THE BRETEAU FOUNDATION

The Breteau Foundation
2018 Annual Report

Contents

THE
BRETEAU
FOUNDATION

Executive Summary

As our **sixth year of operation** reaches year end, it is time to reflect on 2018 which has seen our programmes feature approximately **18,000 students and 616 teachers** across **10 countries.** We have expanded our reach, increased the quantity of resources we provide to schools and deepened our core services ensuring we continue to adapt ourselves to the national curricula where we work.

Our **Digital Education Programme** embodies sustainability and we have had tremendous success this year supporting our legacy schools to become **autonomous**. 34 schools from South Africa and Colombia that have been operating under our sustainable model throughout 2018, can now independently continue the work, we started together.

Given the range of countries and settings in which we operate, understanding *what works best* has been key to designing our delivery. Each year we set ourselves clear impact targets for each school and country we work in. Our key performance indicators include: teacher development, learner's engagement and motivation and learner's academic progress. We undertake start and end of year quantitative and qualitative studies mapping developments and progress to our interventions.

In 2018, we made a major step in **monitoring learner progress** in Mathematics. For the first time, we have been able to gain a view inside the classrooms where we work. By partnering with app creators who use teacher dashboards to track learner's usage and progress levels enables us to monitor our programmes and provides teachers with key insight into learner's development and needs. From our **pilot programmes** in South Africa and Colombia, we recorded **advancements in Maths amongst all learners** who participated. These results are a testament to the power of independent learning and the importance of personalised attainment tracking.

Our monitoring also measures levels of engagement and in our programmes we specifically look for sustained motivation because we believe it is motivated learners who will then progress academically. In all the studies we undertook in collaboration with our project schools, we are pleased to share that sustained engagement and motivation levels were on average above 90%.

2018 has been the seventh year of the Syrian war, and as more child refugees have entered Lebanon, we too have expanded our programme to include more literacy, numeracy and Arabic programmes. We have added a second **Mobile Education Bus** and **expanded our educational and psychological support in the West Bekaa region.** With our drive to aid children into formal education settings, focusing on learners who have either missed years of schooling or never entered a formal education system, we are pleased to record significant learner development in both our literacy and numeracy programmes.

This year in the Dominican Republic we have integrated our programme in our partner school and day care centres and gained the following results: teacher **developments across all digital educational competencies** due to our training programme, **learner engagement and motivation sustained by all 90 learners sampled,** average progress **levels increase amongst all learners groups in our literacy programme** and **excellent progress in learner's entry level digital skills.**

This report provides an overview of our programmes around the world in 2018. The findings demonstrate the positive impact we have had from both children in our intervention programmes, and teachers in our training courses. We would like to extend our gratitude to all partners, schools, and colleagues who have made our work during this past year possible.

Our Vision, Goals & Theory of Change

In 2018 we have remained committed and focused in directing our support to the most disadvantaged.

Our Vision is to improve the academic engagement of disadvantaged children worldwide by empowering primary school teachers through digital technology and training.
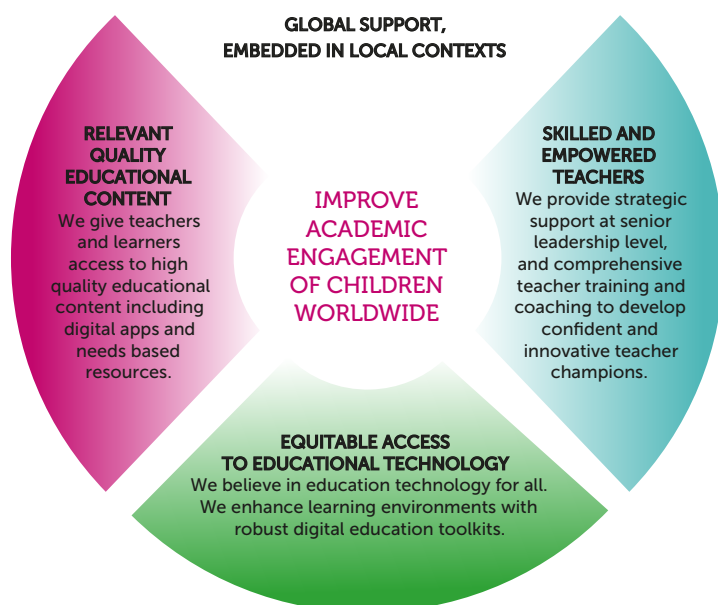
To achieve our vision, the core of our work is delivered through a standard programme: our **theory of change.** This includes:

- providing schools, teachers and children with access to technology

- developing and giving quality educational content for teachers and students to use to raise standards

- training and supporting school leaders and teachers to improve teaching and the integration of technology across schools for the benefit of children's attainment.

In our sixth year of operation, we continue to be an advocate for closing the gap to fairer access for all to digital education. To do this we continue to align our operations with the United Nations' Sustainable Development Goal 4: Supporting access to quality education for primary-aged children through the provision of digital technology and training.

Providing education technology in schools is our way of supporting educational inequalities and by raising digital literacy we are able to empower vulnerable populations, and in turn raise life chances. In 2018 we continued working towards our **Goals:**

- Deepen and strengthen our core services in the countries we operate;

- Work closely with partners to deliver our services and to find solutions to specific needs and contexts;

- Measure our impacts for continuous improvement;

- Share our learning and empower those we partner and work with, and promote our knowledge and experiences;

- Advocate sustainability to ensure maximum longevity of our programmes for our partner schools and for efficiencies of our resources.

GLOBAL SUPPORT, EMBEDDED IN LOCAL CONTEXTS

RELEVANT QUALITY EDUCATIONAL CONTENT
We give teachers and learners access to high quality educational content including digital apps and needs based resources.

IMPROVE ACADEMIC ENGAGEMENT OF CHILDREN WORLDWIDE

SKILLED AND EMPOWERED TEACHERS
We provide strategic support at senior leadership level, and comprehensive teacher training and coaching to develop confident and innovative teacher champions.

EQUITABLE ACCESS TO EDUCATIONAL TECHNOLOGY
We believe in education technology for all. We enhance learning environments with robust digital education toolkits.
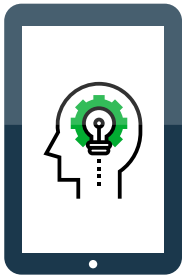
THE BRETEAU FOUNDATION

2018
Global Programme
Highlights

2 months average learner progress in Maths ability

100% of the learners who took part in our mathematics pilots in south africa and colombia improved

90% of students found learning easier with our tablets

Over **80%** of learners Said tablets improved independent learning

100% of children improved in Maths ability in Lebanon

1 in 3 learners below 4 years old were able to use **capital letters correctly**

4 in 5 children believe technology is important in school

Countries **10**
Students **17,949**
Teachers **616**
Tablets **2,725**

Lebanon

3,100 children are not in formal education in our projects

Over 1200 students receive psychosocial support sessions on our BF Bus

100% of children showed improvement in literacy and numeracy in our Lebanon intervention.

75% of children in Lebanon do not use technology at home

Over 289 hours of teacher development workshops

Over **210** Apps used world wide

1500 additional children in our Mobile Bus Program

THE BRETEAU FOUNDATION

34 schools have become independent in 2018

800,772 hours of tablet time globally

Distribution of Children Globally

- Other 5%
- DR 3.5%
- Sri Lanka 12.1%
- Lebanon 22%
- Colombia 19.5%
- South Africa 38%
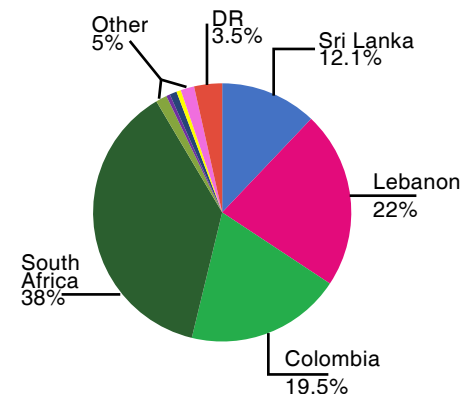
Our network of schools

- South Africa
- Colombia
- Sri Lanka
- Myanmar
- UK
- Ivory Coast
- Laos
- Lebanon
- Ethiopia
- Dominican Republic
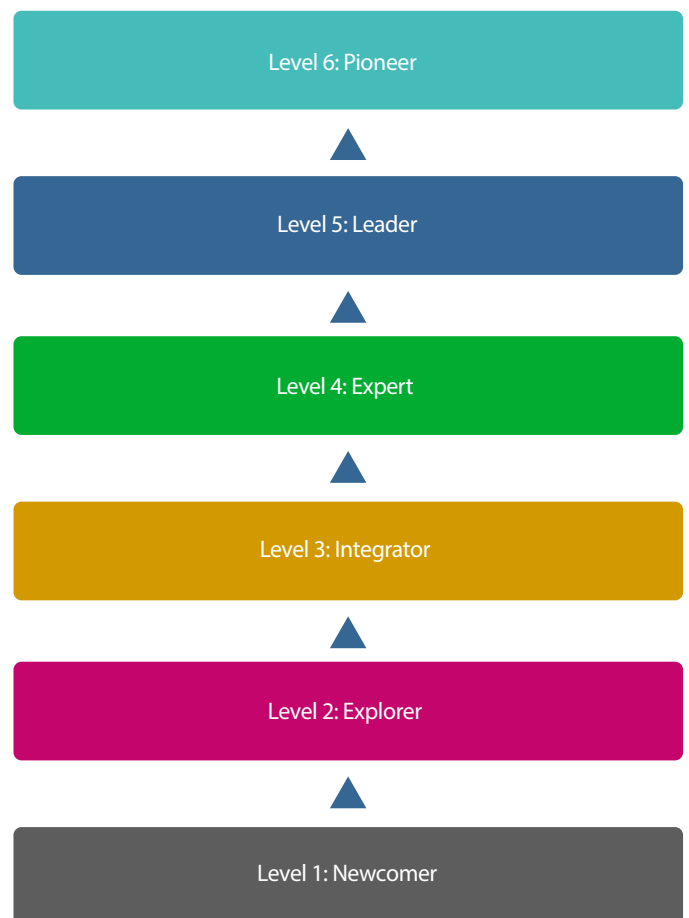
Enhanced Teacher Training Program.

Teacher training is a principal component of our theory of change model. Without training we do not feel we would see the same successes in learner engagement and academic progress. It is often the case that the schools we work with have not previously had technology and therefore teacher confidence and skills for embedding technology in teaching and learning requires our support.

From 2018 our training programme has been based on the European Framework for the Digital Competence of Educators. Digital teaching and learning is constantly and rapidly changing requiring teachers to increasingly broaden their digital competences. Therefore, we have used the framework to design our training and our study of teacher development around the following areas:

- Knowledge of hardware and software

- Teaching & Learning: Teachers ability to plan with technologies and use technologies to support independent learning

- Evaluation and assessment strategies

- Accessibilities and inclusion

- Differentiation and personalisation

- Actively involving and engaging learners

Our training is designed for teachers to progress along the six levels to meet the proficiency set by the framework. In this past year since we have aligned our training model and our research to the framework, the results have been very positive. We hope that our teachers are able to cascade their learning and by teaching along a standard framework ensure a more sustainable model. Finally, using this well-developed model means we can focus more on delivery while benefiting from world-wide innovations in teacher's digital competencies. This model has meant that we no longer monitor changes and innovations in digital teacher training, we just adopt the developments and tweak our training and survey content. Teacher engagement

Using the structure above as the areas of competence, teachers are then measured, at six unique proficiency levels:

Level 6: Pioneer

▲

Level 5: Leader

▲

Level 4: Expert

▲

Level 3: Integrator

▲

Level 2: Explorer

▲

Level 1: Newcomer

Sustainability: Becoming Autonomous

The Breteau Foundation believes that sustainability needs to be the end result of our work, and this year we have been focused on transitioning our partner schools to become more autonomous. We believe that with our support, schools can be empowered, confident and independent users of technology in the classroom. Our programme to achieve sustainability was a considered one and involved detailed planning, consultation with school leaders and guided implementation. In the last year, 34 of our legacy schools in South Africa and Colombia are successfully managing their technology programmes under this new model. This represents a 100% success rate from those schools we identified and supported to becoming autonomous.

To structure this programme we undertook a full review of each partner school's current status across a number of key factors that suggest a school's readiness to drive their own digital programme.

A Red-Amber-Green (RAG) status was used to assess the following areas:

- Senior leaders ability and availability to develop and drive digital autonomy

- Capability and capacity of champion teachers and staff to support the school's digital autonomy plans including the capability of the school's technical facilitator

- Staffing stability to ensure our training support remained within the school and could be cascaded to increase training reach

- Adherence to the schools own safeguarding and safety policies regarding technology

- Location of the school in relation to other potential schools for clustering

Our review was undertaken with school leaders and when we identified areas of need or development, we designed bespoke improvement plans. During this time we also undertook a series of workshops, bringing schools together in order to promote cluster support and build the start of school collaborative networks. Our concept for sustainability is one where the representatives within a cluster support each other, where specialisms can be developed, where cluster members see the benefits of growing together, managing and sharing ideas and knowledge.

Sustainability Planning

A sustainable school has a clear vision and plan to ensure the resources we provide are well used and managed. Planning includes details for embedding the use of digital technologies across the curriculum and within policies and practices. The school will have identified key personnel to be responsible for championing their plans and clear measures to monitor and evaluate their progress against their sustainability objectives. While each school by nature will have its own unique path to self sufficiency: our role is to encourage, support and challenge.

Cluster Train-the-trainer Model

Our aim is to empower the cluster representatives through a train-the-trainer training model so that each cluster member becomes experienced advocates in digital technology for teaching and learning. Our concept is for the people we train to cascade their training to colleagues. By this we place the control and responsibility for building capability in the hands of the school.

Self-Supporting Cluster Networks

We believe if the cluster is stable the school's autonomy has greater chances of sustainable success. By supporting cluster groups of schools, we aim to build self-supporting networks of members who develop good digital skills and knowledge. From this collaboration we begin to build local support networks and our support will stretch more deeply into schools over time.

If our schools become sustainable we are more likely to see greater efficiencies from our own operations. By creating clusters to provide our training, we not only reduce our operational costs but we create more opportunity to increase the number of schools we can support. In the meantime, we remain on hand to provide support, to share innovations and to advise each school, when required.

Innovation

Over the past five years we have provided a broad breadth of content through apps across all primary school curriculum areas. And as our partnership with schools has matured, our schools call on us for more apps and more complex content, as the resources we provide become well utilised in their classrooms. Our search for app providers is constant and we are always thrilled when we find new app solutions that help us and our schools take the next digital development step.

In 2018, we made the decision to develop our expertise in supporting the provision of mathematics through technology. This decision stemmed from new partnerships, the improved capabilities of some mathematical apps including inbuilt monitoring and evaluation systems and our plans to standardise our core services. In 2018 we have made a leap forward in supporting schools, teachers and young people in maths teaching and learning.

Why Track Progress?

One of the fundamental challenges we face working in the areas we do, is the availability of apps that track individual learner progress and in a detailed manner. As we work with schools who are often in a predominately offline environment, it is a manual process to obtain learner progress and is limited to individual app functionality. There are many benefits of apps being able to support and track individual learner progress which includes:

- learners working at their own level and pace - personalised learning

- technology that can support and challenge learners matched to the learner's needs and speed of learning

- providing teachers with feedback to shape and inform learning within the classroom and direct support to individuals or groups of learners with the same/similar needs and abilities

- Increased engagement in lessons, students feel that they are part of a collaborative learning environment

- increased motivation for children to self-learn and to engage for longer periods of time

- direct and immediate feedback to learners that promotes self esteem

- ensuring no learner is left behind - the app is inclusive and offers differentiation

In addition to the above benefits, the Breteau Foundation can monitor learner progress correlating the data with age, gender and usage of the app which enables us to measure the impact of our programmes in schools.

*"Good numeracy is the best protection against unemployment, low wages and poor health." **Andreas Schleicher, OECD, National Numeracy for Everyone, for Life***

Why Numeracy?

While we have continued to provide a broad range of apps across national curriculums, we have developed a key focus to promote and support mathematics. We feel this subject enables us to unify our international operations in schools because mathematics curriculums have many similarities. Our research suggests that a focus on mathematics would enable us to develop a standardised monitoring programme giving us greater insight into learner progress through our support.

Numeracy skills are critical for learners to develop logical thinking and reasoning skills that not only support other subjects but assist with everyday life activities and career advancement. According to the National Numeracy for Everyone, for Life there is substantial evidence to suggest that low numeracy skills are associated with:

- **Academic progression -** a poor understanding of numeracy prevents students from accessing other parts of the curriculum and advancing to study STEM subjects in higher education;

- **Lack of Confidence and Self Esteem -** as the digital age becomes more prominent in our lives, those with low numeracy will be less likely able to use/access numerical data and technology and will become more marginalised;

- **School exclusions -** pupils beginning secondary school with very low numeracy skills but good literacy skills have an exclusion rate twice that of pupils starting secondary school with good numeracy skills;

- **Truancy -** 14-year-olds who have poor maths skills at 11 are more than twice as likely to play truant

- **Unemployment -** those with low numeracy skills are more than twice as likely to be unemployed, as numeracy tests are becom increasingly popular for employers to use in the recruitment process;

- **Poor Health -** there is a correlation between poor numeracy and an unhealthy diet and lifestyle;

- **Crime -** A quarter of young people who are incarcerated have a numeracy level below that expected of a 7-year-old, and 65% of adult prisoners have numeracy skills at or below the level expected of an 11-year-old;

Measuring Academic Progress: Numeracy

New Partners

In 2018, we established a partnership with two mathematic app providers to help us increase our numeracy support in our schools:

DoodleMaths provides a bespoke maths programme for every learner tracking the (UK) national primary school curriculum. Each learner is assessed at the start and progress is then monitored based on monthly age increases. Teachers use the apps dashboard to see learner progress, development areas, whole class statistics and can direct learners to specific topics for additional support.

Smartick is aimed at students from four to 14 years and aims to develop maths competencies. Each learner is given a personalized curriculum and exercises are adapted in real time to ensure the learner is always at the edge of their maximum level of competency. The app provides instant feedback to learners and real time reports for teachers.

2018 Maths Pilot Studies

1. DoodleMaths at Eindhoven Primary School, South Africa

This pilot was designed as a remedial maths programme for learners with math learning needs. Learners chosen were below expected age related levels and the aim of this pilot was to raise their attainment levels to comparative age and stage levels of other learners of the same age. The pilot ran for 10 weeks and the results have been overwhelmingly successful. Read more about this pilot in the South Africa Country Profile below.
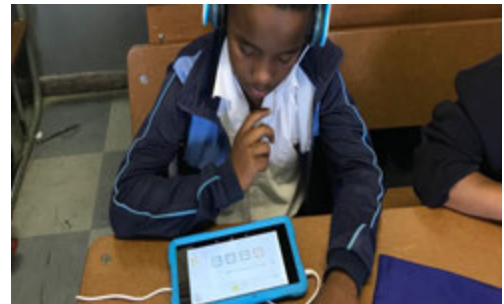
### 2. DoodleMaths Pilot at Nkomo Primary School, South Africa

This pilot was an after school programme involving learners from Grades 5, 6 and 7. Learners attended the pilot as part of an established after school programme which ran for 10 weeks. While this group were not identified as requiring remedial maths support, the pilot was for orphan children who are typically given extra provision at the end of the school day. The results of the pilot have been extremely positive. Read more about this pilot in the South Africa Country Profile below.

3. Smartick Pilot at I.E Luis Carlos Galán, sede El Porvenir School, Colombia

This pilot involved 20 learners from 4th Grade who were randomly chosen to take part in a 10 week after school pilot. Learners completed exercises on fractions, long division, geometry, counting, measurement, and algebra. Statistics analysed at the end of the pilot showed that all learners who fully engaged in the programme progressed their maths competencies. Read more about this pilot in the Colombia Country Profile page below.
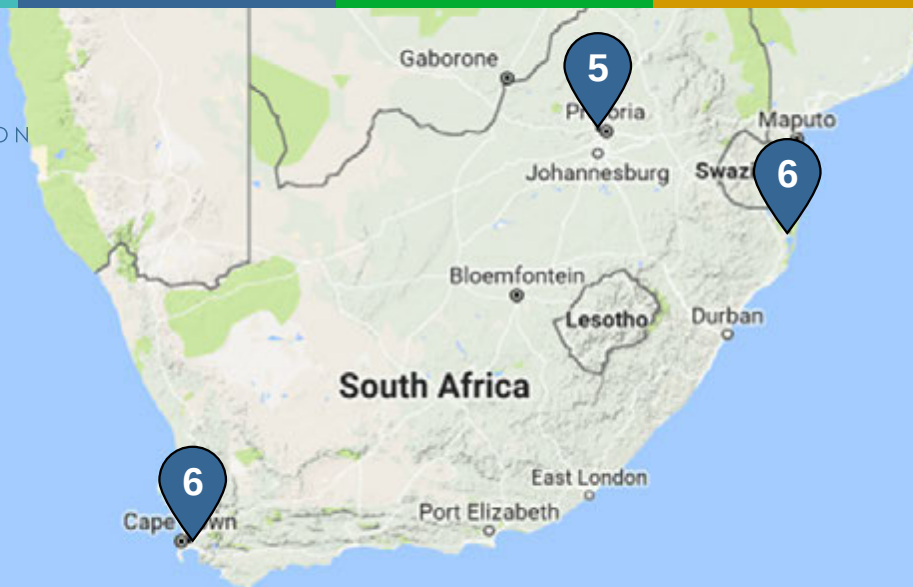
South Africa

Since 2014, we have continued to build upon our schools programme in South Africa, diversifying our reach from urban townships to deep rural villages. South Africa presents us with many delivery challenges, in particular connectivity and finding locally relevant digital content. However, this year we have introduced innovative solutions to solve some of the connectivity problems we face. We continue to source quality apps in local languages, and also map international apps to the South African national curriculum. In 2018, we made significant steps forward in our goal to track and measure student progress in the area of Mathematics with 100% of children making good progress.

We are pleased to state that 100% of our legacy schools in South Africa have become autonomous in 2018 and continue to operate successfully under our sustainability model. Our teacher training programme, is delivered in clusters with training cascaded to colleagues. Our aim is to build self-supporting networks of members who develop good digital skills and knowledge as well as a strengthened local networks of schools all working together.

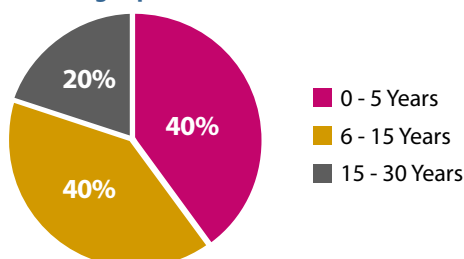|				
Students **6,762**	**Teachers** **207**	**Schools** **18**	**Tablets** **950**	**Apps** **60**

Teacher Training

We worked with 14 different schools and on average approximately three members of staff in each school. In the greater majority of schools we were supported by a Head of Department, whose role it was to support our training and act as the champions amongst the teaching staff we trained. Our training model was delivered in clusters and we expect the teachers we train to cascade their delivery. Overall, we are pleased to report that teachers gained excellent professional development through our support.

The schools we worked with were predominately public schools but we also had four private schools in our programme this year. The staff we trained were teachers representing classes from Reception to Grade 4 and in terms of teaching experience: 2/5ths had 0-5 years teaching experience, 2/5ths had 5-fifteen years experience and 1/5th had 15-30 years experience as shown in the pie chart below. Some of the teachers had been working with us for various years: ¼ have been in our programme for less than a year, 2/4 for 1-2 years and ¼ between 2 to 4 years.

Staff Teaching Experience in Years

- 0 - 5 Years
- 6 - 15 Years
- 15 - 30 Years

Length of Time in BF Program

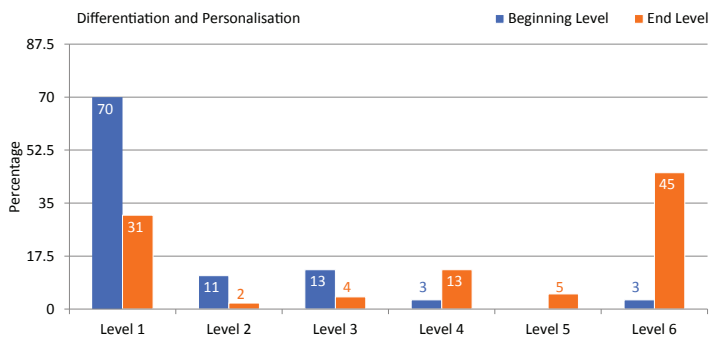- Less than 1 year
- 2-4 years
- 1-2 years
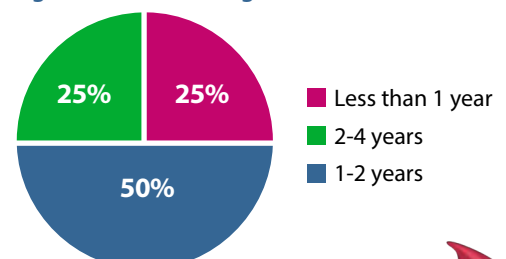
The following results provides assessments of teacher competencies at the start and end of our teacher training programme. It can be noted that across the majority of competencies, we have seen significant increases and therefore a positive impact from our work in 2018:
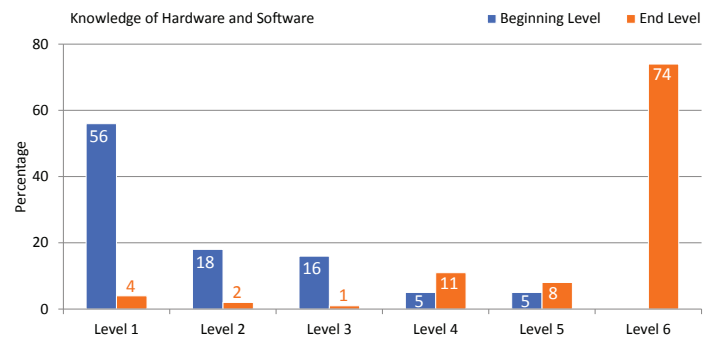
Differentiation and Personalisation

The vast majority (70%) of teachers were at Levels 1 prior to our training and while 31% remained at that Level, 45% moved to Level 6 following our training.

Differentiation and Personalisation — Beginning Level ■ End Level

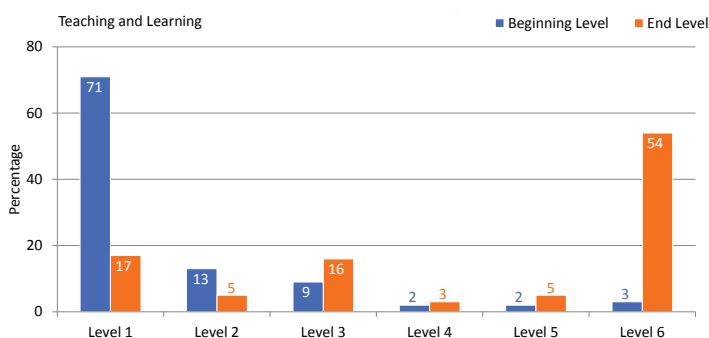|	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Beginning Level	70	11	13	3		3
End Level	31	2	4	13	5	45

Knowledge of Hardware & Software

At the start of our programme, only 10% of teachers had hardware and software competencies at Level 4 or above. By the end of our training, 74% of teachers had competencies at Level 6.

Knowledge of Hardware and Software — Beginning Level ■ End Level

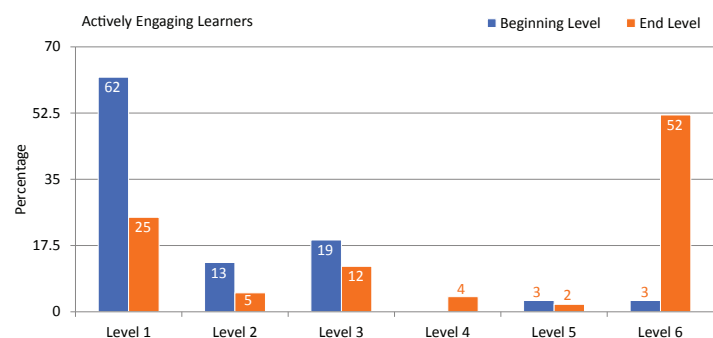|	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Beginning Level	56	18	16	5	5	
End Level	4	2	1	11	8	74

Teaching and Learning

We looked at teacher's planning and implementing technology to improve the effectiveness of the teaching environment, as well as teacher's ability to use technology to help learner's monitor their own progress. At the start of our programme 84% of teachers were between Levels 1 & 2. By the end of our training 54% of teachers were at Level 6.

Teaching and Learning — Beginning Level ■ End Level

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Beginning Level	71	13	9	2	2	3
End Level	17	5	16	3	5	54

Actively Engaging learners

Prior to training, 73% of teachers stated they could not encourage participation in the classroom, while 75% stated they could not use technology in their pedagogy to foster interdisciplinary learning, critical thinking or creative expression. At the end of the year, our study showed that 52% of teachers reached Level 6.

Actively Engaging Learners — Beginning Level ■ End Level

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Beginning Level	62	13	19		3	3
End Level	25	5	12	4	2	52

Accessibility and Inclusion

This competency evaluates accessibility and inclusion. The starting levels of most teachers (70%) were low with only four teachers stating they had the confidence to provide edtech access to SEN learners. By the end of the training only 44% were at Level 1 with 38% of teachers progressing to Level 5 & 6.

Assessment Strategies

The vast majority of teachers were at Levels 1 prior to our training and while 46% remained at that Level, 30% moved to Level 6 following our training.

Student Engagement

Education research has demonstrated that engaging students in their learning increases their attention and focus, motivates them to practice higher-level thinking skills and promotes a more meaningful educational experience. While we hope, and sometimes assume that the technology we provide in our partner schools will predictably increase levels of engagement and motivation, we continue to undertake annual learner engagement studies to test our expectations.

In most of our schools technology and app resources are often first introduced into the school through our donation. Typically, we do see a heightened level of engagement around learning at the beginning but we measure engagement at the end of each year, to test whether learner's engagement has been sustained. This year we tested learner engagement in association with our mathematics pilot projects.

70%
of learners felt the app made Maths easier to learn

93%
of learners enjoyed maths more using the app

86%
of learners believe tablets support independent learning

50%
of learners felt technology in school is important for learning

78%
of learners thought apps were fun to use

We found that 93% of the learners who participated felt that they enjoyed mathematics more when using the app, and 86% of the learners in the pilot stated they believe that the tablets support their independent learning. More than 50% all learners felt that using technology in school is important to their overall learning. In terms of engagement aligned to learner development, 78% of the learners thought that the tablets and application are fun to use and over 70% felt that the app made mathematics easier to learn which correlates with the progress data we have seen in all the mathematics pilots.

One of the qualitative reasons for enjoyment captured in our study was that learners gained immediate progress feedback from the maths app. Learners liked gaining instant feedback for the mistakes they made and viewing their successes with more immediacy. Attendance is also a measurable factor that we use to test engagement and motivation. While our mathematics pilots in South Africa were held after school, in both school pilots we recorded a high level of attendance with an overall average attendance of 73%.

Mrs Morris, a Grade 4 Teacher at Eindhoven Primary School shared her thoughts about the maths app that tracks learner progress, "*It is so great to celebrate their growth with them and show them how clever they are becoming.*"

Academic Progress

DoodleMaths Pilot with Eindhoven Primary School

"Once I pass out the tablets and headphones, the students are in their own world. The software engages them for the full 40 minutes and sometimes there are moans and sighs when I tell them it is time to pack up."

Diedre, After School Facilitator, Eindhoven Primary School

Eindhoven Primary School is situated in Delft township on the Western Cape on the outskirts of Cape Town, and serves over 1,200 learners. The school has been in our core programme since 2016, and has shown great motivation towards tablet integration across the school. Eindhoven showed a readiness to use an app that monitors learner results, and therefore was chosen as our pilot partner.

As the pilot was an after school programme, learners in 4th Grade (aged nine to 11 years) were randomly selected on their geographical proximity to the school and therefore their ability to commute home safely, over the 10 week pilot period. The 4th Grade group were also chosen based on learner needs because at this stage the language of instruction changes from the learner's mother tongue to English, and typically, there is a trend of regression in academic progress. The school viewed the pilot as a way to provide remedial maths lessons with the aim to bridge this gap.

Learners attended several 40-minute sessions per week for a total of 10 weeks. Overall, there were 33 sessions offered and 28 was the highest number of sessions any single learner attended, across the pilot. Learners were given a DoodleMaths age (this was based on learners undertaking a maths test) and learner's DoodleMaths-Ages ranged from 7 years and 9 months to 10 years and 7 months. Even though the pilot was quite short, the results of the pilot were extremely positive:
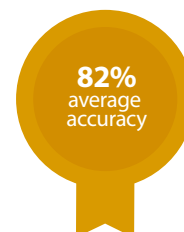

100%
of the learners progressed

during the pilot

2.8 months
average increase

from learner's DoodleMaths starting age

7.8 months
highest increase

made by a student

82%
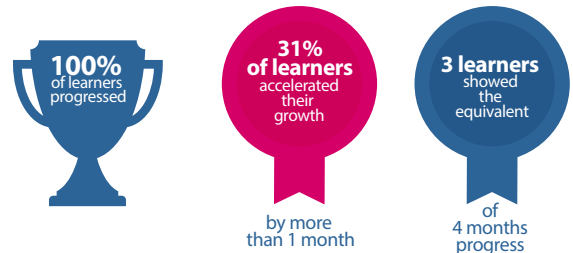average accuracy

levels for correct answers

Academic Progress

DoodleMaths Pilot with Eindhoven Primary School

Nkomo Primary School, serving 891 learners is located in KwaGiba, a rural village on the outskirts of northern Kwa-Zulu Natal. Zulu is the main language of instruction from Reception to 3rd Grade. From 4th to 7th Grades, learners are then taught in English.
The school has been part of the Breteau Foundation tablet integration programme since early 2014, and has shown great motivation and progress in introducing technology in the classroom, as well as to the school community.

As with Eindhoven Primary School we chose Nkomo for the school's readiness and capacity to be able to join our DoodleMaths pilot programme. Learners in 5th, 6th and 7th Grades were randomly selected from the school's own after school programme for vulnerable orphan children who already meet twice a week. The school offers these children a meal, sporting activities and sessions to come together to discuss topics related to social, culture, health and well-being. For the DoodleMaths pilot we were able to embed our programme into two of the learner's 60 minute regular sessions per week.

Across the 10 weeks, 29 learners were offered 17 sessions in total due to connectivity issues during the period. Over the period, we had a good number of learners attend most and near most sessions and once again we noted good development results. The learners were given DoodleMaths Ages and these ranged from 4 years and 7 months to 11 years and 2 months - so quite a significant variation, given the learner's grade level. The results include:

100% of learners progressed

31% of learners accelerated their growth *by more than 1 month*

3 learners showed the equivalent *of 4 months progress*

Given the short pilot period, we are pleased that every learner including those that only attended eight sessions made progress as shown by the pie chart below:

Improvement in months

Legend:
- Up to 1 month
- 1 - 2
- 3 - 4
- 2 - 3
- 4+

52%
32%
3%
2%
10%
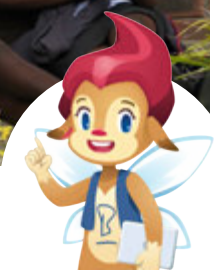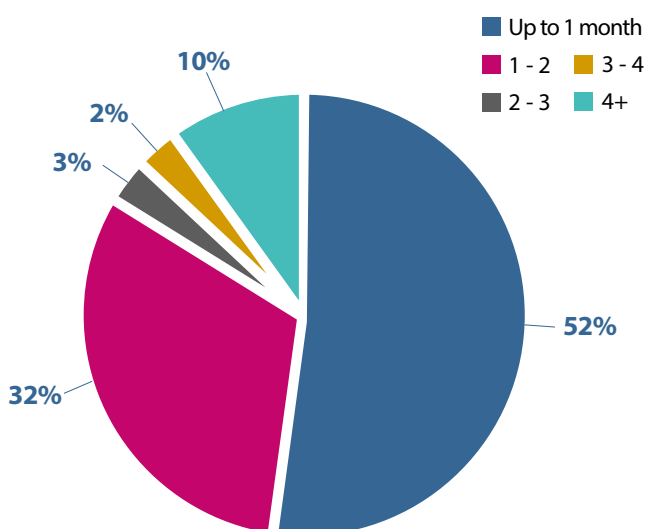
Colombia

The Breteau Foundation has been working in Colombia for close to four years in partnership with 17 schools across the country in the regions of Meta, Cundinamarca, Boyacá and Bolívar. Distance, unreliable infrastructure, and limited school resources remain the biggest obstacles in implementing our programme. While some of our partner schools are located in isolated rural areas, most of our urban schools are located in deprived neighbourhoods where crime and social violence are common.

In 2018 our strategy for tackling some of the aforementioned obstacles and ensure delivery success, was to develop a rigorous school selection process to identify school partners ready to take up our support. We also clustered our schools by geographical proximity to allow our country representatives greater accessibility to each other. This enabled us to provide schools with more training and support toward their collective aim to build capability.

As a result of our delivery changes, we are pleased to state that 100% of our schools have been supported to becoming autonomous: senior leaders and teachers are endowed with lifelong digital educational skills that support sustainability and traditional pedagogical models have transformed to improved teaching and learning using digital resources.

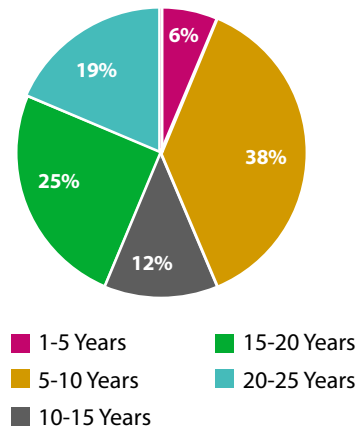| Students	Teachers	Schools	Tablets	Apps
3504	113	17	656	60

Teacher Training

Prior to commencing our training, most teachers across all competencies were at the lower competency levels (Levels 1, 2 or 3). The following provides highlights from our teacher training studies that show good to outstanding progress in teacher professional development, overall.

In 2018, our teacher training programme involved 17 schools, three of which were private and the remainder public. Teachers represented Pre -Kinder to Year 5.
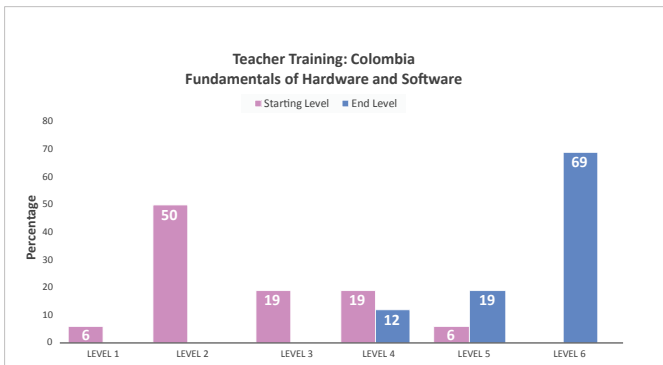
Length of time in BF Program

- 14% 1-2 Years
- 76% 2-4 Years

Staff Teaching Exprience in Years
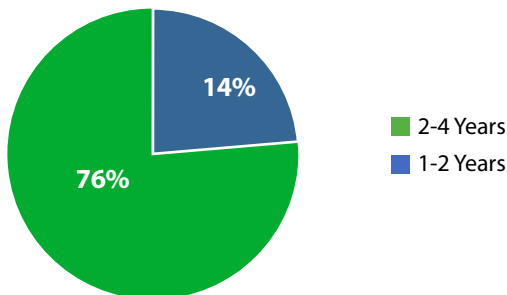
- 6% 1-5 Years
- 38% 5-10 Years
- 12% 10-15 Years
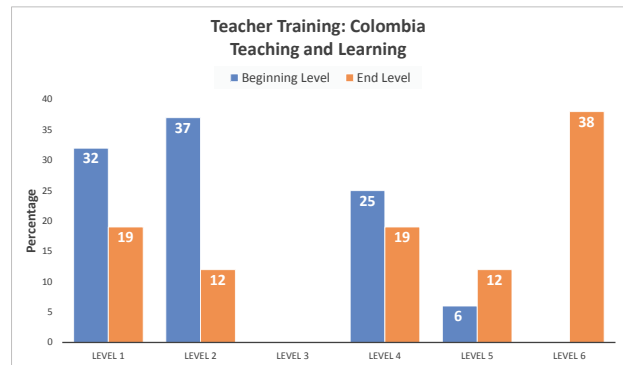- 25% 15-20 Years
- 19% 20-25 Years

Fundamentals of Hardware & Software

Prior to our training, only 25% of teachers had hardware and software competencies at Level 4 or above. At the end of our training, 69% of teachers had competencies at Level 6 as shown in the graph below.

Teacher Training: Colombia
Fundamentals of Hardware and Software

■ Starting Level ■ End Level

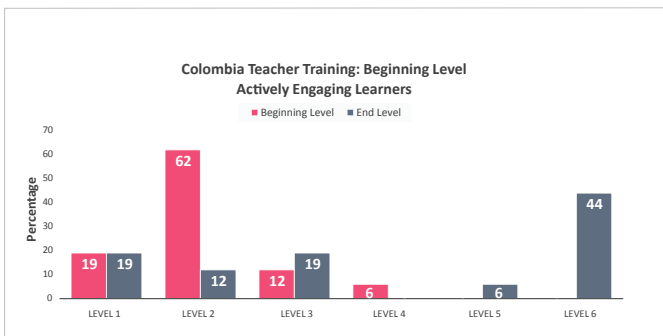| Level	Value
LEVEL 1	6
LEVEL 2	50
LEVEL 3	19
LEVEL 4	19 / 12
LEVEL 5	6 / 19
LEVEL 6	69

Percentage (y-axis: 0–80)

Teaching and Learning

We measured teachers planning and implementing technology to improve the effectiveness of the teaching environment, as well as teacher's ability to use technology to help learners monitor their own progress. The competency growth here shows (graph on the right) that the majority (69%) of teachers moved from Levels 1, 2 & 3 to Levels 4, 5 and 6.

Teacher Training: Colombia
Teaching and Learning

■ Beginning Level ■ End Level

Level	Beginning	End
LEVEL 1	32	19
LEVEL 2	37	12
LEVEL 3		
LEVEL 4	25	19
LEVEL 5	6	12
LEVEL 6		38

Percentage (y-axis: 0–40)

Actively Engaging Learners

Prior to training, more than 50% of the teachers stated they could not encourage participation in the classroom, with 81% stating they could not use technology in their pedagogy to foster interdisciplinary learning, critical thinking skills or creative expression. At the end of the year, our study showed that 50% of the teachers receiving our training, met competency Levels 5 or 6 as shown in the graph below.

Colombia Teacher Training: Beginning Level
Actively Engaging Learners

■ Beginning Level ■ End Level

Level	Beginning	End
LEVEL 1	19	19
LEVEL 2	62	12
LEVEL 3	12	19
LEVEL 4	6	
LEVEL 5		6
LEVEL 6		44

Percentage (y-axis: 0–70)

Assessment Strategy

Only one teacher was at Level 4 or above, prior to our training and this teacher stated they had previously used technologies for formative assessment. By the end of our training a remarkable 44% indicated (shown in the graph on the right) they had achieved competency Level 5 or 6.

Accessibility & Inclusion

We assessed accessibility and inclusion competency and again the starting levels of most teachers were low with only four teachers stating that they had the confidence to provide edtech access to SEN learners. The teachers did not make great strides of progress in this area, as it is one of the more challenging competencies and it therefore remain a competency for further training.

Student Engagement

When we study learner motivation, we are seeking to understand a learner's degree of attention, curiosity, interest, optimism, and passion shown when they are learning or being taught. In Colombia we studied learner engagement alongside our mathematics pilot. We tested learner engagement at the end of the pilot, as we feel this is a better indicator for testing engagement and motivation because we are more interested in identifying sustained engagement.

In association with engagement and motivation are our attendance scores. At the end of the pilot, we tallied attendance scores and our results showed an 85% attendance rate which is not only high but supports our other statistics on engagement and motivation, referenced below, and aids other studies for this pilot, in particular our progress research.

85%
tablets are
fun to use

90%
technology
is important

95%
learn more
through
the application

90%
understand and
solve maths
problems easier
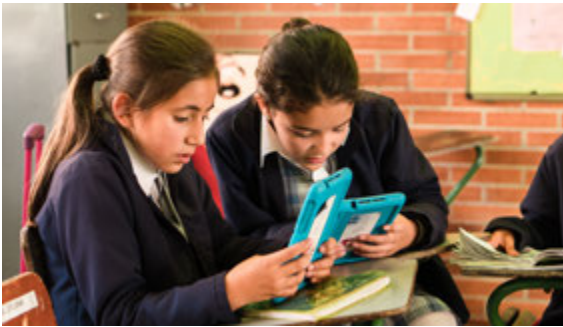
Smartick Mathematics Pilot:LE Luis Carlos Galán, Sede El Porvenir

Since 2016 our support has been focussed on integrating tablets into curriculum delivery and accelerating learning. More recently our work has aimed at ensuring that the benefits of our programme remain sustainable. A key part of sustainability is the identification of best in class apps that evolve and develop alongside learner's own edtech developments. In 2018, we undertook a maths pilot involving 20 randomly selected learners from 4th Grade. We chose this year as learners sit the Superate Test which is a preparation test for the National Saber Test in the 5th Grade. Our 10 week (20 lessons) after school pilot involved a new app Smartick that gave each learner a personalised curriculum. Sessions were 40 minutes, of which the first 15 minutes focussed on math content directed by the software and based on the learner's ability. In the remaining 25 minutes, learners were offered extra mental agility games.
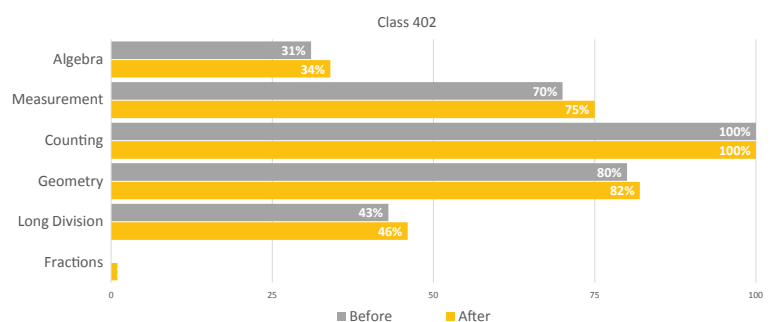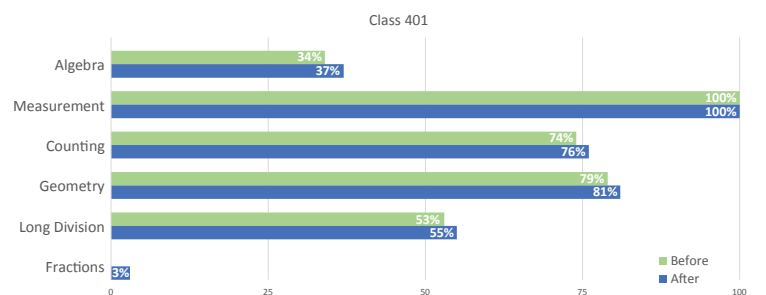

Summary of Results:

Outcomes:

18 out of 20 learners completed the pilot and 8 learners used the app at home during the holidays. Of the 18 learners, 38 was the average number of Smartick maths sessions completed. The highest number of maths sessions completed in one week was 7 compared to the lowest at one. Learners spent on average, just over 13 hours learning maths in the pilot. These figures indicate speed of learning which is one of the Smartick's monitoring features.

Class 401

Category	Before	After
Algebra	34%	37%
Measurement	100%	100%
Counting	74%	76%
Geometry	79%	81%
Long Division	53%	55%
Fractions		3%

Impact

There was progress in all areas of maths except for one area, where learners skills in counting were solid at the start of the programme. Learner progress was greatest in Algebra and Measurement competencies. The app supported self-learning – this was evidenced by the fractions data shown. When learners were assessed at the start of the pilot they showed no competencies with fractions. At the end of the pilot competency levels were noted in both class groups, with one cohort showing a 3% increase in this math competency.

Class 402

Category	Before	After
Algebra	31%	34%
Measurement	70%	75%
Counting	100%	100%
Geometry	80%	82%
Long Division	43%	46%
Fractions		

Dominican Republic

The Breteau Foundation has been working in the Northern Region of the Dominican Republic since October 2017, in Santiago de los Caballeros. In partnership with the Community Foundation of Zona Franca we have been implementing our digital education programme in one public school and three day care centres including comprehensive teacher training and a successful pupil literacy programme. In the Dominican Republic, children can attend educational day care centres from as early as 45 days old and up to five years of age. From six years, children commence their primary school education. Students who attend these public institutions typically live in rural and/or low-income urban areas where a large number of families work in factories.

Students	Teachers	Schools	Tablets	Apps
634	**30**	**4**	**152**	**58**

Teacher Training

In our first year, we commenced our programme with a total of 13 teachers. Seven of the teachers were from a public school representing Pre Primary, First, Third and Fourth Grades, with the remaining six teachers from day care centres.

In order to baseline the teacher's competencies we undertook a three stage assessment. Each teacher provided a self-assessment based on 15 questions and this was correlated with assessments by the school or day care coordinator and our own Country Manager's scores. We took the average score to gain our baselines. Following our training programme consisting of five training sessions, we undertook an end of year assessment using internet surveying software to collect the teacher self-assessment results. In the first six months, our teacher training programme focussed on three competencies and in review of the results there was an overall trend in progress. At the day care centres, we have been able to see excellent professional development across all competencies and while the progress at the school is slightly lower, the professional development trend is overall, upwards.

	Day Care Centres		Public School	
Competence	Start Results	End Results	Start Results	End Results
Fundamentals of software & hardware	66% at Level 1 34% at Level 2	**67% achieved Level 6** and 100% progressed to Level 3 or higher	14% at Level 1 86% at Level 2	**100% of teachers improved at least 2 Levels.** Almost half of teachers achieved Level 6.
Teaching & Learning	34% at Level 1 66% at Level 2	**100% were at Level 3** or above & 67% achieved Level 6	86% at Level 2 14% at Level 3	**100% of teachers increased by at least 1 level**
Self-regulated learning	50% at Level 1 50% at Level 2	83% of the teachers progressed overall **67% attained Level 6**	14% at Level 1 86% at Level 2	**All teachers increased by at least 2 Levels**

Student Engagement

We feel that time spent working with teachers to design our services into schools and day care centres is a key component for building relations, gaining teacher buy-in and developing the roots of engagement and sustainability from the outset. By the same token, we can see that learners are more likely to be engaged if they feel actively involved in shaping the design of their learning. This means that learners clearly understand their learning goals, as well as the learning process. The results of our engagement studies based on 90 children in one public school and the three-day care centres includes:

Motivated at the start

- 74% of all children were viewed as highly motivated
- 18% of the children were viewed as partly motivated
- 8% were deemed unmotivated

Sustained motivation

- 80 out of the 90 learner's motivation levels were sustained throughout the study
- 10 of the 90 children's motivation was in part sustained throughout the study

Independent learning

- 78% of learners were able to work independently using technology
- 20% of learners felt they could partly work independently using technology
- 2% of learners felt they were not able to work independently using technology

Overall, it would be fair to state that engagement and motivation was high amongst the 90 sampled learners and was sustained by the greater majority throughout their edtech programme.

Academic Progress

Nursery and pre-school learners have not typically been part of our programmes. Therefore, throughout this past year we spent time building working relations with teachers in order to develop our programme ensuring it met with the schools and day care centre's curriculum objectives. We then worked alongside teachers trialing our literacy pilot.

|	Start of Year Test				End of Year Test			
	Highest Score	Overall Average	Use of Capital Letters	Correct letter order	Highest Score	Overall Average	Use of Capital Letters	Correct letter order
Pre Primary	55	54.3	60%	60%	77	58.2	80%	30%
First Grade	43	67.2	80%	80%	83	67.6	100%	70%
Second Grade	50	73.5	90%	80%	80	69.9	100%	90%

Key: Green font show progress

At the start of the pilot learners were tested on letter recognition of their first and second names and given an overall percentage for each letter identified. They were also scored on correct use of capital letters and letter order.

- Pre-primary (5 years): the average test score at the start of the pilot was 54.3% and increased to 58.2% following our support.
- 1st Grade (6 years):, there was a slight increase noted at the end of pilot test.
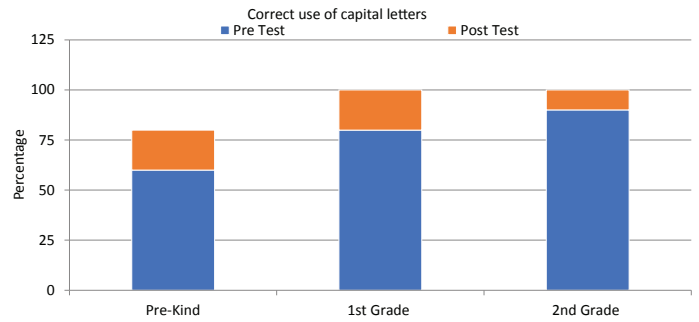- 2nd Grade (7 years): the average end of year test reduced slightly

Overall, the scores increased with the age of the children, girls averages were higher at pre primary stage and boys averages were higher at 1st and 2nd Grades. In terms of the use of capital letters, we noted increases across all age groups. However, the only group that increased their scores in letter ordering were the 2nd Grade learners.

Graph on left indicates the highest scores achieved and shows **positives increases across all cohorts.**
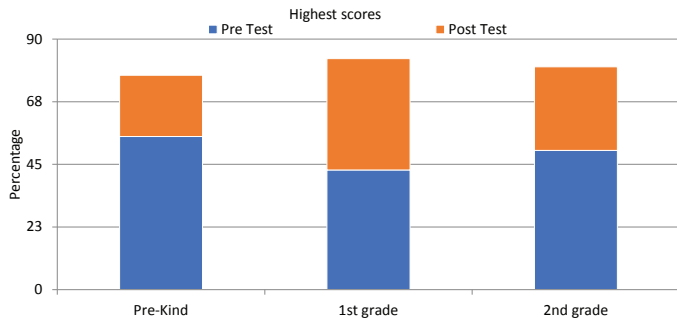
The graph on the right shows **the results on use of capital letters** and again shows **good progress** was made amongst all learners.

Highest scores
■ Pre Test ■ Post Test

Percentage

Pre-Kind   1st grade   2nd grade

Correct use of capital letters
■ Pre Test ■ Post Test

Percentage

Pre-Kind   1st Grade   2nd Grade

Daycare Centres

Across the three day care centres, we worked with 60 learners in total: 30 in Pre Kindergarten and 30 in Kindergarten. Learners were aged between 3 and 4 years old and just over half were girls.

|	Start of Year Test				End of Year Test			
	Highest Score	Overall Average	Use of Capital Letters	Correct letter order	Highest Score	Overall Average	Use of Capital Letters	Correct letter order
Pre Kindergarten	40	14.7	0%	0%	60	45.2	30%	0%
Kindergarten	18	8.2	0%	0%	85	45.7	33.3%	0%

Key: Green fonts show progress

The data above shows very positive progress. The overall averages **increased significantly from start tests to end tests.** The highest score attained leapt from 40 to 60 for Pre Kindergarten and from 18 to 85 amongst the Kindergarten cohort. Furthermore, at the start of year test neither year group used capital letters correctly or were able to recognise letters to spell their name in the correct order. At the end of year test, we are pleased to record **an increase of 30% and 33.3% in learners being able to use capital letters correctly.** As the data above suggests, learner's did not have the ability to be place letters in the correct order of their name and therefore this will become a 2019 development need.

Graph on left indicates the average progress showing a jump at Pre Kindergarten from 14.7 to 45.2 and in Kindergarten from 8.2 to 45.7. Significant **increases from both cohorts.**
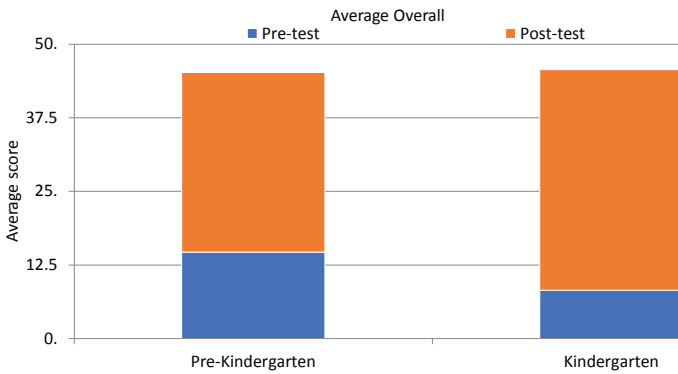
Bar chart on the right shows a good increase in Pre Kindergarten and a **significant increase in Kindergarten.**

Average Overall

Highest scores
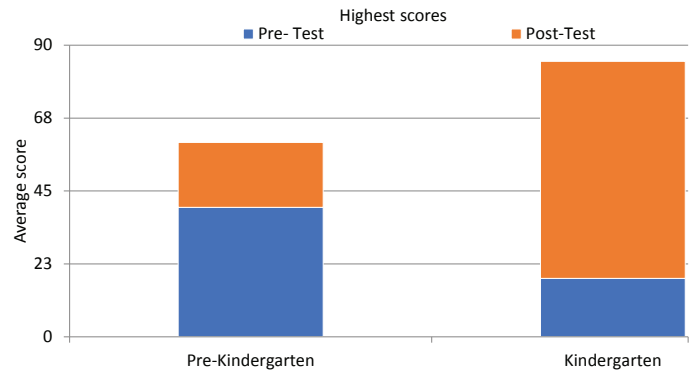
Basic Entry Level Digital Skills

Developing learner's technology confidence and competencies through access to technology (tablets and apps) is a fundamental part of our programme. For many of our learners access to technology is limited, and therefore our programmes aims to support learners with the opportunity to develop technology intuition and skills: otherwise known as digital literacy.

The table below shows the progress learners made in developing digital literacy skills. The green highlighted areas denotes where our support has resulted in skills progress. As you can see learners in pre-primary increased their digital skills in every area, 1st Grade students improved across three out of five competency areas and 2nd Grade learners improved in four out of five competency areas.

Public School

| Basic Entry Level Digital Skills	Able to turn on the tablet	Able to enter a password	Able to change the profile	Able to open an App	Able to clear & turn off tablet
Pre-primary: Start	8	9	8	8	7
Pre-primary: End	9	10	9	10	8
1st Grade: Start	10	9	8	9	7
1st Grade: End	10	9	10	10	10
2nd Grade: Start	10	9	9	9	6
2nd Grade: End	10	10	10	10	10

Increase shown

Day Care Centres

The Table below shows that progress is clearly evidenced in the majority of competencies with one area noted for further development.

Basic Entry Level Digital Skills	Able to turn on the tablet	Able to enter a password	Able to change the profile	Able to open an App	Able to clear & turn off tablet
Pre- Kindergarten: Start	14	21	24	23	16
Pre-Kindergarten: End	25	27	28	23	22
Kindergarten: Start	23	24	23	29	18
Kindergarten: End	27	25	26	26*	23

Increase shown   **Development area**
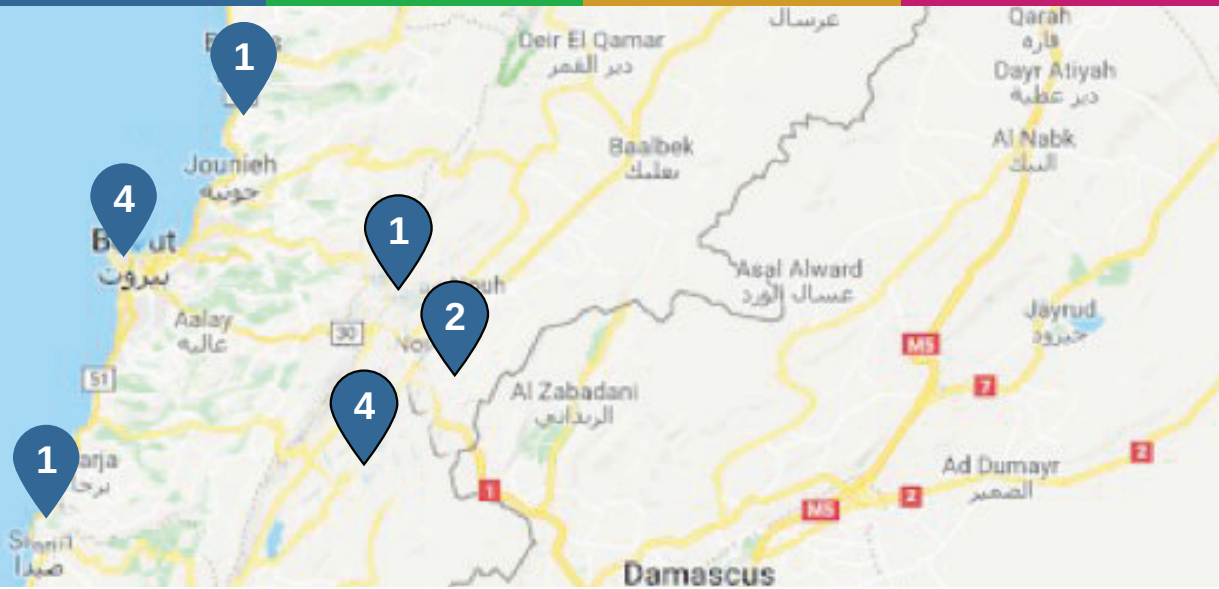
Lebanon

The Breteau Foundation runs a unique programme in Lebanon. While our work adheres to our theory of change model it is implemented on our mobile education buses. Our programme in Lebanon integrates learners from a variety of locations including 2,650 enrolled in non-formal education centres, 320 learners who come from refugee settlements, 339 from charity schools, and 670 from public schools. The learners we support typically require accelerated literacy and numeracy programmes, as well as technological competency skills development, and psychosocial support (PSS). Given the quantity of displaced children we support: who have either missed or never been in formal education, our aim is to return children or enrol children, for the first time into a national education system.

Students	Teachers	Schools	Tablets	Apps
3,979	143	13	303	46

Teacher Training

We provided teacher training to teachers in four educational centres: Jousour, Damma, Amel Association International Amel Association International (AAI) Haret Hreik and AAI Ein El Remeneh. The majority of teachers who took part in our programme (which were provided in both English and Arabic) were Syrian with 10% Lebanese and 5% Iraqi, all of whom were university trained, and had between two and seven years of teaching experience.

While our usual teacher training programme does not completely fit the context that we find in Lebanon, we have used components of the European Framework for the Digital Competence of Educators. While this framework provides a structure to assess and support teachers, parts of the framework do not match the challenging environments our teachers in Lebanon face. Our training aims to build teacher's inclusivity knowledge and know-how, as well as competencies to provide differentiation and personalisation so that learners can make the most of the resources we provide. Our teacher training showed significant impacts including:

Competence Area	Impacts
Fundamentals of software & hardware	Most teachers had never used tablet technology prior to our training with 11% assessed at Level 6 at the start of our programme. At the end, **83% were at Level 6: a 72% competency increase.**
Teaching & Learning	The majority (66%) of teachers started at Level 2 and **by the end of our training we had 22% at Level 5 and 56% at Level 6.**
Self-regulated learning	At the start of the programme 88% of the teachers were at Level 2 whereas at the end 78% were at Level 6. This suggests **86% of the teachers we supported increased by 4 levels from start to end.**
Assessment	The majority of teachers had good capability of assessment at the start of the programme and therefore increases **were insignificant with 17% at Level 2 at the end of the programme and 83% at Level 5. 3/10 skills were not** applicable due to the teaching and learning environment.
Accessibility & Inclusion	**At the end of our training, 94% of teachers were competent at supporting learner inclusion and access to the technology with only** 6% below Level 3.
Differentiation & Personalisation	The competency levels at the start of the year were 11% at Level 1, 55% at Level 2 and 3, and 34% at Level 5. **At the end of our training: 83% were at Level 6**
Actively Engaging Learners	**Our training indicated excellent support for this competency: 89% of teachers met Level 6 at the end of the programme from a starting average of Level 3.**

Our Second Breteau Foundation Education Bus

In 2018, we launched our second mobile education bus operating in West Bekaa district with voluntary design support from Daniela Geraldes and Sarah Murphy, Designers from Jestico & Whiles Architects. They transformed our bus into a vibrant, positive and welcoming space for our teachers, staff and learners.

The interior has been designed to be an open and adaptable learning space outfitted with tablets loaded with relevant content. Bright colours and artworks have been used to make our bus classroom an attractive oasis from the white tent cities that these displaced children live in. Foldable and moveable desks and chairs were bespoke designed to fit young learners and promote space flexibility and projector and screen facilities allows for teacher input and student sharing.

The extendable bright blue awning which attaches to the side of the bus, provides much needed additional teaching and learning space, offering opportunity for active learning and play. The tent is also used as a unique space for our PSS sessions.
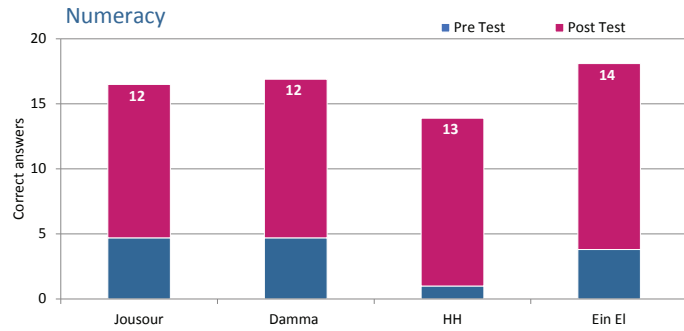
Why Bekaa?

Bekaa hosts Lebanon's largest official border crossing with Syria, in Masnaa and is an area mixed with Christians, Sunnis, Shities and Druz. The Bekaa Government is split into three administrative districts: Zahle, West Bekaa and Rashaya and composed of over 85 municipalities.

Bekaa has received the highest number of Syrian refugees in Lebanon, placing strains on already fragile government services. This has increased the vulnerability of the host community because new populations increase competition for employment, accommodation, access to public services, and infrastructure. More than 40% of the refugee population live in Informal Tented Settlements; and as a result, have limited access to basic services. The Bekaa district need the support of other world governments, international organisation and charities to support the displaced populations. Given our theory of change; our teacher training, our educational equipment and resource provision, and in Lebanon our ability to transport our support, we believed our model can help make a difference to young learners missing their education.
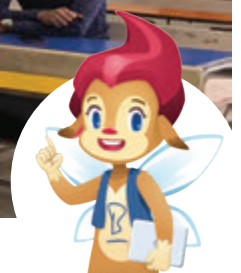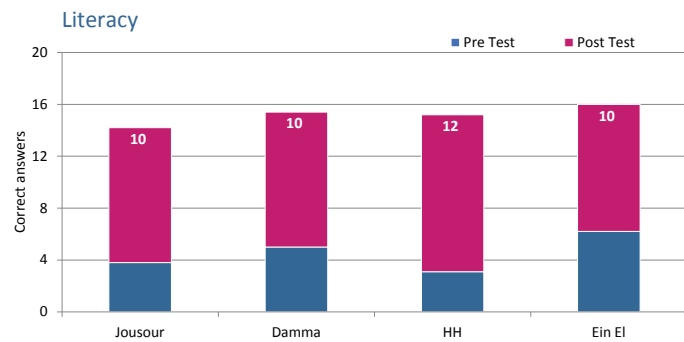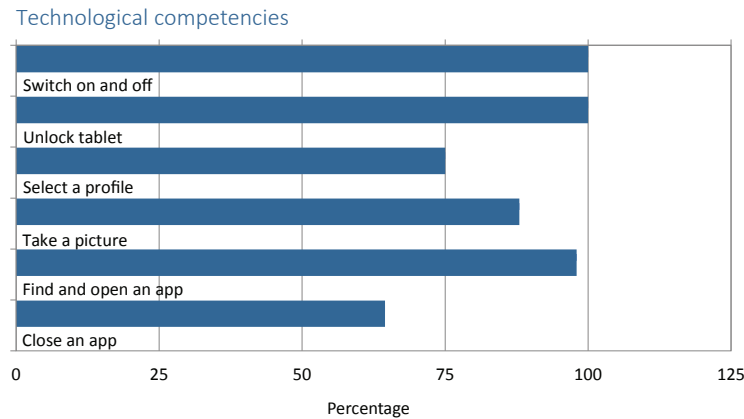
Academic Progress

With our drive to aid children into formal education settings, we have carefully monitored the academic impacts of our programmes in the centres where we provide direct support to children including: Jousor, Damma, AAI Haret Hreik, and AAI-Ein El Remeneh. To this, we undertook numeracy and literacy baseline tests with learners and then we closely compare progress, over a six-month period. The results of our studies are as follows:

Numeracy

Legend: ■ Pre Test ■ Post Test

Y-axis: Correct answers (0, 5, 10, 15, 20)

Centre	Post Test value
Jousour	12
Damma	12
HH	13
Ein El	14

We recorded signiÿcant increases in numeracy as shown in the graph on the left. Learner's at every Centre made great improvements from baseline to end of period assessments. On average, out of 20 questions, student increased their test scores by circa 12.8 points from their baseline tests.

Literacy

Legend: ■ Pre Test ■ Post Test

Y-axis: Correct answers (0, 4, 8, 12, 16, 20)

Centre	Post Test value
Jousour	10
Damma	10
HH	12
Ein El	10

In our literacy programme, we again saw excellent increases in from baseline assessments to end of year assessments as noted on the graph on the left. Learners in every school improved by more than 10 points (out of 20 questions) from start to end of year tests.

Technological competencies

Categories (X-axis: Percentage, 0, 25, 50, 75, 100, 125):
- Switch on and off
- Unlock tablet
- Select a profile
- Take a picture
- Find and open an app
- Close an app

By the end of the programme, all students could switch on and o° a tablet and unlock it. We found that 75% of learners could select a proÿle and around 90% could take a picture. Approximately 98% of learners could ÿnd and open an application, when asked, while approximately 65% could successfully close an application.

- Can't say
- Do use technolagy at home
- Don't technolagy at home

5%
20%
75%

Student Engagement
Given our programmes provide direct support to children, we are very interested in understanding what works well with learners across the range of educational projects, apps and content. We undertake an annual engagement survey to assess motivation and sustained engagement.
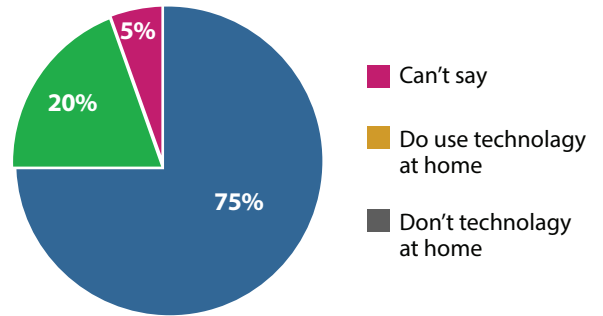
Our digital programmes provide children with an opportunity to learn through technology, often for the first time. **Of the learners we support 75% do not use technology at home.**

Despite not having ease of access to technology, we found that our tablets made the learning process easier with **90% of our learners stating that the tablets and apps such as writing wizard and Montessori Maths made learning easier.**

Psychosocial Support Sessions (PSS)
This year we have completed over 1,215 psychosocial sessions (PSS) with children ranging from six to 14 years.
We believe that psychosocial wellbeing is necessary for children to live a full life and fulfil their potential. It is our hope that through the sessions children will develop psychological tools to be able to manage the challenges associated with their displacement and build confidence to therefore be in a position to take up their right to have an education.

During the PSS sessions we use stories and drawings to help learners develop the ability to express themselves. Group activities such as drama and games are also used so students can practice confidence skills in a safe environment and in turn increase self-confidence/self-esteem. The role-play and games also promote cooperation and collaboration between learners. Overall, we feel the PSS component of our programme works hand-in-hand with our academic programmes: the balance of the two programmes gives us a higher chance of progressing children to formal education.

PSS Study
48 students from Jousor, Damma, AAI Haret Hreik (HH), and AAI-Ein El Remeneh were randomly selected to take part in a PSS programme.
Our staff assessed students on their:

1. confidence in class

2. readiness to learn when entering the classroom

3. engagement during learning activities

4. approach and attitude to problem solving i.e.: whether a learner attempted to solve a problem alone or sought help and whether they persevered with a given problem

5. the student perseveres when undertaking challenging activities

6. ability to communicate and collaborate with other learners

7. ability to work independently.
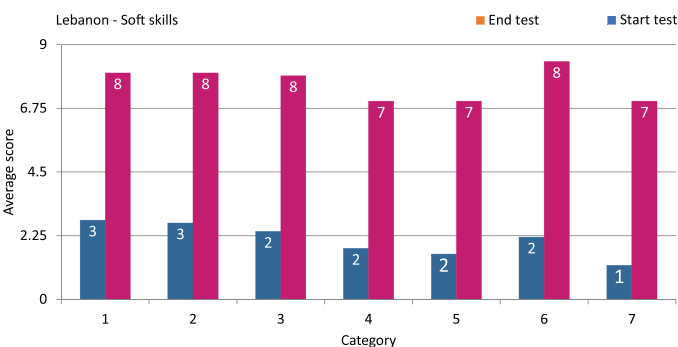
During the programme we saw an increase in all categories from the start to the finish of our intervention. We saw the largest improvement in student's ability to communicate and collaborate with their fellow classmates.

What we have Learned

We pursue resource efficiencies wherever possible and aim for greater effectiveness in all that we deliver. In 2018, we sought to do this by standardising areas of our work, because it affords us greater control of our products and services, even when we need to add bespoke components to meet specific country contexts. This year we have taken on board lessons learned from previous years and made the following developments:

1. Choosing Suitable Partner Schools:
We have become more discerning about partners and developed clear criteria on a school's readiness to join our programmes which includes: geographical distance from other schools in our programmes, internet connectivity and the level of motivation amongst senior leadership teams. By reducing the dispersion between schools we reduce our own carbon footprint and it enables our country teams to be more visible. We have clustered schools by region, reducing duplication of our training programmes, and increasing the possibility of autonomisation sustainability.

2. Delivery Improvements:
- Continuous evaluation of our programmes has supported the identification of new apps with a particular focus on technologies that track learner activities and results.

- With a more rigorous training model based on an international framework, and an improved train-the-trainer methodology, we increase our reach into schools.

- On behalf of some of our partner schools, we have liaised with internet providers to improve connectivity for schools that are excessively under-resourced.

- We transitioned to Google Classroom to assist schools manage their tablets and reduced set up costs allowing schools to adapt their devices between year groups.

- We now provide detailed information about future technology costs so schools can find solutions within our two years contract period.

3. More Rigorous Measures
At the start of 2018, we set our measurement expectations with schools at the outset and included information about the why, what, how and when we will measure impacts through studies and research. Our monitoring and measurement capability ensures both parties can use data collected to benefit children's learning.

4. Autonomisation with Partner Schools
We recognised that we would need to support schools to become self sustainable. This has meant developing strategies and plans with and for schools.

Continued Challenges:

Not all schools are ready for autonomisation and while we had 100% success this year, we may need to provide longer timeframes and more support for some schools to reach self sufficiency.

As technology develops, the tablets and apps we use require replacing and updating. In fact, every couple of years we will need to replace our entire tablet stock, which is costly.

We strive to find robust solutions for legacy technology, particularly for our autonomous schools who experience technical faults with older technology and don't have funds for repairs or replacements.

We rely on Androids that allow us to use multiple profiles but this technology is increasing difficult to find at an affordable price. We are currently buying up stock, more than we need to future proof our programme and buy us longer time with the same technical setup.

There remains to be lack of high quality educational apps aligned to local curricula and in local languages, in particular in South Africa.

While the above provides an overview of some of the operational challenges we continue to face, beyond all of these delivery issues are the challenges of working in environments of extreme poverty, displacement, conflict and violence, gender inequalities... and so on. All these socio-economical and environmental factors place the greatest challenges on our work, our learner's wellbeing and therefore their readiness and ability to learn.

Our Partners

Working in partnership can make a significant difference to our operations and great partnerships help strengthen our support to the world's most disadvantaged learners and schools.   Our partners range from innovative content developers and app providers; to technology entrepreneurs, and grassroots organisations who work with us in the field and on the ground, in the countries where we operate.

Our partners are also the schools that become involved in one of the many, many programmes we offer. We are very grateful for the relationships we build with our school's senior leaders, teachers and their wider communities who afford us their time and support to to deliver the best possible outcome we can, to their learners.

We would like to thank all our partners for their collaboration, expertise and kindness in 2018 and we look forward to a continuing many of the same partnerships in 2019.

With special thanks: