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Innovative Finance
for Education

Case
Study

Zaya Learning Lab

A Case of Impact Investment

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EXECUTIVE SUMMARY

This case study examines the evolution of Zaya Learning Labs from its initial work as a non-profit organisation to its current format as a for-profit social business, focusing on how its funding has changed over time, leveraging the impact investing ecosystem. Created in 2013, Zaya Learning Labs (Zaya) is an education technology (EdTech) company. Zaya designs and builds mobile applications, web platforms and hardware-based systems for education organisations. It also provides advisory and consulting services related to innovation in education. With a blended learning approach, its core aim is to improve the learning outcomes of underserved populations by freeing up teachers' time and improving access to additional learning resources. Zaya's headquarters are in Mumbai, India, where it shares office space with its sister organisation, Teach-a-Class.

Founded as a non-profit, its initial funding came in the form of grants and equity investment from impact investors, venture capitalists and angel investors. However, soon after the launch, the initial mode of financing proved to be limiting, insufficient and unsustainable in the long run. As a non-profit, Zaya could not license its services and products or attract funding from additional impact investors. As a consequence, Zaya shifted to a for-profit format, joining the larger impact investing ecosystem in India. To become financially sustainable, Zaya pivoted from being a non-profit organisation, which exclusively developed technology solutions for low-cost schools with grants, to targeting services at a mix of low- and high-income schools. Generating revenue through the sale of its technology services made Zaya self-sustaining and more attractive to impact investors. Such investors expect not only social outcomes, but also financial returns. However, to accomplish its original mission and ensure that the most vulnerable populations would still receive due attention, the original organisation was split into a for-profit arm, Zaya Learning Labs, and a non-profit arm, Teach-a-Class, which is able to provide services to low-income schools.

Zaya, in its evolution, has always followed a technology start-up model, where the product development process is agile and focuses on users. Thus, the shift from a non-profit to for-profit format also led to changes in management practices. Before the 2017–18 financial year, the team, largely consisting of in-

house staff, was geared towards the implementation of low-cost educational solutions in schools. Since then, Zaya has downsized its team and cost, retaining only the essential software engineering teams, which are directed towards high-revenue-generating workstreams. As a result, at the time of data collection for this study (June–August 2019), Zaya was consulting for over eight clients domestically in India and in the US. Zaya was on track to onboard over 15 clients in India, the US and new geographies, such as Africa and the Middle East, by the end of 2020. Zaya has seen a steady growth of revenue each year, and 2018–19 was its best year yet regarding growth. Zaya is expected to maintain the same level of revenue and grow by about 20 percent in the 2019–2020 financial year. The initial goal of penetrating the primary school EdTech space in India has been achieved, with the number of schools and pupils impacted rising each year. Through trial and error and with support from investors and the advisory board, Zaya has created EdTech products and services that have provided a blended learning experience to hundreds of students.

1

CONTEXT AND THE STATED PROBLEM

Located in one of the most populated cities and the commercial capital of India, Mumbai, Zaya is situated at the intersection of social diversity and inequality, a considerable need to improve education, and a growing ecosystem for impact investing and social businesses. India's education sector is highly diverse, with multiple national, state and private systems with corresponding curricula, along with a large variation in the ability and willingness of households to pay for educational services.

A central issue faced by India's education system is low levels of reading, writing and mathematical skills at grade proficiency level. Even at grade 8, 25 percent of students cannot read at the grade 2 level and 55 percent cannot do simple tasks of division (ASER, 2015). The skills gap is prominent between students from low-income and high-income households. Other challenges include a lack of teacher training, teacher absenteeism and little to no access to technology in schools (Malani, 2016).

Although education is considered an important budgetary element by the central and state governments, India spends comparatively little of its GDP on the sector relative to more advanced economies. While India invests 4.13 percent of its GDP in education, the USA, the UK, Germany, and South Africa spend 5.22, 5.63, 4.93, and 6.05 percent of their GDP on education budgets, respectively (Dubey et al., 2019). Funding shortages in public education services, the scale of poverty and development challenges in India mean that limited government funds are available for social enterprises, especially non-profit organisations looking to enter the education services space. Social enterprises typically need to seek other forms of funding, often competing for the small pool of philanthropic and corporate social responsibility funds.¹

When Zaya entered the education space in India, impact investing, an alternate stream of funding from private actors, had been growing in the country for over a decade. Between 2010 and 2016, impact investing in India attracted USD 5.2 billion and benefited 60 to 80 million people in India per year (Pandit & Tamhane, 2017). Impact investing combines financial and social returns and aims to mobilise resources from private investors for social purposes while also catalysing new approaches to social issues (OECD, 2019). It seeks to create social or environmental benefits by directing capital to enterprises that can achieve impact goals that traditional profit-seeking organisations cannot (Pandit & Tamhane, 2017). Compared to other ways of harnessing private

sector funds for social purposes (such as socially responsible investing or corporate social responsibility), impact investing puts the social and environmental purposes at the core of activities and investment decisions rather than treating them as lenses or variables (GIIN, n.d.).

In the Indian context, education has thus far attracted only a small portion of impact investments. Nonetheless, investors are increasingly diversifying and investing in the areas of education, healthcare and agriculture (Pandit & Tamhane, 2017). In the education sector, EdTech has gained prominence. EdTech refers to 'hardware and software designed to enhance teacher-led learning in classrooms and improve students' education outcomes' (Frakenfield, 2020, p 1.). EdTech can involve the use of several tools (laptops, tablets, interactive projection screens, etc.) that usually aim at enhancing individualised learning and supporting teachers in attending to students' needs in order to improve learning outcomes (Frakenfield, 2020). India is emerging as the world's EdTech laboratory, with EdTech being adopted by the central and state governments to improve elementary education (Gupta, 2014), aiming to address structural issues and reach quality and equity (Burch & Miglani, 2018). In this context, investors, including venture capital (VC) investors, are providing funds to EdTech start-ups. These organisations are 'the next focus' of VC investors and have attracted investment from large organisations, such as the Omidyar Network India (Arakali, 2020, p.1).

In response to this context of need for social enterprises in education and a burgeoning ecosystem of impact investment, the co-founders of Zaya aimed to combine their background in the information technology industry and their understanding of the gaps in the education system (resulting from some time spent teaching in Mongolia and working for Khan Academy) with their business training experience. The organisation's emphasis has always been on blended learning as a solution to overcome

teaching and learning challenges. As one of the founders describes:

I visited a lot of offline schools and saw a real need for connectivity. A lot of great educational content exists online, but these kids did not have access to it due to lack of internet, intermittent electricity, unmotivated instructors, or some combination thereof. We came up with an idea that would help overcome the infrastructural issues in these schools (Zaya Co-Founder, interview, 2019).

1. In 2012, the Government of India passed the Companies Act of 2013, which mandated corporations above a certain profit threshold to spend 2% of their net profits on corporate social responsibility. This change allowed for considerable amounts of funding to be directed to underserved areas of development in India. In the first year alone (2014), companies spent INR 59,22 Crore (USD 780 million) on corporate social responsibility (CSR).

2

BLENDED LEARNING: A SOLUTION TO THE LEARNING CHALLENGE

As an EdTech company, Zaya's products and services aim to harness education technology to improve the learning outcomes of primary and secondary school children. More specifically, Zaya's use of technology in education is expected to allow teachers to monitor progress, address the issue of pupil-per-teacher ratio, which often disadvantages schools with lower budgets, and encourage students to learn at their own pace by giving them access to resources on the internet they may otherwise not have been able to access.

As the co-founder explained: 'We wanted to give time back to the teacher and include professional development' (Zaya Co-Founder, interview, 2019). Furthermore, Zaya's goal of implementing education technology in primary schools (and later secondary levels as well) of underserved populations addressed a gap in the sector, as many EdTech companies in India targeted tertiary education.

Zaya uses blended learning, a teaching and learning approach that combines face-to-face classroom methods with computer-mediated activities, to deliver instruction. It involves leveraging technology, including the internet, to offer a more personalised learning experience that gives students more control over their own learning (Christensen Institute, n.d.). This can be implemented in different formats, such as the 'flipped classroom' and 'station rotation' (Christensen Institute, n.d.-b; see Appendix I for a description of various models of blended learning). Blended learning has gained attention in development contexts as a way to address the lack of trained teachers (Whittenberger, 2015).

Zaya focuses on blended learning as a 'pedagogical strategy to provide more personalised education in large classrooms with few or even no qualified teachers' (Zaya Co-Founder, interview, 2019). Beyond specific goals and target outcomes that are set on a case-by-case basis for different schools, the overall goal is to improve learning outcomes. This has been materialised into several products and services as the organisation has learned from its experiences with different schools in different parts of the country.

Zaya utilises some common strategies to implement their products in schools in a variety of ways depending on the needs of a particular school. Zaya focuses on teachers as primary users of EdTech in ensuring learning gains for the students. Lead teachers and teaching assistants receive ongoing training on its pedagogical

model through Zaya's platform. They learn about managing groups in classrooms and working with data in instructional teams. They receive formal training every couple of months and receive in-class coaching from Zaya's School Managers throughout the year. Certified teachers deliver lessons to student groups using textbooks. Then, students rotate between small group teaching with the lead teacher and technology-enabled activities overseen by a teaching assistant. Students review concepts by means of videos, games and assessments with instantaneous feedback. The data resulting from the assessments are aggregated and immediately made available to the teachers. The assessment data aim to give information to the teachers, support student feedback and provide further teaching support.

Blended learning can thus support teachers who face large classroom sizes. These technology solutions can help them group students according to their learning level and level of support needed. It also helps teaching assistants, who might have limited content knowledge, use the platform to review concepts and find teaching strategies with limited preparation time. For instance, in a chain of after school centres across Karnataka and West Bengal, uncertified instructors used this technology to help them deliver a skills-based English program (Zaya Learning Lab, 2016).

3

IMPACT INVESTMENT: FINANCING TECHNOLOGY SOLUTIONS FOR EDUCATION

Zaya has been able to utilise impact investment funding at various stages of its development and has come up with creative solutions to reach underserved populations with EdTech while achieving financial sustainability. Impact investments, as mentioned above, are financial investments made with the core intention of yielding ‘positive, measurable social and environmental impact alongside a financial return’ (GIIN, n.d.-b, p. 3). Impact investors use finance as a critical vehicle for solving social and environmental challenges facing the global community.

Measurable social and environmental performance is a cornerstone of impact investment, and the details of how Zaya and its investors approach this is discussed in greater detail later in this case study. In this section, we highlight the financial model alignment of impact investing and Zaya.

Depending on the investors’ strategic goal (Figure 1), the target range of financial return could vary substantially from a below

market to a risk-adjusted market rate return on the capital. These investments can take the form of diverse financial asset classes (e.g. grants, cash equivalents, fixed income, venture capital, and private equity) from a wide variety of investors, such as fund managers, pension funds, insurance companies, private banks, development financial institutions, individual investors, private foundations, religious institutions and more (GIIN, n.d.-b).

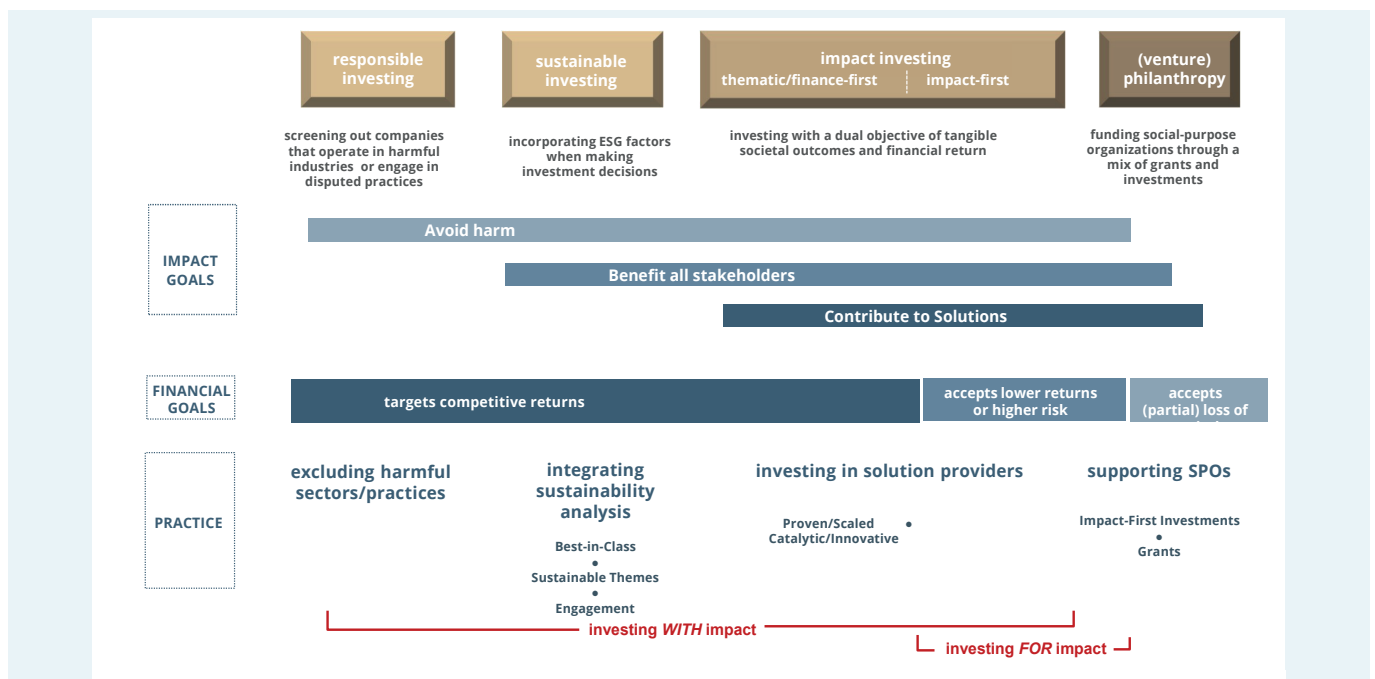
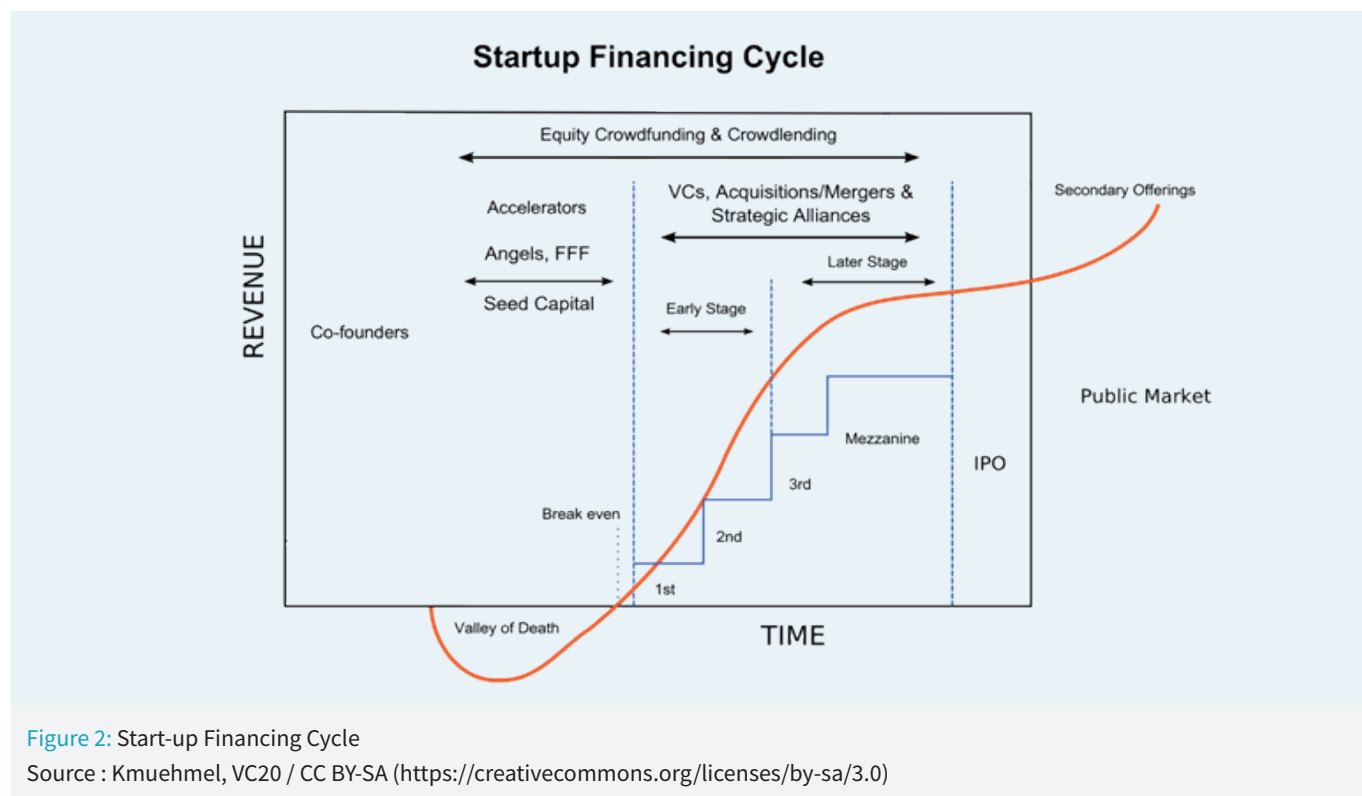


Figure 1: Impact-Generating Investment Approaches

Source: Julia Balandina Jaquier, JBJ Consult

Zaya, as a start-up EdTech company and a social enterprise, has been able to use multiple vehicles of financing from the impact investment ecosystem. Figure 2 shows the typical financing pathway for start-ups, from receiving initial seed capital for

promising ideas to becoming a publicly offered shares enterprise.¹ While angel investment and seed capital, which do not require an immediate financial return on investment, are available to start-ups in initial phases or early stages, as the enterprise grows, tapping



into later-stage investments often requires some form of income for the financial return on the capital. In fact, a recent report on impact investors in Nordic countries showed that a vast majority (83 percent) 'expect their impact portfolio to deliver at or above the market rate of return' (IMPACT X, 2019). Even in India, although the investments mostly represent seed funding or angel investment for start-ups, there is a growing trend of these funds being directed towards later stages of investment as well (Ravi et al., 2019).

Initially, Zaya aimed to support underserved populations by providing low-income schools with access to educational technology with its blended learning approach. Zaya developed solutions for accessing educational content for schools with low or no internet connectivity in order to reach the most disadvantaged students. The idea was that technology could assist teachers and elevate the quality of education, thus reducing the gap between low-income schools and others. To develop the proposed solutions, Zaya started as a non-profit organisation that developed technology products for low-income schools and organisations. The initial funding for Zaya came in the form of seed funding, grants and equity investment from impact investors, venture capitalists and angel investors. Their last grant was received in May 2018.

Having identified some limitations to the non-profit format, Zaya pivoted from this strategy. The main issue identified was the need for a financial model that was predictable, reliable and sustainable. Grant applications and management were time-

consuming, and future funding was uncertain. As a Zaya advisor describes, 'As we expected to be in operation for some years, we would have perpetually been writing grants if we had gone the NGO route' (Zaya advisor, interview, 2019).

The founder echoed this challenge by comparing and contrasting grants to operating as an entrepreneur:

... Once you have a grant, it's like a validation that you have a very good idea. However, it takes a very long time to get any sort of funding, so you cannot afford to have continuous rounds of funding. In fact, your grant can easily be spent in a year. So, if you want to be a smart entrepreneur, you should pick access to market as a negotiating factor in your investment terms and conditions. This can or cannot work, but this is a bigger leverage for you as an entrepreneur – you can get access to market and have a recurring stream of revenue at the same time (Zaya Co-Founder, interview, 2019).

The non-profit institutional format was found to be limiting, as it did not allow for alternative income streams, such as licensing Zaya's products or establishing steady revenue from sales. As a consequence, it was difficult to attract funding from VC investors, who expected a financial return on the investment: 'With the types of funding we were getting for being a non-profit at the start, our main challenge was that along with being low-income, we couldn't license our products to others. It was very difficult

under that structure because we couldn't get VCs interested in our enterprise' (Zaya Co-Founder, interview, 2019).

Thus, shifting to a for-profit format and making use of impact investing became an appealing alternative. Since 2013, impact investors have shown interest in Zaya, and Person's PALF advised the team to use a 'business model of a social enterprise: low income, a private budget for 4–5 years' (Zaya Co-founder, interview, 2019).

The shift from a non-profit dependent on grants to a for-profit EdTech company required organisational, strategic and financial changes. The organisation had to change legally from a non-profit institution to a for-profit one. To benefit from becoming a for-profit service provider and maintain the funding required to reach the poorest social groups, Zaya bifurcated its operations and formed a sister organisation called Teach-a-Class (TAC). TAC now handles the non-profit activities and still receives grant funding from donors. The need for separating the organization into two arms, a for-profit arm and a non-profit arm, illustrates how impact investing has the potential to fund social activities, but it is not a 'silver bullet' solution, as it is difficult to attract investments to target the poorest populations, and it might be beneficial to use a combination of funding sources (Morduch, 2011).

This shift enabled Zaya to attract investments and license its products. This move, although challenging, was facilitated by having a 'proof of concept' from the non-profit activities:

The first investment was easy because we already had proof of concept; enough indicators to project results that could be achieved at a low cost. [...] Grants allow for capacity building and experience. If you don't have product impact or a business model, you don't have product/market-fit. ... I think the role of private funding in education in India should be through blended financing like Zaya (Zaya Co-Founder, 2019).

Thus, the shift allowed Zaya to move from early funding stages to more mature phases of the impact investment ecosystem. Zaya has attracted venture capital to the EdTech industry in primary education in India (where primary schools were a neglected target), thus mobilising resources from for-profit investors into education and towards the education of underserved populations, improving learning outcomes and the capacity of underpaid teachers in low-income schools. In other words, Zaya targeted a new market and brought new participants to the education sector to mobilise resources that were previously untapped for development and use those resources to provide new or improved impact.

In impact investing, social investments are treated in a similar way to other, traditional forms of investing, except that they include an expectation of both financial and social outcomes. Impact investments, therefore, are still investments that require the repayment of the initial amount plus interest. Thus, funders evaluate investment candidates with similar procedures and rigour to those with which they evaluate traditional investments:

It was very similar to financial analyses for other investments; there is a rate of return hurdle² like for others. No sacrifices from that perspective, a return is expected as a normal investment. Internal Rate of Return [IRoR] would be 12%; with an international discount rate of 20% for the future. Expected RoR going out. [...] These would be investments rather than grants (Impact Investor, interview, 2019).

Over the financial years of 2018–19 and 2019–20, Zaya's strategy shifted to formulating a steady income from consulting and developing IT applications related to the education sector for multiple schools and private clients. This meant products had to be created with paying clients as targets, which had to be identified and attracted. At the time of this study, Zaya was consulting for over eight clients domestically in India and in the US. They were on track to onboard over 15 clients in India, US and new geographies, such as Africa and the Middle East, by the end of 2020. Zaya Learning Labs has seen steady growth in revenue each year (with the exception of 2017–18, a restructuring year), and 2018–19 has been their best year yet in terms of growth (over 300%). Zaya is expected to maintain the same level of revenue and grow by about 20% in the financial year 2019–2020.

The use of business methods and practices is not limited to generating financial return. It permeates the understanding and functioning of organisations. Compared to traditional NGOs, for-profit social businesses need better management and a focus on efficacy, efficiency and outcomes. Thus, the shift to a for-profit model also required a combination of streamlining staff and outsourcing administrative functions. Before the financial year 2017–18, the team was structured differently, geared towards the implementation of low-cost educational solutions for schools in non-metro cities and villages in India. Zaya had in-house marketing personnel and engineers who were developing solutions. Since then, Zaya has downsized its team and costs, retaining only essential software engineering teams. Functions such as accounting and compliance are now outsourced at a reduced cost. Zaya is now focused on hiring engineers and software developers and directing them towards high-revenue-generating workstreams. In terms of changes in budget, it now has a larger allocation for revenue-generating activities. Indeed, this is seen as a benefit of impact investing by some of its proponents: 'The argument has been that the "social" mindset and "free funds" have also retarded professional behaviour and innovation often leading to heavy wastage and high resource drain' (Sengupta, 2015).

The relationship between the organisation and its funders usually offers incentives in this direction. As this investor describes:

We were interested in the management team, the efficacy of learning outcomes, the business sense. There was and is such a big difference between schools and what Zaya is doing. We would look at 'a dollars to learning' perspective – what is the value that the company is adding? In this case, it is not so much outcomes based but inputs based. Typically, school education would

provide that service for 6–7 hours a day; with Zaya – an hour a day for the price you’re paying (Impact Investor, interview, 2019).

A virtuous cycle is then created from having investors and being able to sell products. Having investors allows the organisation to develop products and gain scale, which attracts more investors. This process allows the company to ‘sell our products and services to a lot of US schools, and in a year or two, this will help us with more angel investors’ (Zaya Co-Founder, interview, 2019). As a result, Zaya is able to expand its reach and impact in education. Shifting to impact investing addressed the needs of the operationalisation of Zaya’s workplan. It allowed Zaya to deliver customised EdTech solutions to the underserved market of Indian primary schools while also benefiting from the resources and expertise available to investors. This would have been a much more difficult endeavour if Zaya had relied on the other two alternatives: 1) maintaining the non-profit format, which depended on non-government grants or donations, and thus rendering it unable to grow, or 2) the for-profit routes of traditional bank loans and government schemes in support of start-ups. With impact investment, the potential for financial return attracts funding from investors and enables growth and greater impact, leading to a business collaboration that allows both parties to benefit.

1. For more information on start-up financing options see <https://www.cloudways.com/blog/startup-funding-stages/>
2. The hurdle rate is the minimum rate of return that will cover the initial costs.

4

MONITORING AND EVALUATION: MEASURING SOCIAL OUTCOMES

One mark of impact investing is the commitment to measuring and reporting the social performance and progress of initiatives and investments, aiming to ensure transparency and accountability between implementers and investors (GIIN, n.d.). Impact investors define explicit and measurable impact goals (OECD report, 2019).

Having clear goals is one of the core characteristics of impact investing: intentionally contribute to social impact, use evidence and impact data in investment design, and manage impact performance (GIIN, n.d.-b). Nonetheless, in spite of the relevance of monitoring and evaluation (M&E), there are also challenges, as ‘there is an inherent difficulty in measuring impact and an associated challenge for diverse stakeholders to agree on measures to understand (social) entrepreneurial performance and the viability of impact investing deals’ (Logue et al., 2017).

In Zaya’s case, M&E of Zaya’s interventions addresses both social and financial aspects with internal metrics as well as with metrics and targets agreed upon with investors. On the social side, the M&E aims to verify the efficacy of solutions, inform changes that are needed and guide the interventions, and demonstrate social outcomes to the investors. On the financial side, the adopted metrics concern Zaya’s capacity to mobilise revenue, its expenditures and management.

Zaya and Teach-a-Class both have standard surveys and assessment tools that allow them to monitor progress (see Appendices I and II for examples). These instruments were developed in-house with specific products or services in mind. The implementation managers, who are in charge of specific schools, are responsible for running the surveys in their schools.

Zaya also conducts tests before and after its interventions to assess students’ learning. These tests aim to demonstrate impact, while also providing insight to teachers:

Zaya conducts a BOY, Beginning of the Year, and EOY, End of the Year, test. BOY is a test taken before implementing Zaya. This helps us understand the current learning level of the students. Then we implement Zaya and conduct an EOY to understand

how much Zaya has helped students learn. From these tests, we have seen an increase in learning outcomes. The children’s core concepts have also been strengthened. Also, analytics on Zaya’s platform help teachers identify students who have not fully understood concepts or chapters; teachers can then focus on those students (Zaya Co-Founder, interview, 2019).

Taken together, the surveys and tests are used to evaluate the efficacy of a product or technology solution for a given school. At times a third party (such as Grey Matters) conducts an external assessment of Zaya schools to ascertain impact. Other metrics are also used to monitor the implementation of solutions, such as students’ progress and percentage of material covered. The results collected thus far show that progress varies depending on the starting point of schools. In some schools though, test scores suggest modest progress, which still shows that Zaya’s programs are making a positive difference. From this data, Zaya is able to report on specific indicators agreed upon with investors at the outset of each funding agreement. In general, these investor-specific rubrics are unchanged from the standard template of the investing organisation.

At the same time, the investors have their own evaluations, instruments and metrics. Each of them has its own rubric for measuring progress and monitoring operations. These are ordinarily high-level indicators that are less granular than Zaya’s internal data and reflect the investor’s approach to being involved with the implementing agent, while still giving freedom to the invested organisation to determine impact. For example, a representative from an investor describes its evaluation of Zaya as considering ‘the pre-and-post math scores’ and teachers’ attendance as outcomes. These are ‘proxies’ for education improvement. In other words, ‘with these, you can see the baby steps towards the ultimate outcome’ (Impact Investor, interview, 2019).

Business-wise, there are other metrics used, such as the buy-in of schools for Zaya products and the ability of the team to customise a technology solution based on feedback. Impact investors' evaluations also cover both the 'business side and efficacy side'. Concerning the business perspective, the investor goes on to describe:

From the business perspective – we would look at the financials, consistently track how the business was doing, how to grow, how to manage costs. Before we made investments, companies who have a historical revenue, we consider this a strong indicator of future success. From the non-financial perspective, we look at the management team. Indicators like a strong founder, the members of the second rung of leadership – willingness of talented people to work for the founder; and a willingness to accept feedback. We would also be interested in the sustainability of companies. For instance, a non-profit requires consistent grant funding. An investment would require an enterprise to be financially self-sustaining (Impact Investor, interview, 2019).

Thus, the M&E tools are central to Zaya's impact investing management to promote a focus on outcomes, inform decisions and interventions, and promote the alignment and accountability between implementer and investors.

5

STAKEHOLDER RELATIONSHIPS

In order to develop its products, Zaya connects its own team of technology experts with impact investors and beneficiaries. The logics of impact investing affects the relationships and interactions between both groups, and both steer Zaya's work and development of solutions. First, impact investors share risks and return with Zaya, creating incentives and pressures for efficacy and impact. Second, the development of products is guided by the needs and feedback of beneficiary schools and teachers.

Funders and impact investors

Besides playing the fundamental role of providing financial support for Zaya's projects, funders also play a role in the organisational development of the institution and offer technical expertise. The investors support and encourage impact by demanding financial sustainability, encouraging a focus on monitoring and evaluation, and through their diligence in verifying results (Jackson, 2011). All of this creates incentives for Zaya to overcome challenges and roadblocks.

However, attracting investors might be challenging for the implementing organisations. Investors evaluate investment candidates based on some criteria and informal relationships as well, which depend on networking and having a convincing pitch:

It is very informal, sort of go to conferences – 'this is my company'. There isn't a formal process. From [Impact Investor] – the investment process would involve a concept note, this is the company, why we like it, what they do, learning outcomes, potential return, investment committee, whether there is continued diligence (Impact Investor, interview, 2019).

Having successfully completed this first step, investors and investee move to more detailed discussions. At this point, a detailed plan focusing on outcomes, the creation of tools for monitoring, and due diligence is created:

Then we would meet the founder in person, look at the company; there would be heavier diligence, legal diligence, an investment note (more detailed note). Then comes the final say on investment. Then there are negotiations, you'd sort out final diligence – terms of the deal, evaluations, et cetera. There may be differences in timings or written materials, but most venture capital is like this (Impact Investor, interview, 2019).

By the time of this study, Zaya had a stable set of investors, such as Pearson, DBS Foundation and The Gratitude Network.

Zaya and beneficiaries

As an EdTech company, Zaya's services and products are developed following a start-up model and culture. Products and services are created with specific needs in mind, and its development is agile, dependent on tests and incremental improvements:

Before a project starts, we do a requirement analysis. This is done first to ascertain what is expected. Then comes the development phase. This lasts six months on average (with minor updates throughout). There are prototypes of the product every month. The first measure we look at is – what was the initial expectation. Sometimes the whole product changes. The user is involved in the research and development (Zaya Engineer, interview, 2019).

With the imperative of combining social impact with financial return and sustainability, the product ideas emerge from the identification of the specific needs of users. Zaya's beneficiaries (or clients) include schools, NGOs, foundations and CSR teams that use their technology. The development process puts these stakeholders' needs and feedback at the centre: 'If it's a new app or product, there is a requirement to gather and understand data; it typically involves working closely [with the client]' (Zaya Product Manager, 2019).

This relationship with users includes not only the collection of feedback, but also user support and consulting services 'to show how to use the products in the most efficient way. There is a great deal of consulting. A lot of experience tells teachers whether the right path is being followed; and if not, which is the right path. A lot of research goes into it. We look into how it is done, look at other ways, make a few tweaks where required' (Zaya Product

Developer, 2019).

Therefore, the users are not passive consumers, but play a role as drivers of improvement in the product development process. They are engaged in the project and provide timely and consistent feedback, which allows the technical consultants to advance the tech solution. The development team stressed how the ideas actually come from the users, and the educators are part of the creative process of solutions:

[The idea] comes from the clients/users. We want to provide something that is useful – for teachers. [...] Incidentally, most co-creators are educators. Big schools design their own curriculum, processes and usually have some theory behind it. When the research is done by them – engineering [by Zaya] makes the process smooth (Zaya Engineer, interview, 2019).

One engineer from Zaya describes the process with a concrete example:

For example, there was a request for music [classes] in an Indian school – the teacher plans for every class; this is an operational problem we wanted to solve. Then a new problem – the teachers didn't want to make lesson plans. With continuous engagement with the 140 teachers – 250 teachers, we saw that everyone was using the 90% centralized plans (Zaya Engineer, interview, 2019).

Within schools, different actors play different roles. School leaders have to take ownership of the process and allow flexibility for technology disrupters. Teachers have to be open to new solutions and to the idea of learning new methods. Students are also part of the beneficiary group, but they have less engagement with the development of solutions. Finally, it is often the case that only one class or a fraction of primary school students in a partner's school gets to benefit from the technology solution.

6

CHALLENGES AND LESSONS LEARNED

The shift from a non-profit to for-profit structure, the leveraging of impact investment and the use of technology have posed a series of challenges. Each stakeholder has faced specific sets of challenges and shared their own lessons learned.

Zaya

For Zaya, the shift from non-profit to for-profit has posed financial and managerial challenges. Combining social and financial returns has not been a simple task. Ascertaining the maximisation of impact on low-income schools while maintaining the financial viability and sustainability of the enterprise was a demanding balancing act. This was especially the case at the beginning, when a value proposition had to be defended to potential venture capital investors demanding a business-like approach to what was essentially a non-profit model. Later on, it was also a major challenge to demonstrate a consistent financial return (sometimes of up to 20%) to investors. This became financially unsustainable and encouraged the enterprise to move towards a for-profit mode of functioning and split the organisation in two (Zaya and Teach-a-Class). This allowed Zaya the freedom to license their products and target a mix of low-income and high-income schools in order to recoup costs.

Additionally, it was not always possible to convince investors to invest in EdTech solutions for schools with low or no connectivity. Investors assumed that, in the near future, India and other countries would have 100 percent connectivity, and developing short-term, non-internet-based solutions may not be the most effective path. However, in reality, even in 2019, only 38 percent of Indian children under the age of 15 had access to the internet (Khanna, 2020), which leaves a large proportion of the student population at a disadvantage if internet-only solutions are implemented. The non-profit work through Teach-a-Class allows Zaya to make EdTech solutions through non-internet-based options available to schools with low or no connectivity.

The challenge of aligning Zaya's purposes and operation with funders' expectations has also been highlighted by interviewees. Searching for and meeting investors can be time consuming and discouraging, as investors can have strong opinions and tough feedback: 'His team ripped us apart. [...] the lens they were using for scope or scale – just didn't work for us' (Zaya Co-Founder,

interview, 2019). Part of the difficulty lies in the divergence between investors and implementers regarding mindsets and expectations. Attracting investments is often challenging, but in the case of impact investment for development, it is likely that 'the return expectations are not clear and the investor mindset is harder to understand since their requirements cannot be boxed into financial parameters alone' (Sengupta, 2015).

Attracting paying customers to maintain the for-profit model has also been an issue. Schools had been offered other EdTech solutions by organisations that had, at best, not helped them, or worse, wasted time and resources: "Now, the customer is very sceptical, you have many schools which have bought solutions or been donated solutions which don't add any value to their learning" (Zaya Co-Founder, 2019).

Nonetheless, the interviewees argue that, when designing a new project, other organisations may opt for a more financially sustainable model from the outset. This requires having a clear organisational vision and a theory of change, as well as rethinking the scalability of projects. To facilitate this shift, Zaya also benefitted from the outsourcing of administrative aspects of the organisation and from splitting it along the lines of funding structure.

Finally, there are also product-specific lessons, some of them operational, some of them engineering-specific. EdTech solutions must be adapted to the concrete context of schools, which might have limited infrastructure, such as bad internet connection or professionals that are not willing to use EdTech solutions. For example, a product for a school in Uttarakhand worked even with 2G internet in Mumbai but would not work when shipped to the school. On another occasion, a school that had requested a technology solution to create a centralised repository for lesson plans ultimately could not get a majority of teachers to buy in. These are case-specific lessons that all contribute towards a smoother customisation process in the future.

Beneficiaries

Overall, the school leaders and teachers involved in the Zaya classroom seemed to enjoy the blended learning environment. Nonetheless, when adopting technology solutions for education and blended learning tools, schools and teachers experience a steep learning curve that must be planned for and addressed by service providers. These professionals need to adjust to new processes and practices. For many education professionals, it is their first time using a blended-learning approach for a specific class. In this case, educators need to be open to new pedagogical models. Regular workshops and meetings with the implementation managers are helpful for both the school and for Zaya – both stakeholders benefit from maintaining high levels of contact.

Schools also appreciate rapid scalability. In most cases, only a single class is able to implement the technology solution, which can widen gaps between those with access to such resources and those without within the same school.

Investors

In 2012, EdTech in primary schooling in India was a relatively new market for impact investments. Thus, like education professionals, investors also had to adjust to a new sector and its specific context and practices. It required learning about the Indian education system and the lack of data available about this new market, especially in digital form. At the same time, it was perceived as an untapped area of great potential impact. Investors also advise non-profit organisations to ensure financial sustainability before encouraging any intervention concepts.

Despite the potential of impact investment for education, investors argue that not all issues can be addressed with impact investing. The most vulnerable populations cannot be reached by for-profit endeavours, and some solutions cannot be successfully marketized:

The lowest end of the pyramid cannot be served by impact investing – at that point the willingness-to-pay and ability-to-pay is zero. India is a diamond, a misshaped diamond. There is a massive group of people who are not in squalor but not well off. They have a small disposable income and a high willingness to put this towards their children. Whether it is the bottom two thirds, the top third, the rest – they are actively interested in going up the social ladder but low willingness-to-pay. If you're an Impact fund – people want to serve the lowest – so this was a difficult argument to make. In education, you have to be doing well to be spending money on education (Impact Investor, interview, 2019).

7

CONCLUSION

The case of Zaya Learning Labs demonstrates that funding through impact investment has the potential to provide technology solutions in the education sector, as impact investors are interested in providing financing to social enterprises that have a financial and social return.

However, due to the condition of financial return and the need for long-term financial sustainability required for impact investment, social enterprises have to find creative organisational and legal structures to ensure that they are able to reach underserved populations. In the case of Zaya Learning Labs, a for-profit and a non-profit organisation were established depending on the funding source and type, aiming at different populations.

Impact investment, an innovative financing approach, opens up a new source of funding – private investors looking for

financial returns – for the education sector. With the focus on outcomes (social and financial), impact investment enhances the management practices of social organisations as related to efficacy and efficiency, while allowing the organisation to develop its own theory of change and innovate solutions to meet the needs of their beneficiaries. The funders (i.e. impact investors) allow the social organisation the freedom to innovate as long as they are focused on delivering outcomes based on strong monitoring and evaluation plans.

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APPENDIX

Appendix I. Four Models of Blended Learning

Blended learning is a teaching and learning approach that combines face-to-face classroom methods with computer-mediated activities to deliver instruction.

The following definitions are directly quoted from the course on blended learning offered by Khan Academy in partnership with the Clayton Christensen Institute and the Silicon Schools Fund.

1. Flipped Classroom

‘Flipped classroom or flipped learning is a methodology, an approach to learning in which technology is employed to reverse the traditional role of classroom time. If in the past, classroom time is spent at lecturing to students, now in a flipped model, this time is utilized to encourage individualized learning and provide one-on-one help to students, and also to improve student-teacher interaction. While the instructional or teachable content is still available in class, however, this content is mainly designed in such a way to be accessed outside class which is a great way for struggling students to learn at their own pace’.

2. Station Rotation Model

‘In a station rotation model, within a given course or subject, students rotate at fixed points in time between different learning stations, at least one of which is an online learning station. Other stations might include activities such as small-group or full-class instruction, group projects, individual tutoring, and pencil-and-paper assignments. Some implementations involve the entire class alternating among

activities together; whereas others divide the class into small-group rotations. In the Station Rotation model, students rotate through all of the stations’.

3. Lab Rotation Model

‘In a lab Rotation model, students rotate at fixed points in time between a classroom and computer lab, in which students learn predominantly online. The classroom is generally reserved for other learning activities’.

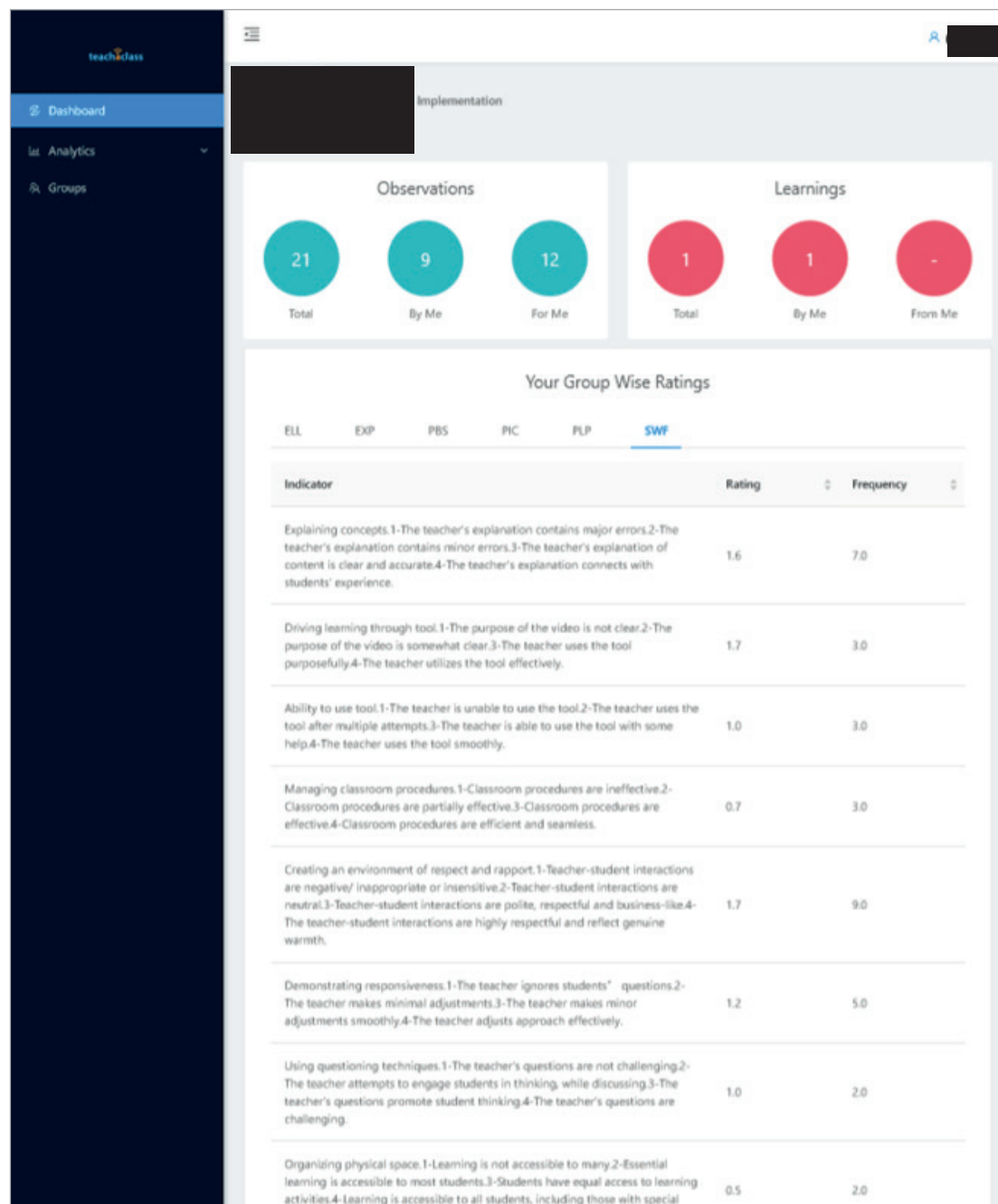
Difference between Lab Rotation Model and Station Rotation Model:

‘In station rotation model students are rotating within a given classroom whereas in the lab model they are actually rotating out to a learning lab where they are doing their online learning’.

4. Flex Model

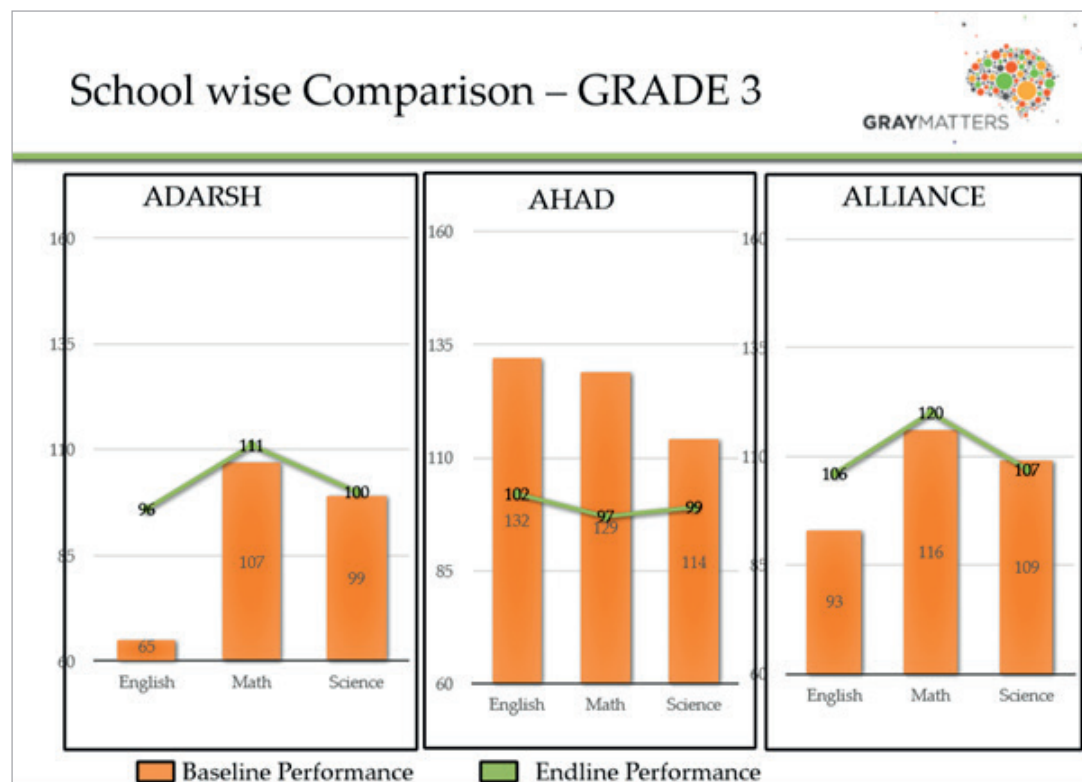
‘In the Flex model, online learning forms the backbone of a student's learning, even if it directs students to office activities at times, and students are able to move flexibly through different learning modalities with the goal of optimizing their learning experience based on their specific needs. Each student in essence has a customized, fluid schedule among learning modalities. The teacher of record is on-site, and the teacher-of-record or other adults provide face-to-face support on a flexible and adaptive as-needed basis through activities such as small-group instruction, group projects, and individual tutoring. Some implementations have substantial face-to-face support, and others have minimal’.


Appendix II. Teach-a-Class Monitoring Tool



Appendix III. Example of M&E for Zaya

Source: Gray Matters India assessment performed in February, 2016



Areas Tested	
	<div> Subject Tested </div>
	<div> Different Strands Tested </div>
	<div> English – Reading Comprehension </div>
	<div> Mathematics </div>
<div> Subjects Tested </div>	<div> Science </div>
	<div> 1. English </div>
	<div> 2. Mathematics </div>
	<div> 3. Science </div>

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