The students and their families are very diverse at Spark Ferndale, a characteristic we pride ourselves on.
- Other than being the first school in the network, Spark Ferndale shows quality because of the dedication and excellence of the academic and support teams making Spark Ferndale work. Knowing that we are providing our scholars with excellent high quality education and working to shift the education landscape in South Africa, is what makes us get up in the morning.