CAMBRIDGE

Implementing grassroots reform: ZIIEI evaluation report

A summary of qualitative research on stakeholder perceptions on the Zero Investment Innovations for Education Initiatives (ZIIEI) programme

TRANSFORMING SOCIETIES THROUGH EDUCATION

CAMBRIDGE

Implementing grassroots reform: ZIIEI evaluation report

A summary of qualitative research on stakeholder perceptions on the Zero Investment Innovations for Education Initiatives (ZIIEI) programme

November 2020

TRANSFORMING SOCIETIES THROUGH EDUCATION

Transforming societies through education

Contents

Executive summary

India has one of the world's largest and most diverse education systems. It operates on massive scale with complex systems of governance, high levels of inequality, and persistent local issues. This presents some fundamental challenges to improving system-wide educational outcomes.

The Zero Investment Innovations in Education Initiatives (ZIIEI) programme is a grass-roots approach designed to support teachers in schools with little to no resources. It is intended to empower teachers to identify low or no cost solutions to local issues unaddressed by national policy, and develop a community of shared best practice.

In 2019 Cambridge University Press conducted qualitative research with a sample of different stakeholders in the ZIIEI programme to answer two key questions:

1. How do different stakeholders perceive the ZIIEI initiative's aims and its conception of innovation?
2. What are the critical features (strengths and weaknesses) of the process of implementation of the ZIIEI initiative, as perceived by the different stakeholders?

There is no systematic research or evaluation study looking at the 'quality' of this initiative through the lens of those who conceptualise, facilitate and participate in it. This research report attempts to fill that gap by taking an in-depth qualitative approach to understand 'how' the initiative works and functions within the state system.

Summary highlights

Impact

There is overwhelming evidence of ZIIEI's positive socio-educational, organisational and personal impact. Features highlighted by this research include:

- Learning is more aligned with learner needs.
- The teaching workforce is more motivated, confident, and respected.
- The programme helps develop parental engagement and build communities.
- The programme helps to narrow the gap between government and private school provisions.
- Improved reflective practice, as well as the identification and sharing of best practice.

Evaluation of strengths

The ZIIEI programme's strengths, as identified by stakeholders, include:

- Mass movement, bottom-up grassroots approach
- Changed mindsets
- Vision aligned at all levels, shared by all stakeholders

- Zero monetary investment at the ground level; optimisation of resources
- Professionalised teaching force
- Wide-spread show of respect, offer of appreciation and recognition to teachers
- Created a platform and network on social media for teachers
- Fosters collaboration among all stakeholders

One of the emerging strengths is the remarkable level of consistency between the stakeholder groups in the understanding of the ZIIEI programme. This indicates both clear communication and a well-understood message, which has proven particularly effective in such a complex context.

Remaining challenges and opportunities for growth

The stakeholders also identified a number of challenges and opportunities for growth. The areas identified include improving implementation through technology, securing buy-in and support from government and for-profit organisations, extending pedagogical and financial scope, and further enhancing capacity building.

The ongoing sustainability of the ZIIEI programme is a key theme, in particular securing finance from donors and international funders, measuring impact and quality, ensuring continuous improvement, and managing changes of government, bureaucracy or curriculum.

A notable opportunity may be the suitability for the ZIIEI programme to be adopted in countries with a similar context.

Overview of ZIIEI

> *As a teacher myself, I am certain that the key to unlocking solutions for long-standing problems in education lies primarily with teachers. A strong network of energised teachers, principals and administrators mobilised to take innovation as a route to solutions can create a wave of positive changes in the education system.*
>
> Shri Ramesh Pokhriyal 'Nishank', Hon'ble Minister MHRD[1]

Zero Investment Innovations for Education Initiatives (ZIIEI) is an educational initiative conceptualised as a mass teacher outreach programme and started by the Sri Aurobindo Society (SAS) (www.aurosociety.org) in 2015 under its nation-wide education reform programme Rupantar[2].

In India, ZIIEI is an attempt to develop sustainable and large-scale interventions that can improve the quality of education with minimum investment by the state. It works alongside state players, rather than replacing them. The defining feature of the ZIIEI programme is that it takes a grassroots approach as opposed to a top-down policy change, which is typically the norm in India and other developing countries (Dyer, 1999; Chand, 2006).

Typically, grassroots organizations are engaged in needs-driven activities, and are defined as

> self-organized groups of individuals pursuing common interests through volunteer-based, non-profit organizations, that usually have a low degree of formality but a broader purpose than issue-based self-help groups, community-based organizations or neighborhood associations.[3]

From its inception in 2015, the initiative has reached 30 states/UTs as of March 2020:

> Currently, about 20 lakh [2.0 million] teachers and principals in over 6 lakh [600,000] schools are being connected through Rupantar to improve education using existing resources, impacting 80 million students in 30 states/UTs of the country. However, our true progress lies not in numbers but in individuals.[4]

In academic year 2019-20, 86% of teachers surveyed showed positive intent to implement ideas from the ZIIEI programme[5]. In addition, research conducted in 2019, 93% of participants felt that the ZIIEI training had improved their knowledge of their role as agents of change in society[6].

The ZIIEI programme has three key aims: teacher development, innovation, and collaboration to improve the quality of education. It sees teachers as agents of action, who by sharing 'ideas and

[1]https://openthemagazine.com/columns/%EF%BB%BFwho-will-drive-innovation-in-the-education-sector/
[2]https://rupantar.in/who-we-are/
[3]https://webgate.ec.europa.eu/fpfis/mwikis/aidco/index.php/Grassroots_organization
[4]http://ziiei.com/impact/
[5]Data provided by ZIIEI
[6]KPMG, 2019

practices that work', will contribute to transforming education, and the improvement of teaching and learning. Claims that have been made about the ZIIEI programme are as follows:

Features:

- Promotes innovations that require zero or minimal monetary investment.
- Focuses on leveraging existing resources and infrastructure.
- Ideas 'improve' an existing system or process.
- Systematic documentation of best practices.

Development Impacts of ZIIEI:

- Improve learning outcomes and reduce/decrease learning gaps.
- Create enquiry-led self-learning environment.
- Increase parents' involvement in their child's education.
- Improve student enrolment and reduce drop-out rate.
- Inculcate deeper human values and nurture happy, confident human beings.
- Improve motivation levels among teachers.
- Equip teachers to deliver high quality education.

Recent research has found that teachers under the ZIIEI programme demonstrate higher motivation and greater self-efficacy and 95% of teachers report improvements in student learning and engagement[7].

Central to ZIIEI's notion of innovation is that teachers who know the challenges in their job context are best placed to offer solutions for them. The state often does not have the resources to deploy solutions for local problems. Teachers can produce micro-innovations where no or only low investment is required. Experience shows that centrally created innovations do not seem to find solutions to small but tenacious local problems.

As Shri Venkaiah Naidu, Hon'ble Vice President of India, describes the programme: 'Teachers lead students on the path of becoming self awaked and self-reliant. I am glad to know that Sri Aurobindo Society's education initiative ZIIEI is giving the confidence to the teachers to experiment with new ideas.'

A key feature of the ZIIEI programme is the process of collecting ideas from teachers of practices that work, and sharing the best of these amongst other teachers. In the academic year 2019-20, 363,843 teachers shared ideas, and 390,688 teachers accessed teaching ideas through ZIIEI[8].

All the ideas submitted by the teachers are evaluated by the ZIIEI team and the ones that have potential are shortlisted. The selected ideas are then converted into case studies and published annually in a state-wide Innovation Handbook (called Navachar Pustika). Teachers contributing the shortlisted ideas have their work acknowledged at the state level. In research conducted in 2019, 73%

[7]Ibid
[8]Data provided by ZIIEI

of the sample of teachers who were using the Navachar Pustika reported that it had supported their efforts to a very large extent[9].

The ZIIEI team then creates detailed lesson plans for each chapter of the student books published by the National Council for Education Research and Training (NCERT) and State Boards. These lesson plans are vetted and published as part of Innovative Pathshaala (Innovative Curriculum) and published as 'an everyday companion for achieving better learning outcomes'. By 2019-20, 43,535 Innovative Pathshaala activities had been developed from ideas submitted by teachers and the Innovative Pathshaala app had been downloaded more than 2 million times[10].

Each participating school is required to implement at least one of the case studies and send signed photographic evidence of the implementation. Teachers are trained on how to use the lesson plans in the Innovative Pathshaala in their respective schools.

Discussion of the ZIIEI programme

Recent analysis by Ernst & Young[11] identified a number of programmes operating in India, globally, or in other locations. These include STiR Education, the Azim Premji Foundation, the Kaivalya Education Foundation, HundrED, Let Teachers Shine, and The Centre for Teaching Quality. The programmes analysed featured elements of teacher training as well as the sharing of teacher-developed innovations. However, ZIIEI is by far the largest programme in terms of the number of teachers receiving support and the number of states in India in which the programme directly operates.

In academic year 2019-20, 363,843 teachers trained through the ZIIEI programme had submitted teaching ideas. These teaching ideas are passed through a set of selection criteria, with the best ideas curated through the Innovative Pathshaala programme. In the same year, 43,535 teaching ideas were developed into activities for Innovative Pathshaala – a selection of 1 teaching idea for roughly every 9 submitted. However, since there is a significant gap between teachers willing to implement ideas in the classroom (390,688) and teachers who implemented ideas in the classroom (57,193) there are questions that remain to be considered around the barriers to more widespread implementation. Barriers may include teacher workload, lack of support from principals, the selection process, and the ease with which teachers can find teaching ideas relevant to their needs.

Scale is undoubtedly one of the ZIIEI programme's key strengths. It is unmatched by its peers in its scope to provide direct teacher training, preserving quality and consistency by avoiding the use of cascade models. ZIIEI conducts school visits and provides call-centre support for teachers, as well as the curation and dissemination of teaching ideas mentioned above. Naturally, scale of this kind requires a larger organisation; ZIIEI employs 420 staff split between programme and support functions.

However, ZIIEI's operation is able to take advantage of economies of scale. The cost of delivering training is just INR 120 (US$ 1.64) per teacher. However, despite this efficiency, ZIIEI's financial model is perhaps its key weakness. The ZIIEI programme is presently funded by one donor – HDFC Bank – which places a high degree of financial risk on a programme that delivers a high return on investment. Diversification of funding sources will be necessary to ensure that ZIIEI is able to continue its mission.

[9] KPMG, 2019
[10] Data provided by ZIIEI
[11] Earnst & Young, 2020

Evaluation of ZIIEI

To understand the 'quality' of the ZIIEI intervention, this small-scale research study explores perceptions of the different stakeholders involved in the initiative. It is well known that often policy which is brought in top-down, without engagement of the stakeholders who are to implement them, causes resistance and ultimately rejection of those policies (Cuban, 2003; Fullan, 2006). The engagement and participation of stakeholders before and during implementation is therefore critical. Further, ZIIEI challenges the conventional notions of innovation, by fore-fronting grassroots level micro-innovations, making the stakeholders central to the initiative.

To understand 'success' of any initiative it thus becomes imperative to hear voices of those who are ultimately engaged in implementing the intervention at the ground level. This study focuses on the voices of the stakeholders who have engaged with the ZIIEI initiative, to understand how they understand the initiative and its aims; especially the initiative's conceptualisation of the notion of 'innovation'.

Research conducted by KPMG[12] identified that 93% of teachers felt that the ZIIEI orientation programme has helped them in understanding the ZIIEI innovative ideas and their implementation. This indicates that there is a high level of awareness within one set of stakeholders, but the research activity conducted by Cambridge set out to understand how consistently the ZIIEI definition of 'innovation' was understood within and between stakeholder groups.

ZIIEI and its stakeholders

ZIIEI is a holistic initiative which complements the state system, by engaging with different stakeholders at different levels of its implementation design. This study addresses stakeholders at different levels of the initiative. This includes the *participants*: teachers and principals at school level, and education officers and Block Education Officer at the district level; *facilitators*: the trainers and the government education officials/bureaucrats; and finally, the *conceptualisers*: members of the ZIIEI team who have been critical to the conceptualisation of this initiative.

While the study uses these three categorisations of stakeholders it is important to note two things:

- First, the initiative essentially believes that there is no hierarchy to these different stakeholders (participants, facilitators or conceptualisers). While the participants are state players, and the facilitators and conceptualisers are representatives of the initiative, the relationship is viewed as a partnership, rather than a hierarchy.
- Second, the movement of the 'idea/innovation' of the initiative is not a unidirectional move from the conceptualiser, through the facilitator to the participants. The programme follows a rather cyclical movement as shown in the ZIIEI model (see Figure 1), where ideas or 'micro-innovations' from the participants feed back into the system. However, these three groups of stakeholders are crucial to delineate since they function within different systems (state and ZIIEI) and have different roles within the initiative.

These two key elements are neatly summarised by Shri Vijayendrapal Singh Badnore, Hon'ble Governor, Punjab & Administrator, U.T. Chandigarh: 'Sri Aurobindo Society's Zero Investment Innovation for Education Initiatives (ZIIEI) is a great example of how big change can happen through small, simple ideas.'

[12] KPMG, 2019

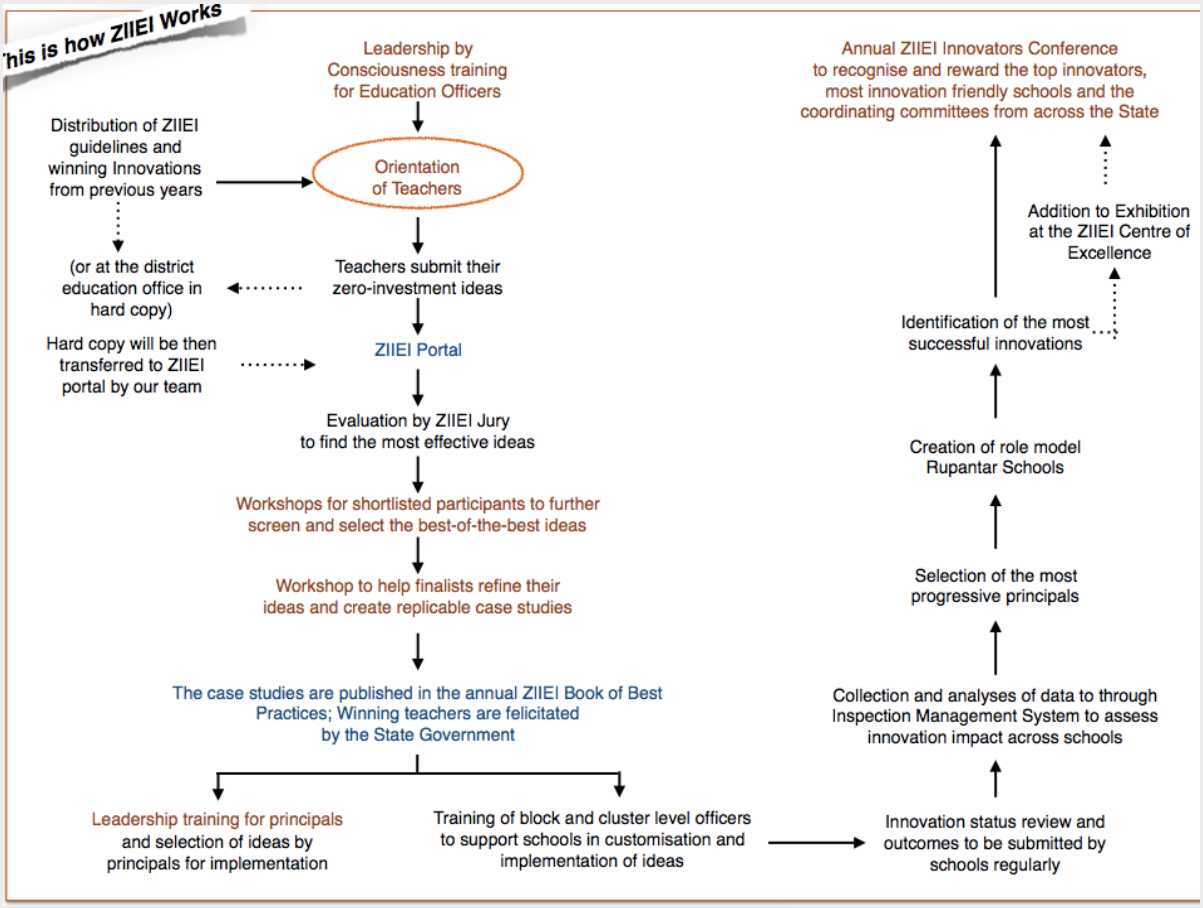


Figure 1: Structure of the ZIIEI initiative, ZIIEI implementation process diagram/flowchart

Literature review

To understand the 'quality' of the intervention, this small-scale research study explores perceptions of the different stakeholders involved in the initiative. It is, then, vital to understand the context of education and recent reform initiatives in India, a country unique for the massive scale and diversity of its education system.

Education in India

Understanding the education policy environment in India involves also understanding the very specific challenges of education provision that India faces, and the governmental structures and institutions that are in place to deal with them. The total population of India is estimated to be close to 1.37 billion in 2019, with the most recent breakdowns showing that a little over 370 million people are aged 14 and younger, and that approximately 300 million of them are in primary and secondary education (MHRD, 2018, p.4). The scale of education need therefore dwarfs that of most other jurisdictions, and presents a very specific challenge to policy-making that means that lessons from the global and comparative education community must be applied selectively, and the cause and effect of education interventions in India may be particularly challenging to learn from. As one recent researcher characterised the issue: '[a] small, but profound, indication of scale is the fact that the number of primary schools in India is far higher than the total number of students in Finland' (Singal, 2019, p.827).

The system faces longstanding problems around enrolment, retention, and completion, particularly for those from disadvantaged social groups: for instance, some data suggest that as many as 43% of the poorest quintile of students are out-of-school at the secondary level (EPDC, 2018). However, analyses of the Indian education system and its performance are increasingly pointing out that issues surrounding access are not the only problem. Inequalities in enrolment across spectrums of socioeconomic grouping, caste, religion, ethnicity and region have translated into equivalent inequalities in students' performance and learning, and attendance at school is no longer a sufficient guarantee that learning is taking place, and that the objectives for students leaving school have been attained. A recent evaluation of the secondary education system characterised the challenge thus: 'policymakers need to address the dual challenge of increasing the quantity of education and maintaining high quality of education' (Jain & Prasad, 2018, p.1).

These difficulties are not only in spite of the execution of many significant, well-resourced and often impactful large-scale reforms, but also the demand for high-quality education from the Indian population. One of the persistent challenges to successful education policy in India is born out of the scale of the system. This has necessitated a degree of local governance over education, usually concentrated at the state level. States are expected to administer the public education system in their states (as well as having significant control over regulation of the private sector), and are given the budgetary resources necessary to do so as well: in 2017-18 approximately 85% of total education expenditure in India was at the state level.

The outcomes of this division of political and administrative control are, to some extent, an exacerbation of existing regional inequalities and diversity. The varieties in performance of the different states in a number of human development indices are well-documented, and have been shown to persist over very long timeframes (e.g. Behera, 2017). More sophisticated inter-state comparisons of education metrics also find that over the last few decades the responses of different states to reform initiatives have produced widely varied levels of improvement in outcomes, suggesting that even

regression to the mean within overall upwards trends may not be occurring (Asadullah & Yalonetzky, 2012). Recent years have also seen substantial underspending by regional governments, suggesting inefficiencies in how state-level administration of education is delivered (Bose, Ghosh & Sardana, 2017).

As approaches to education reform have varied according to state governmental leadership, creating variations in the system, the general direction of policy has also tended towards diversification of provision. Generally, government responses to public demand for more and better schooling since the 1990s have produced, both through increased investment in public education and the expansion of private sector supply through deregulation (Johnson & Bowles, 2010), a highly refracted schooling system, split across the public and private sectors. In some cases this refracted – but still broader – landscape of school provision has offered improvements in terms of access and equity by increasing the immediate availability of schools to populations who previously lacked them (Ramachandran 2004). However, the longer-lasting impact of this change has been that the variety of schools available have come to mirror and then reinforce existing social hierarchies and inequalities (Hill, Samson & Dasgupta, 2011; Mukhopadhyay & Sarangapani, 2018).

This variety in the existent education systems, political initiatives and aims, and demography of students in the different states, has led to the view that national policymaking is too distant from delivery, and to scepticism about the capacity of the national government to have much impact on education delivery at the 'front line'. For example, in response to the recent launch of the new Draft National Education Policy (DNEP) in 2019 (subsequently adopted in 2020 as the New Education Policy (NEP)), some observers questioned both the institutional capacity for the national government to put in place the increase in expenditure required, and their ability to direct state-level administration to align itself to the aims of the policy (e.g. Redden, 2019). However, in spite of these variations between states, and between public and private schools, efforts at standardisation and coherent, universal policy implementation can be identified.

The next section looks specifically at the national policy landscape through two national-level policies. However, other mechanisms of national-level education delivery and alignment are present, aimed at standardisation and the attainment of particular consistent standards across all state-level systems. This includes a variety of autonomous statutory bodies adjacent to the Ministry of Human Resource Development and other arms of government, including the Central Advisory Board of Education (CABE) and the National Council for Teacher Education (NCTE).

However, most significant amongst these for primary and secondary education is the National Council of Educational Research and Training (NCERT). NCERT's role is to progress education policy and practice in India, but they are also responsible for the development of official syllabi, textbooks, and other teaching and learning materials, aligned to a key piece of policy (that they are also involved in preparing), the National Curriculum Framework (NCF). The current iteration was created in 2005, but through the adoption of the DNEP, the NCF will be revised in 2020 by NCERT in accordance with the new curricular priorities outlined in the Policy. Creation of the framework, and the development of materials to support it, is carried out in conjunction with equivalent regional bodies (State Council of Educational Research and Training – SCERTs) and, further down the chain of command, local District Institutes of Education and Training (DIETs), which primarily hold responsibility for pre- and in-service training of teachers, but which also act on other policy implementations.

The preparation of textbooks is one of the areas where the often unclear balance of power and influence between national and state-level entities is manifest. The DNEP instructs NCERT to create 'core material' matching the curriculum, and requires SCERTs to prepare the textbooks, but outlines a loose articulation of these two processes to facilitate 'local variations'. SCERT-prepared textbooks shall contain:

> ‘a. NCERT core material;
>
> b. Any NCERT supplementary material deemed of interest to the State; and
>
> c. Any other material and edits prepared by SCERT or local districts that add local relevance and flavor as needed or desired…
>
> …After review, SCERTs may simply adopt NCERT textbook material, consisting of core national material, and supplementary material as chosen by the State, when no further modifications are necessary for the local context.’ (MHRD, 2019, p.102)

This effort at creating accountability at different levels through decentralisation under national frameworks, and flexibility to respond to the different education requirements in each state, allows for contextualisation. The usage of official NCERT textbooks, however, may be as low as just 15% amongst school-age students, as SCERTS are able to use private sector-published resources fairly freely (Kumar, 2011; Syeed 2018, p.543). Division of responsibility can also generate confusions between NCERT, SCERTs and DIETs, and lead to yet further diversification of outcomes such as teacher quality (Dyer 2005). The DNEP aims towards a number of laudable aspirations for the Indian education system as a whole, but the evidence suggests that the institutions tasked for achieving these aims may not wield sufficient power to put them into practice.

National Policy Landscape

This section examines two previous large-scale reforms, and evaluates their reach and impact.

Sarva Shiksha Abhiyan (SSA)

Since 2000, education reform in India has been oriented at the highest level by two key policies. The first of these was the ‘Sarva Shiksha Abhiyan’ (SSA), or Education for All Movement. SSA was initiated in 2000 but first led to implemented policies and interventions in 2002. The key focus of the policy was access: according the government’s own evaluation of SSA: ‘[d]espite decades of educational reform … it was realized that a vast majority of children were still out of the educational stream and efforts made by the states were insufficient to achieve universal elementary education’ (Planning Commission, 2010, p.i). The constitutional right of universal primary education was not being met, and SSA’s objective was to dramatically expand and improve the elementary-level education across the country. The stated aim was the education of ‘all children in the 6–14 age group by 2010, and to bridge social, regional and gender gaps with the active participation of the community in the management of schools’ (Jain & Mital, 2011, p.16).

Evaluating the effects of a reform at this large national scale and over a long period of implementation proved a challenge. Initially, researchers struggled to access data and link it to the implementation of SSA, although as the maturity of the National Council for Educational Research and Training’s (NCERT) National Achievement Survey (NAS) has developed, better data has become available. Total funding for SSA between 2000 and 2011 totalled Rs.76388 crore (£8.66 billion), though despite this significant expenditure, those examining its legacy still find it difficult to identify and analyse data about the effect it has had (Jain & Mital, 2011, p.17).

Consensus around the impact of SSA is that it contributed to an undoubted trend towards greater access for elementary level students throughout the programme’s implementation phase, but very few studies were without reservations about the positive impact. The initial SSA implementation period saw a drop in the number of out-of-school students by almost two-thirds between 2002 and 2009 (Ward, 2011, p.554). Other assessments note that the programme had achieved notable success in

reducing dropout rates, but that constructive and sustainable developments, such as teacher training and infrastructure improvements (Das, 2007) and community engagement (Rao, 2009), had not made sufficient progress. A key concern is the persistence of very high variability between the outcomes in different states, a trend that continues in the latest data (Kapur et al., 2018, pp.11-12). It seems that more granular problems and inequalities have persisted, suggesting the reach of programmes such as SSA have their limitations. Michael Ward summarises that 'significant challenges remain and the programme must now successfully target the hardest to reach children, solve persistent problems such as poor teacher and student attendance and high levels of dropout and further improve the quality of elementary education' (Ward, 2011, p.554.)

Right to Education Act (RTE)

The second of the two flagship education policies of the last twenty years is the 2009 Right to Education Act (RTE). The core feature of the Act is to make education a fundamental right of every child between the ages of 6 and 14, and to specify minimum norms in elementary schools. Additionally, a number of provisions in the Act strengthen the legal requirements placed on different actors, including the government, to ensure children are attending schools of sufficient quality. In 2011, the coverage of the Act extended the right to education up to age 16, and downwards into pre-school provision.

The articulation between the SSA and the RTE requires examination, as the two are linked in popular and professional perceptions: '[w]ith the passing of the RTE Act, the SSA is now conceptualised as the vehicle for implementing the Act. This is a fundamental shift, as the RTE Act is a legal framework, and its provisions for free and compulsory elementary education are legally enforceable matters of law' (Srivastava et al., 2013, p.49). This has had the effect of perpetuating and extending the objectives of the SSA, but has strengthened the onus on the government to deliver them.

Literature on the implementation and impact of the RTE Act initially focussed on the scale of the challenge facing Indian education, and the practical and financial barriers it would face in accomplishing the aims it had set out (Jain & Dholakia, 2009; Reddy & Sinha 2010). In part because of the more stringent requirements placed on the state to deliver the aims of the RTE Act, monitoring and data gathering has improved since in the SSA era, and more analysis is available on its effects.

Unfortunately, the data has suggested a very similar story to that experienced by the SSA, in that improvements, mostly in access, are eclipsed by intractable problems or inequalities between different places: '[t]he right to education is still a mirage in a number of cities and towns. Though enrolment rates have improved, learning outcomes have not shown much progress' (Singh & Ramaswamy, 2016, p.2). One paper posits that these two effects are related, with additional enrolment leading to overcrowding and strains on the capacity of the system (Shah & Steinberg, 2019, p.239). More stringent criticism of the Act has targeted the restructuring effect it has had on the balance between public and private schooling sectors in certain places, where efforts to promote equity have instead had the effect of reducing system-wide capacity (Iyer & Counihan, 2018).

What is striking about findings on the effects of the RTE Act is that negative impacts seem to affect almost all areas of education, with the exception of enrolment. One holistic study (Kumar et al., 2019) of different metrics of education system performance and learning outcomes identified a widening of inequality along gender, socio-economic, rural-urban and religious lines, concluding that efforts at universalising elementary education have instead entrenched existing inequities. Quality of learning and the particularisation of reforms for different contexts are identified as key areas for improvement in the implementation of programmes to enact the RTE Act (Singh & Ramaswamy, 2016, pp.29-30), addressing shortfalls that have been common to both the SSA and RTE. Other domains required for improvement include additional education budget, the provision of modern teaching–learning infrastructure, and improved pedagogy with teacher training (Kumar et al., 2019, p.109).

Teacher Training Policies

The SSA reform contains multiple provisions around teacher training, and built on the establishment a decade earlier of the network of roughly 200 District Institutes of Education and Training (DIETs) set up around the country to facilitate teacher training, both pre- and in-service. The specific provisions included funding for additional teachers and new approaches to resourcing to deploy teachers more effectively, as well as providing extensive training and grants for developing teaching-learning materials. Similarly, the RTE Act has been noted to have a range of impacts specifically on teacher training and management, covering specifications for teacher policy in a number of areas: '[t]he Right to Education Act specifies acceptable pupil-teacher ratios, levels of teacher vacancy in the school, qualifications required for teacher appointments, and terms and conditions for teacher hiring' (Chudgar, 2013, p.55).

As with NCERT's responsibility for textbook and curriculum governance, teaching and teacher training is overseen by the National Council for Teacher Education (NCTE). While the involvement of the NCTE in implementing the additional resourcing of teacher training under the SSA was often indirect, they have taken significant responsibility in enforcing some of the requirements of the RTE Act, including ensuring that standards are met by state governments in recruitment of teachers. The NCTE is responsible for defining the minimum qualifications necessary to become a teacher, which are then translated into the 'Teacher Eligibility Test' (TET), an assessment administered by state-level governments to teachers graduating within their jurisdiction. This policy approach mirrors that for NCERT, in that the NCTE sets the overarching framework to ensure standardisation, but state-level governments are responsible for executing it.

However, the success rates of teachers taking the TET vary hugely across time and in different jurisdictions, with some states having pass rates of just 1%, and the TET itself coming in for criticism for failing to assess pedagogy sufficiently and instead being overly-focussed on subject knowledge (Perryman, Buckler & Seal, 2014, p.5). The minimum qualifications the NCTE require can vary over time, and it is not infrequent for under-supply of teachers in a given jurisdiction to be blamed either on over-exacting or unrealistic standards for recruitment, or the below-standard teacher training facilities (e.g. Kohli, 2015). Recent reporting suggests that the mismatch of standards and expectations on numbers and quality of teachers is leading to significant under-spending and inefficiencies in a number of institutions designed to provide teachers to state systems (Kundu, 2019). Teacher training policy over the last 20 years offers a similar story to other areas of reform of education in India, in which the intentions and aims of national-level programmes clash with the realities and diversity of delivery in India's highly heterogeneous education system (Chudgar, 2013).

Summary of findings from the literature review

In summary, the key areas of improvement identified by research reviewed above are

- quality of learning
- the particularisation of reforms for different contexts (Singh & Ramaswamy, 2016, pp.29-30)
- the provision of modern teaching–learning infrastructure
- improved pedagogy with teacher training (Kumar et al., 2019, p.109)

The following evaluation of the ZIIEI programme will consider whether the initiative has been successful in driving change in the above areas according to its key stakeholders.

Findings

In this section, we outline the findings to the original research questions:

1. How do the different stakeholders perceive the ZIIEI *initiative's aims* and its conception of innovation?
2. What are the critical features (strengths and weaknesses) of the *process of implementation* of the ZIIEI initiative, as perceived by the different stakeholders?

Research Question 1a: Aims

The research found remarkable similarity in perceptions of the aims of the programme among all stakeholders. Within that unity of vision and mission shared by all stakeholders, trainers' thoughts were closest aligned to that of ZIIEI designers'.

ZIIEI's aims, as perceived by stakeholders, are to:

- Bring about transformation in education to improve quality of teaching and student learning by promoting self-improvement and continuous professional development
- Reconsider old pedagogical methods and think of new ideas to solve every-day problems in education within existing resources and structures
- Document and share best practices across the entire country
- Show appreciation of the teaching profession by identifying and recognising teaching talent.

Research Question 1b: Concept of innovation

Again, there is a large overlap in different stakeholders' notion of ZIIEI's concept of innovation. Interestingly, here designers and implementers (ZIIEI members and teachers) are closest in their thinking: they share the same view of innovation as problem solving to improve student learning. Government officials and principals focus on the need to do things differently with no or minimal cost. Trainers and teachers stress the need to adapt to a changing environment, and also to achieve benefits beyond the school, that is, to extend benefits to the home, community and nation.

Next, we take each stakeholder group and list their view of innovation.

ZIIEI designers' concept of innovation centres around delivering quality education with improved outcomes for all society. This includes:

- problem solving: finding solutions to multiple types of problems teachers face (including infrastructure, knowledge, pedagogy, administrative issues, curriculum, attitude, resources, workload, community)
- reflective teaching: a continuous process involving teacher reflection on pedagogy to unlock student potential, reaching out to each and every child (children with different needs and different learning levels)

- change in pedagogical practice: (re)inventing methods in teaching, reversing traditional processes, rewriting existing ways, finding new ways of doing things
- making learning easier/more effective for the students, creating a joyful learning environment
- upscaling: innovations which can be used for multiple concepts, curricular, co-curricular and extra-curricular activities
- looking beyond the classroom, using locally available resources: the community, technology, environment
- extended community participation (daily attendance, enrolment, girl education, dropout, etc.)
- in summary: any effort to improve quality of education, in other word, to bring about a transformation in education.

Government officials' concept of innovation involves innovative ways of delivering better results with no financial implications. It includes:

- up-cycling: new practices by teachers using resources available to them at minimal cost
- teacher autonomy: teachers not following any curricular or methodological guidelines, instead teaching the way they want
- experiential learning: being practical and connecting learning to day-to-day life.

Principals' concept of innovation is related to the low or no cost and nature of innovative teaching practices. They perceive teaching in a different way as innovative if it manages to attract students, using out-of-the-box thinking to provide joyful learning.

Trainers' concept of innovation focuses on getting teachers to reflect on the impact of existing methods and finding the best practices, methods, tools that can be used to adapt to new challenges and situations in a fast-changing environment. Trainers think innovation is transforming what is taught and how, for instance, including life skills and improving the student attitude to learning.

Teachers as a group and as individuals have a very clear idea of the concept of innovation. They emphasize that different challenges require different solutions. For them, any new technique, idea or method is innovative if it makes learning more joyful, learner-centred, effective, inclusive, and responsive to learners' needs and interests, and if its impact goes beyond the classroom and reaches the home, community and nation. Teachers are aware that they have to fulfil increased learner expectations and meet various challenges of technology.

Teachers view ZIIEI's concept of innovation very positively. They think the ZIIEI programme is innovative because it has managed to disseminate simple, easy-to-implement, transferrable ideas with zero investment across the whole nation. Teachers appreciate the new focus on joyful, experiential learning rather than learning by rote. They think the new focus on joyful, experiential learning drives behavioural change and moral values. They relish the idea that teachers can be agents of change.

Research Question 2a: Results/achievements

Benefits of the ZIIEI programme as perceived by stakeholders include the following:

1. learning is more effective and teaching is better aligned with learner needs
2. the teaching workforce is more motivated, confident and respected
3. the programme promotes equity, narrowing the gap between government and private school provisions
4. it has improved student admission, enrolment, participation and attendance, and reduced dropout

5. it promotes a broader perspective, an ability to adapt to new challenges, out-of-the-box thinking for all participants
6. it provides a model of problem solving to trainers, teachers, students, and parents with the application of learning to real-life problems
7. it fosters desirable competencies: such as curiosity, scientific orientation, thinking and reasoning skills, creativity, cooperation, leadership, self-awareness, empathy, environmentally conscious practices, healthy living, moral values, citizenship roles and responsibilities
8. it has increased parent interest and involvement in children's education
9. it has encouraged engagement, collaboration and healthy competition among all stakeholders
10. it helps in community participation, donations, nation building activities
11. it has been successfully implemented with the creation of:
    a. technology and IT infrastructure: a simple, easy, flexible and formal system of collecting, sharing and adapting best innovative practices
    b. easily accessible resources: teacher manuals/booklets and lesson plans
12. it has managed and documented change - both its benefits and challenges
13. it has wide reach and sustainable growth: represents a continuous process of (r)evolution, vertical and horizontal growth
14. it has a positive impact on future generations, on education and economy
15. it is replicable in other industries, or globally.

The ZIIEI programme's strengths, as identified by stakeholders, include:

- mass movement, bottom-up grassroots approach
- changed thinking on what innovation is
- vision aligned at all levels, shared by all stakeholders
- zero monetary investment at the ground level: optimisation of resources
- professionalization of the teaching profession
- wide-spread show of respect, offer of appreciation and recognition to teachers
- changed mindsets, has brought out the best from all participants, released the imagination, let professionals practice and celebrate the art of the possible
- created a platform and network on social media for teachers
- fosters collaboration among all stakeholders.

Research question 2b: Weaknesses and remaining challenges

Stakeholders have identified some weaknesses and remaining challenges. There is a need to:

1. improve implementation by:
    a. making it even more motivational
    b. using technology:
        i. make the teacher management cycle self-running to reduce costs
        ii. more efficient to reduce administration load for teachers, principals, trainers
2. provide opportunities for follow-up to improve implementation
3. secure buy-in and support from government and for-profit organisations for their respective value added (e.g. to further reduce teachers' workload and sponsorship)
4. extend pedagogical and financial scope: include new content (e.g. moral values, nation building, playway method, environment) as well as low cost innovative ideas
5. enhance capacity building
6. encourage creativity in teaching as well as management, administration, policy making and other education-related practices
7. enhance training for trainers, school leaders, new generations of teachers
8. employ more trainers to improve trainers-to-teachers ratio

9. run impact studies: e.g. measure quality of innovations
10. curriculum renewal: keep best of curriculum, discard out-dated obsolete aspects
11. based on insights and lessons learnt from the pilot, figure out issues, adopt new strategies and improve implementation
12. ensure continuous improvement and sustainability at all levels of the programme
13. allow time to reflect upon achievements
14. find donors and international funders:
    a. to improve the sustainability of the programme
15. find solution to talent retention
16. meet upcoming challenges of change of government, bureaucracy or curriculum.

The remaining challenges listed above indicate opportunities for reflection for all participants and provide indicators for lessons learnt.

Conclusion

The ZIIEI programme has been conceptualized and initiated by Sri Aurobindo Society, an NGO, supported by locations of power such as state government agencies, and acted upon by teachers and principals. The aim is to empower the teaching profession and local communities towards establishing control over their affairs and overcome challenges they face. It enables local actors to identify what needs changing and how to go about the change. It legitimizes autonomous initiatives within schools and communities. Essentially, ZIIEI is a bottom-up approach to create social opportunities and transform functionings into capabilities where 'the former [is] about the things a person does and the latter about the things a person is substantively free to do' (Amartya Sen 1999: 75).

Evidence of the programme's impact is growing. As observed by Shri Banwarilal Purohit, Hon'ble Governor, Tamil Nadu: 'The improvements in attendance, enrolment and learning outcomes that are becoming evident in other states where ZIIEI is operational are proof that today's solutions by teachers can be a game-changing factor in education.'

This study has highlighted the importance of understanding the needs, motivations and opinions of stakeholders of grassroots initiatives through consultation and analysis. The views expressed have pointed to the vital centrality of local acceptance and sense of ownership, and the need to work with all stakeholders involved (designers and implementers) who share a common goal. In the case of the ZIIEI programme, the ultimate goal is develop a more self-reliant, effective, responsive and inspiring educational ecosystem.

The success of the ZIIEI initiative seems to be in its focus on encouraging and enabling the voicing of local needs, tackling local problems, and advancing local interests. The initiative has proven that it can lead to adequate adjustment of practices, identifying best practices and enabling and ensuring their large-scale adaptation and implementation. The programme has been highly successful at creating 'teacher learning communities' to discuss, try out, and evaluate techniques for themselves. Clearly, this is a form of professional self-development, centred around innovating with teaching, learning and assessment practices.

As observed by Smt. Anandiben Patel, Hon'ble Former Governor, Madhya Pradesh and Current Governor, Uttar Pradesh: 'By providing a platform for teacher empowerment, ZIIEI has started a movement.'

Lessons learnt from ZIIEI

As a result of analysis, the following success criteria can be identified, listing conditions under which grassroots initiatives similar to ZIIEI might flourish:

1. official support at government/state level (e.g. permission, releasing human resources)
2. realistic aims, with a clear idea of challenges
3. sensitivity to contextual differences
4. a shared vision (clear goals and specified aims accepted by all stakeholders)
5. achieving buy-in, convincing all stakeholders to engage
6. provision of training (for teachers, principals, trainers, education officers)
7. developing and maintaining communication
8. encouraging strong collaboration
9. ownership of project among all stakeholders

10. mutual respect and support among stakeholders (teachers, principals, trainers, education officers, community, parents)
11. learner-centred, competence-based pedagogical approach, promoting experiential, engaging, joyful, and wilful learning
12. outreach: parental and community involvement, joint effort of all parties involved
13. allowing for
    a. agency: being able to make decisions on matters that are crucial to participants' life
    b. flexibility: accommodating a wide range of interpretations of innovation and uses of innovative ideas, expanding the range of potential applications
14. not being prescriptive of a particular type of action or institutional arrangement.
15. efficient project management
16. developing sufficient expertise and retaining staff
17. systematic monitoring, documentation to improve transparency, quality, continuity.

Educational systems in different countries are surrounded by diverse social, economic, cultural and political systems (e.g. central authority vs decentralized powers). The roles and responsibilities of local actors (principals, teachers) also differ. Because of the contextual nature of the impact of the ZIIEI initiative, no generalisations can be made about the success or otherwise of the approach.

However, the evidence of the extremely positive impact of ZIIEI that has been revealed through this research indicates that there may be potential for the ZIIEI approach to be taken up in other countries with similar conditions to India. If this initiative is to be replicated in other countries or jurisdictions, specific attention needs to be given to the following: the local educational culture, the particular context for change, the roles and responsibilities of teachers and principals, the role of administrative leadership and support, and the nature of interactions among all stakeholders.

Ultimately, the degree to which an initiative such as this can be sustained over time will depend on:

- a strong need to embrace the goal of the project (i.e. in ZIIEI the ultimate goal is facing challenges in education without extra funding), and
- ownership of the project by all stakeholders.

It is imperative to avoid thwarting the grassroots leadership. This can be done by incentivizing it (e.g. by reforming existing rewards structures) and creating a supportive institutional and community culture. It is only then that the desired institutional changes as well as changes in mindsets can be expected to be sustained in the longer term. Organisations and countries interested in adapting the ZIIEI approach need to carefully consider the following requirements of success, grouped in 5 Cs:

- Conditions: keen awareness of socio-political, economic, cultural, educational conditions
- Context: sensitivity to contextual differences
- Commitment: positive response, acceptance and sense of ownership by stakeholders
- Capacity building: strong sense of agency, control and confidence among stakeholders
- Competencies: growing expertise of all stakeholders (pedagogic, training, management, leadership, policy making, etc.)

ZIIEI has achieved the key areas of improvement identified in the literature review earlier in this report. It has

- improved the quality of learning
- particularised reform for different contexts
- provided modern teaching–learning infrastructure
- strengthened pedagogical approaches
- all without financial investment in professional development.

Supplementary annexes to support the implementation of grassroots reform

1. A short summary with debate questions for **classroom debate** and **further research** interests of international social sector institutions
2. A dissemination of the findings and recommendations of this report written for **teachers** in accessible non-academic language and with practical takeaways/considerations
3. A dissemination of the findings and recommendations of this report written for **policymakers** in accessible non-academic language and with practical takeaways/considerations
4. A dissemination that highlights some of the impacts and plaudits for the ZIIEI approach for **international investors and donor organisations interested in CSR** (Corporate Social Responsibility)

Bibliography

ANI (2019). Education has improved in State: Yogi Adityanarth. *ANI*. Retrieved from: https://www.aninews.in/news/national/general-news/education-system-has-improved-in-state-yogi-adityanath20190905230157/

Asadullah, M. N., &Yalonetzky, G. (2012). Inequality of educational opportunity in India: Changes over time and across states. *World Development*, 40(6), 1151-1163

Banerjee, A., Banerji, R., Berry, J., Duflo, E., Kannan, H., Mukherji, S., Shotland, M.& Walton, M. (2016). Mainstreaming an effective intervention: Evidence from randomized evaluations of "Teaching at the Right Level" in India. (No. w22746). *National Bureau of Economic Research*.

Banerji, R. (2015). How do systems respond to disruptive pedagogic innovations? The case of Pratham in Bihar. *RISE Working Paper*, no.15/02

Behera, D.K. (2017). Nature and Intensity of Inter-State Inequality in India: The Post-Reform Experience. *The Journal of Social, Political, and Economic Studies*, 42(1), 3-29

Bose, S., Ghosh, P., &Sardana, A. (2017). Resource requirements for Right to Education (RTE): Normative and the Real. *National Institute of Public Finance and Policy, New Delhi*, Working Paper no. 17/201.

Braun, Virginia and Clarke, Victoria (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2). pp. 77-101.

Chand, V. (Ed.). (2006). Reinventing public service delivery in India: Selected case studies. Sage.

Chowdhury, S.R. (2017). Mergers, segregation, tests: Centre draws up customised roadmap for Uttar Pradesh schools. *Scroll.in*. Retrieved from https://scroll.in/article/845991/mergers-segregation-tests-centre-draws-up-customised-roadmap-for-uttar-pradesh-schools

Chudgar, A. (2013). Teacher Labor Force and Teacher Education in India: An Analysis of a Recent Policy Change and its Potential Implications; in Akiba, M. (ed.) *Teacher Reforms Around the World: Implementations and Outcomes* (International Perspectives on Education and Society, Vol. 19pp.55-76). Emerald Group: Bingley

Das, A. (2007). How Far Have We Come in SarvaSikshaAbhiyan? *Economic and Political Weekly*, 42(1), 21-23.

Dörnyei, Z. (2007). *Research Methods in Applied Linguistics*. Oxford University Press.

Dyer, C. (1999). Researching the implementation of educational policy: A backward mapping approach. *Comparative Education*, 35(1), 45-61.

Dyer, C. (2005). Decentralisation to improve teacher quality? District Institutes of Education and Training in India. *Compare: A Journal of Comparative and International Education*, 35(2), 139-152

EPDC (Education Policy Data Centre). (2018). India National Education Profile 2018. *Education Policy Data Centre*. Retrieved from: https://www.epdc.org/sites/default/files/documents/EPDC_NEP_2018_India.pdf

Hill, E., Samson, M., &Dasgupta, S. (2011). Expanding the school market in India: Parental choice and the reproduction of social inequality. *Economic and political weekly*, 46(35), 98-105

Iyer, G., & Counihan, C. (2018). When a Right Goes Wrong: The Unintended Consequences of India's Right to Education Act. *Economic Affairs*, 38(3), 367-379

Jain, C., & Prasad, N. (2018). *Quality of Secondary Education in India*. Springer.

Jain, P.S., & Dholakia, R.H. (2009). Feasibility of implementation of Right to Education Act. *Economic and Political Weekly*, 38-43

Jain, S., &Mital, M. (2011). Assessment of 'SarvaShikshaAbhiyan' in Sarvodaya Schools of Delhi. *Indian Educational Review*, 49(2), 15-29

Johnson, C., & Bowles, M.T. (2010). Making the grade? Private education in northern India. *The Journal of Development Studies*, 46(3), 485-505

Kapur, A., Bordoloi, M., & Shukla, R. (2018). Budget Brief 2018-19: SarvaShikshaAbhiyan (SSA). *Centre for Policy Research*. Retrieved from: https://www.cprindia.org/research/reports/budget-brief-2018-19-sarva-shiksha-abhiyan-ssa

Kohli, N. (2015). Not in the class: A story of India's missing teachers. *Hindustan Times*. Retrieved from: https://www.hindustantimes.com/india/not-in-the-class-a-story-of-india-s-missing-teachers/story-8HITtop9bbJbL18cGC5U7H.html

Kumar, A.,Shukla, S.K., Panmei1, M., & Narayan, V.(2019). Right to Education Act: Universalisation or Entrenched Exclusion? *Journal of Social Inclusion Studies*, 5(1), 89-111

Kumar, K. (2011). Curriculum reforms in India; pp.156-170 in K.N. Pannikar, & M.B. Nair (eds.), *Emerging trends in higher education: Concepts and practices*. Delhi: Pearson.

Kundu, P. (2019). To Improve Quality Of School Education, India Must Spend More On Training Teachers. *IndiaSpend.com*. Retrieved from: https://www.indiaspend.com/to-fix-poor-quality-of-school-education-teacher-training-holds-the-key/

MHRD (Ministry of Human Resource Development). (2018). Educational Statistics at a Glance. *Ministry of Human Resource Development, Department of School Education & Literacy, Statistics Division, New Delhi*. Retrieved from: https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/ESAG-2018.pdf

MHRD (Ministry of Human Resource Development). (2019). *Draft National Education Policy 2019*. Retrieved from: https://innovate.mygov.in/wp-content/uploads/2019/06/mygov15596510111.pdf

Mukerji, S. (2019). A quiet revolution: The case of primary education in Uttar Pradesh. *J-PAL South Asia*. Retrieved from: https://www.ideasforindia.in/topics/governance/a-quiet-revolution-the-case-of-primary-education-in-uttar-pradesh.html

Mukhopadhyay, R. &Sarangapani, P.M. (2018). Introduction: Education in India between the Stae and Market – concepts framing the new discourse: quality, efficiency, accountability; in Jain, M., Mehendale, A., Mukhopadhyay, R., Sarangapani, P. M., & Winch, C. (eds.) (2018). *School Education in India: Market, State and Quality*. Taylor & Francis.

Perryman, L-A., Buckler, A. & Seal, T. (2014). Learning from TESS-India's approach to OER localisation across multiple Indian states. *Journal of Interactive Media in Education*, 2(7), 1-11

Planning Commission. (2010). Evaluation report on SarvaShikshaAbhiyan. *Government of India, New Delhi, 46*. Retrieved from: http://planningcommission.nic.in/reports/peoreport/peoevalu/peo_ssa2106.pdf

Ramachandran, V. (ed.) (2004). *Gender and Social Equity in Primary Education: Hierarchies of Access*. New Delhi: Sage.

Rao, V.S. (2009). Lack of community participation in the SarvaShikshaAbhiyan: a case study. *Economic and Political Weekly*, 44(8), 61-64

Redden, E. (2019). Plan or Pipe Dream?*Inside Higher Ed*. Retrieved from: https://www.insidehighered.com/news/2019/06/21/indias-draft-national-education-policy-outlines-ambitious-and-difficult-achieve

Reddy, A. N., & Sinha, S. (2010). School dropouts or pushouts? Overcoming barriers for the right to education.*CREATE Pathways to access, Research Monograph No.40*. Retrieved from: http://sro.sussex.ac.uk/id/eprint/2485/1/PTA40.pdf

Schleicher, A. (2018) Making education reform happen, in World Class: How to Build a 21st-Century School System, OECD Publishing, Paris.

Shah, M., & Steinberg, B. (2019). The Right to Education Act: Trends in Enrollment, Test Scores, and School Quality.*AEA Papers and Proceedings*, 109, 232-38

Singal, N. (2019). Challenges and opportunities in efforts towards inclusive education: reflections from India. *International Journal of Inclusive Education*, 23(7-8), 827-840

Singh, H. &Ramaswamy, N. (2016). Assessing the impact of Right to Education Act. *Confederation of Indian Industry & KPMG*. Retrieved from: https://assets.kpmg/content/dam/kpmg/pdf/2016/03/Assessing-the-impact-of-Right-to-Education-Act.pdf

Srivastava, P., Noronha, C., & Fennell, S. (2013). Private Sector Research Study: SarvaShikshaAbhiyan. *Report submitted to DFID India*. DFID-UK Aid. Retrieved from: https://www.prachisrivastava.com/uploads/1/9/5/1/19518861/srivastava_et_al._private_sector_study_ssa_india.pdf

Syeed, E. (2018). Conflict between covers: Confronting official curriculum in Indian textbooks. *Curriculum Inquiry*, 48(5), 540-559

Ward, M. (2011). Aid to education: the case of Sarva Shiksha Abhiyan in India and the role of development partners. *Journal of Education Policy*, 26(4), 543-556.

Appendix 1: Methodology

With the need for a study to understand the stakeholder perceptions of the ZIIEI programme, the research addressed two research questions, listed below. The first research question focuses on the stakeholders' perceptions of the aims of the initiatives, while the second research question focuses on their perception of its implementation.

1. How do the different stakeholders perceive the ZIIEI *initiative's aims* and its conception of innovation?

2. What are the critical features (strengths and weaknesses) of the *process of implementation* of the ZIIEI initiative, as perceived by the different stakeholders?

Research design and methods for data collection

To investigate the research questions, the study used a qualitative approach using focus group discussions. The purpose of the focus group discussions is to situate the extent to which the ideas are shared among other respondents.

The sample for respondents within each category of stakeholders was identified using a purposive sampling (Ritchie et al., 2013). Using this method, respondents were chosen on the basis of their engagement with the ZIIEI initiative. Participants, facilitators and conceptualisers who have had long and critical engagement with the programme were chosen for the study.

Initially, the site for all the focus groups was also purposively chosen as Uttar Pradesh, since the state had been implementing the initiative since its inception and had the most widespread reach. This was meant to ensure that respondents are aware of different aspects of the initiative with a rich understanding of its processes. However, the government officials, teachers and principals were based in Chennai and the ZIIEI representatives and trainers were based in Delhi. This may have made no difference to the responses provided, since the ZIIEI programme has been implemented in each state for the equivalent amount of time. However, due to the diversity across the states in India no generalisations can be made across any one group.

Data collection

ZIIEI and Cambridge University Press collected the focus group discussion data (FGD). This report highlights the main themes and findings based on this data.

Respondents	Role	Location, venue	Date, time	No.
Teachers	participants	Chennai, District Institute of Education and Training	19 Oct 2019, 10:15 – 12:15	9
Principals	participants		19 Oct 2019, 12:45 – 3:15	6
Participants				**15**
Trainers	facilitators	Delhi	17 Nov 2019, 11:45 – 2:30	11
Senior government officials	facilitators	Chennai, District Institute of Education and Training	18 Oct 2019, 7:15 – 7:35 pm	4
Facilitators				**15**
ZIIEI members	conceptualisers	Delhi	18 Dec 2019, 10:15 – 1:30	9
Conceptualisers				**9**
Total				**5 FGDs**

Table 1: Sample and number of FGDs conducted

Data analysis

Table 2: Index of data collected for ZIIEI Focus Group Discussions

No.	Focus groups	Location	Report	Videos	Transcriptions
1	Education govt. officers	Chennai	Govt. officers Teachers Principals	No	Yes
2	Teachers	Chennai		Yes	Yes
3	Principals	Chennai		Yes (2 videos 1 video missing)	No
4	Trainers	Delhi	ZIIEI Trainers	Yes (approx. 3 hours of video)	Yes
5	ZIIEI members officials	Delhi	ZIIEI members	Yes (6 video files)	Yes (6 files)

The timings for some of the focus groups were shorter than had been intended to be the case, consequently, some of the responses are more concise than others. For the reports of moderators, please see Appendix 1.

Thematic analysis (Braun & Clarke, 2006) was used to understand both within stakeholder responses as well as compare them across the different stakeholder groups. Use of qualitative data analytical software (MAXQDA, NVivo) was considered, and two types of software (SpaCy, gensim) were explored to generate summaries of the focus group discussions.

However, since the focus group data were already summarized by the moderators of the focus group discussions (Appendix), and transcripts of the discussions were available for all groups except for the school principals, ultimately, it was decided to analyse the data by hand. All available videos were viewed in order to check and update all transcripts and reports (Table 2). Then all video, transcripts and report data were coded, allowing themes to emerge inductively (Dörnyei 2007) in a bottom-up approach to coding. Responses were recorded in the following coded categories (Appendix 2):

- Reason/Challenge/Opportunity,
- Aim,
- Solution,
- Achievement/Result/Impact,
- Remaining challenges.

Appendix 2: Reports from moderators of FGDS

FGD with education government officials

Initially it was planned to have a focus group discussion with 10 education officers involved in ZIIEI. However, because of a prior training getting delayed and other logistics constraints, 4 senior officials agreed to attend the discussion. The education officers were unavailable. The officials were not of the same reporting levels. The group had several people reporting to the head of the team who also was part of discussion. Before agreeing to be recorded, they asked for the type of questions which would be asked and were shown the list of the questions. There was a limited time of 20 minutes allotted for the discussions. The questions had to be modified because of the lack of time.

The group members discussed the topics quite freely. Potential disagreements may not have come across because the head of the department was also part of the conversation and their seating arrangement also had the head sitting close to the moderator. The officials were unwilling to have a circular arrangement as they thought this would not follow their hierarchy. These factors needed to be considered while evaluating the responses. The questions had to be modified because of the lack of time. Despite all these challenges, the response from the officials to the program came across positively.

FGD with teachers

There were 8-9 teachers present for the discussion. They were seated in a circular arrangement. A break was organised in between the questions for tea and snacks as some of the participants had travelled for a long time before coming to the venue. The team from ZIIEI was present for clarifications and translation. During one of the questions when teachers were asked for challenges in the implementation, some members of ZIIEI wished to clarify the situation. However, the moderator felt it would hamper the free nature of the discussion and asked for the clarification to be given after the discussion. In some other instances, clarifications were allowed as it was a smooth discussion. When each participant spoke, a mic was used to ensure the sound quality was good in the recordings. There were some teachers who spoke in Tamil. The ZIIEI coordinator translated the teachers' views after he/she finished her point. The translation was not done after each point because this would affect the flow of the discussion. Whenever required, the moderator asked the teachers if they had understood the translation correctly and if there was anything the teacher would like to add. Some teachers used a mix of Tamil and English. There were other people inside the discussion room, which included family members of the teachers, principals (who were part of the next discussion) and other ZIIEI officials. Because of shortage of time, in the last few questions, the participants were asked to keep the answer to the point and not repeat things which had been covered in the earlier questions. In some of the initial questions, the answers were not to the point. However, to ensure that the participants are not discouraged and express their opinions freely, the points were allowed. The discussion was free-flowing. Towards the end, the moderator had to request the teachers to not repeat the same points as we were short of time.

FGD with principals

There were 6 principals (4 female, 2 male) and 1 (male) teacher present in the group sitting in a circle. The teacher had been late for the session and had to be accommodated in the discussion. One of the ZIIEI coordinators helped in translating the responses from Tamil and English. The questions were also translated in Tamil for the convenience of the group members. A mic was used to ensure sound quality was good. There was a lunch break taken around half way through the discussion. The discussion was free flowing.

FGD with trainers

Before the discussion session started, the moderator had informal talks with some of the trainers while having tea and snacks. The group (11 trainers, all male) included some senior trainers and some were new to the organisation. The participants were seated in a semi-circular arrangement in a conference room. There was a small pause during the discussions as the storage disk for the recording needed to be changed.

FGD with ZIIEI organisation members

The members included senior leaders (e.g. Chief Programme Officer and Head of Partnership and Outreach) and some of the participants reported to the senior leadership. Introductions were carried out before the discussions started. The ZIIEI implementation process diagram/flowchart was showed to the participants before the discussion started.

Commentary of moderators

'Overall based on the various inputs, I feel the program has been well received by administrators, school teachers and principals. In the short term, challenges can be resolved with appropriate changes in processes. In the long run, keeping the motivation of the teachers will be a difficult task. A small percentage of teachers will get recognized by the program. This is likely to leave a lot of teachers from being recognised. It remains to be seen if the ZIIEI process can help in driving the concept of innovation for teachers who do not get recognised. There is a need to dig deep into practical challenges hampering the implementation of the innovative practices in the classroom. Further inputs from education officers and ZIIEI trainers will help in providing more inputs.

'The response from the officials to the program came across positively. They could foresee challenges with the implementation and also were ready to embrace innovation not just in curriculum or pedagogy but also in the processes which need to be followed. They appreciated that sharing best innovative practices helped the teacher, student and the parent community at large. They were willing to support the program in the form of directing the district and state administration to assist the process. The officials in the program are the key stakeholders. However, they are able to view the program at a macro level. Further discussions need to be conducted with the education officers, who can explain the details happening closer to the ground level.

'The principals are appreciative of the ZIIEI concept. Their suggestions about training processes and long-term challenges of the program need to be thought through. The innovation practices need to include process-based innovations where school principals or leaders can innovate to reduce their workload. Administrative load seems to be a big concern which can use up a lot of the teacher and principal time, effectively reducing the time required for implementation.

‘The teachers are extremely happy at being recognised by senior officials for innovating. Involvement of teachers, students and parents has improved because of ZIIEI. The suggestions related to trainings and their operations need to be taken into account while planning the next set of trainings.’

Appendix 3: Coded responses

The focus group discussions were analysed and responses coded in the following order and colour scheme:

1. ZIIEI members
2. Government officials
3. Principals
4. Teachers
5. Trainers

Reason/Challenge/ Opportunity	Aim	Solution	Result/Impact	Remaining challenges
Need to adapt to a changing environment The government already has several programs in government schools. Top down initiatives usually doomed	Bottom up - higher chances of success	Mass movement	adapting and applying to the present situation is innovation	
Teachers traditionally seen as implementers	Make teachers into innovators Help teachers deliver the curriculum plus innovate			
Challenge of achieving buy-in from stakeholders	Convince teachers of the usefulness of sharing best practice	Recognise innovative ideas	A win-win situation for teachers and students	

Reluctance to accept and embrace reform (on the part of teachers, but also government officials)	Convince government officials of the potential of the concept of innovation Secure buy-in from authorities, e.g. permission and support from government officials	Change thinking on what innovation is Adopt innovative practices In the teachers' interest And since no extra cost involved it becomes acceptable Trainers know the ground realities which helps in acceptance. Visits from officials helps in teacher motivation	Both teachers and students benefit from new ways of teaching and learning students like new ways (innovative ways) of learning. (Nature Conservation Foundation) The program has pious, noble aims/intentions Similar concept can be replicated in other industries. It is possible to replicate this program globally.	
Resistance to change	Ideas from peers Not top down Make it democratic	Do not force implementation Offer incentives Offer choice.	The teachers can customise as per their needs.	
Inequality, diversity, difference	Make education inclusive for all students	Involve all teachers	Slow learners also develop interest in learning process	100 % teachers are not included in the process
Resource poor environment	Find solutions within existing resources and structures	Zero monetary investment at the grassroots (low or no cost innovations, i.e. 'navachaar') renovate, re-invent Identify and share best practice	Optimisation of resources	Low cost innovations could be considered. Zero investment needs to be changed to minimum or low investment. Some ideas which need low investment will get ignored.

Poor quality education Without a majority of the population not involved in education, economic development cannot take place. There is neglect of education in developing countries.	Use locally available resources: community, technological advances Re-discover, re-invent methods	Involve the community Make teachers think about the future of children, look outside the classroom Community based projects conducted Collaboration with local community to solve problems. Engagement with the local community as ex-students provide donations to school Students become environment conscious and help reducing wastage in the community	School administration gets involved in the innovative process. Helps in improving enrolments/admission Student participation/attendance has increased, reduced dropout levels Helps in community participation, donations, nation building activities. The program helps students who are the future of the country. This in turn helps the economy.	Inclusion of other aspects like moral education, nation building and playway method. Ideas can be used to teach multiple concepts or themes beyond the curriculum like moral values, nation building, environment, wastage etc.
Job security, feeling of resignation among teachers	Change teacher attitudes	Offer appreciation (in lieu of money)	More enthusiasm in the teachers to try innovative methods/experiment.	
Low confidence among teachers	Change mind sets Build confidence in teachers	Imbue confidence to come up with new innovations (I as a teacher can do something also)	Teachers gain confidence in their ability	
Apathy among teachers	Professionalize the teaching profession Identify pockets of excellence Identify and share best practice	Create platform/network to share ideas Show teachers respect Offer recognition and credit for excellence Offer incentives (non-monetary, e.g. scholarships) Teacher innovation award		

Culture of blame between teachers and education officers	Make it collaborative	Align vision at all levels common goal for teachers, principals, trainers, education officers, govt officials: overcoming challenges Orientate and sensitise education officers	Collaboration has increased among teachers. The bond between teachers and students also improves. Better parent teacher meetings	One of the aims is to encourage creativity. This can be related to management / administration, or teaching or (other) school related practices.
Used to have textbooks	Let teachers solve every-day, practical problems	Application oriented methods to teach rather than rote Book free day. Fun packed days and focus on practical education	Becomes a model of problem-solving for learners Experiential learning Joyful learning experience and application of concepts in day-to-day life / conversation.	
Unhappy classrooms, teachers, students, parents	Bring about transformation in education Change education system so that students benefit Teach in a different way to attract students Improve the approach to students Use new technology / technique / idea, i.e. innovate Can be through tools, applications, methods Out of the box thinking Create joyful, engaging, wilful learning environment learning-oriented practice	Cater for students' needs, likes and interests Make the subject/learning of concepts attractive to students use different/innovative methods teach-learn "by psychology and methodology" make students "enlightened" child centric ways of learning. Learning by doing, using the 5 senses, making children curious Improve higher order thinking skills and IQ of	Student expectations have increased, they expect different/innovative methods The process helps to think out of the box and gain a broader perspective Joyful learning Experiential learning Helped in fostering scientific temper, creativity, cooperation, environment friendly thinking among students Recognition and appreciation of parents who adopt good practices motivates other parents. Parent involvement has increased: Program helps stress the importance of education.	

	Drive behavioural change and moral values	students through innovations. Drive behavioural changes on themes related to environment, cleanliness, hygiene not just among students but also among parents Use low cost options like fruits/vegetables for colouring instead of colours.	**Parents get engaged and are invested in the learning** **Helps reduce child labour.** Students get personalized spaces to study (matters a lot in low-income families) Improvement in health of students and healthy practices shared with the parents The innovative practices help in improving the thinking ability and reasoning skills, leadership skills, self-awareness, empathy, moral values. Students become better citizens, learn about responsibilities and duties and develop civic skills. Professionals from the community interact with students. It helps in community engagement and also helps students in terms of career counselling.	
Problems need solving	improve quality in education improve learner attainment make learning easier unlock student potential create joyful, engaging, and wilful learning environment learning-oriented approach	Reflective practice Try alternative ways – innovate, optimize available resources: IT, the community Small changes in pedagogy Habits of mind: encourage enquiry, inquisitiveness Theme based learning	Relooking and reflecting on impact of the existing methods	

Problems contextual	Let teachers close to the ground come up with ideas Trainers know the ground realities	Grassroots		
Local solutions Different methods/solutions needed in different geographies (mountainous vs urban areas) Students from different areas have their own needs. Different techniques are required which needs money.	Share unique solutions Need to scale it up Make it available to all Share all existing resources and innovative practices in a structured way across all states	Replicate Develop a formal system of collecting best innovative practices Easy access to resources: lesson plans and teacher manual/booklet The teachers can customise as per their needs. The customised ideas can be taken up by other teachers.	Teachers are motivated to adopt new ideas of others and also try new ideas of their own based on others' ideas Adopted across different regions	Set up a pilot with Innovative Pathshaala to figure out issues Based on insights and lessons learnt, adopt strategies and improve implementation
Those who manage to work successfully within limited circumstances not recognised	Find talent Show appreciation	Recognise and certificate ('felicitate')	Teachers adopt good practices after seeing others recognised	
Teachers already have ideas but no platform. Problems identified and solutions suggested by teachers themselves	Document solutions/best practices Share them Replicate them Get them adopted Implement them	Develop offline and online system/build platform to showcase best practice Select ideas State-wide innovation booklet (currently 21) including about 1000 innovative ideas: • Simple, easily replicated • Scalable • Wide reaching	Innovation in different processes like news reading and attendance as well. Innovation being carried beyond the basic classroom. Include home, community and nation	Doubts exist among teachers if all the implementations are checked or not. Lack of clarity if multiple ideas can be submitted by the same teacher. Currently, the form doesn't allow moral values

Need to engage all teachers	**No restriction on ideas,** no boundaries New problems and **new solutions** Unbiased, transparent and **genuine selection process** where checking takes place at different levels.	**Zero manipulation of ideas** Independent teachers, no need to seek approval from seniors	Increases teacher interest Provides ideas to teachers Ideas can be used in different ways **Social prestige, pride, inspiration, motivation** Teachers become popular in local community Teachers get a chance to train other teachers which is very motivating. There is healthy competition between the teachers	
Innovation needs **time, effort and energy** to be implemented	**Reduce the burden of implementation on teachers** Make it part of teachers' day to day work **Integrate innovative ideas into ready-made lesson plans**	Develop and share **Innovative Pathshaala** curriculum (i.e. curriculum with innovative ideas, for guidance only) **Develop a mobile app**	Innovative Pathshaala app provides certification of participation A structure for ensuring implementation Workload reduction for teachers	Workload is still high for teachers, not enough time to implement ideas.
It's a cyclical process, with no beginning and no end	Professional development Ensure continuity Achieve spread / reach / growth	Reverse existing processes, rewrite traditional rules The teachers are asked to implement at least one 'navachaar'.	There is horizontal and vertical growth. The program can move to different geographies in the country. The ideas can be improved upon or customised further (vertical growth)	How to ensure continuous improvement, and sustainability?
Initiative might not work **Teachers may lose interest in the initiative** Sustainable development	**Make it sustainable** Improve chances of implementation **Make it motivational, inspirational**	Internally robust design **Needs evolving**	**Keep on thinking of new solutions, keep innovating** **Continuous process of (r)evolution** Keep resolved and focused.	**On-going motivation** is required. Hence, **constant trainings and follow-ups** need to be conducted to

				help chances of implementation For it to be sustainable, the **methods** need to keep evolving. Need effective trainings which have to be updated regularly
Not all teachers across the country have been reached	Cascade training Create "community of practice" / network	Develop training management system Introduce call centre Master trainers straight to teachers (no in-between layer)		Need to club with the block resource training Leadership training needed for school leaders (management) Newer generation of teachers needs to be trained. Manpower for training could be a concern.
Too many ideas to felicitate	Digitalisation to make it easy and simple to propose innovative ideas Disseminate Engage	**Develop technology and IT infrastructure** Social media (FaceBook, WhatsApp, ZIIEI TV) Teacher innovation awards - certification District level exhibitions	**Simple**, easy to implement ideas Flexible - teachers can improve own ideas, adapt and modify or customise others' ideas Same idea can be implemented in **multiple ways.** Innovative methods for multi-class teachers (e.g. same room with multiple classes together) Easy access to resources	Improve access to Facebook Would be helpful if it is broadcasted on TV More information needs to be provided through the government channels

			Teachers use same ideas across different subjects, levels, etc. Teachers engaged and use social media as a platform/network (WhatsApp groups) **Teachers instead of complaining about problems, discuss solutions** Ideas are shared during the conference Inspiration, motivation by peers Smooth process with appropriate recognition which is motivating for teachers	**The innovations need to be linked to the latest technology**
Measuring adoption / **implementation**	Agility – make it self-running But keep the human contact Make it into a cycle/loop of for continuous process of **self-improvement**	**Boost the technology, make it even more motivational: let teachers know the adoption rate of their idea, how others are benefiting from it** Reduce programme management costs Implementation outcome form Merge for profit and non profit efforts in future	Some innovative ideas are about administrative practices: Teachers save time in administrative work	A lot of the teacher and students' time is used in administrative help. Implementation of the activities is difficult. Despite repeated follow-ups, implementation is not 100%.
Too many ideas might need to get recognised felicitated in the future All ideas need to be shared not just the ones which are recognized.	**Avoid demotivating effect of rejected ideas**	**Measure quality of innovations**	There is a sufficient time period and it is not rushed through: Offline ideas take about 6-7 months to get feedback, online ideas 2-3 months.	Fewer teachers from Tamil Nadu got rewarded

Measure quality of innovations Measure impact	Observe teachers and then scale up models of quality teaching Build competencies to solve real life problems	Implementation outcome form.	Schools **documenting** the ideas and their benefits. Documentation ensures articulation of benefits and challenges in implementation.	The form doesn't have enough space for explaining the idea. Implementation not just on form but in reality. Need to check if the implementation is practically happening on ground?
India has signed up for PISA 2021	Have a 2-3 year vision of student achievement and teacher education	A competence based curriculum Inclusion of life skills Comparison with private schools Compare outcomes internationally, not just within India	The process helps to think out of the box and gain a broader perspective Students have started shifting from private to government schools looking at the innovative practices being conducted. The program promotes equity where govt. school students can compete with private school students Parents have started observing the practices being followed in govt. schools	
Curriculum renewal	**Continuous curriculum review and renewal**	**Keep good aspects of curriculum and discard out-dated obsolete aspects**		

Trainers extensive travelling Trainers face problems	Train the trainers sessions internally Activity based training	Call centre Doubts get clarified by the trainers during training	All teachers didn't attend the training because of either genuine reasons or lack of awareness Currently the ratio of trainer to teacher is too high. (300 teachers at the same location)	The trainers to teachers ratio needs to improve Need regular follow-ups or meetings with the trainers. Awareness and the training processes need to improve. Because of high teacher to trainer ratio, the sessions get monotonous. The space and ambience of training venues needs to be improved.
Challenge to complete in a 2-teacher school	Training should be 1 day long and not half day. It can be a focused training where teachers can grasp more concepts Provide information about the training process in advance, inform the expectations from the teachers during the training.	half of the teachers train on one day and the remaining half on the other to ensure schools are not closed 1 day programmes are usually conducted	Training sessions energetic, engaging, activity driven – a model for teachers how to teach trainers get motivated by the positive feedback from teachers and education officers motivated by working for nation and education, skill enhancement, develops courage (to venture to different regions of the country), job satisfaction, helps travel and understand own culture, pride	Could help if full day trainings are conducted instead of half day. Allows the teachers to focus on the training without having to worry about going back to school. How to connect to remote locations and focus on their ideas can be a challenge Keep resolved and focused.

Technology is seen as a distraction by teachers, creating a challenge	Innovation is needed to adapt to the challenges of new technology			Technology concerns – Need to adapt to the technology after a lot of years.

Acknowledgements

Cambridge is grateful for the support and involvement of the many people who contributed in the creation of this report. These include: Ridhima Bahl, Nitin Bhalla, Lewis Birchon, Dr Meghna Nag Chowdhuri, Preeti Hingorani, Dr Szilvia Papp, Dr Chris Martin, Leena Singh, and Onkar Shaligram.

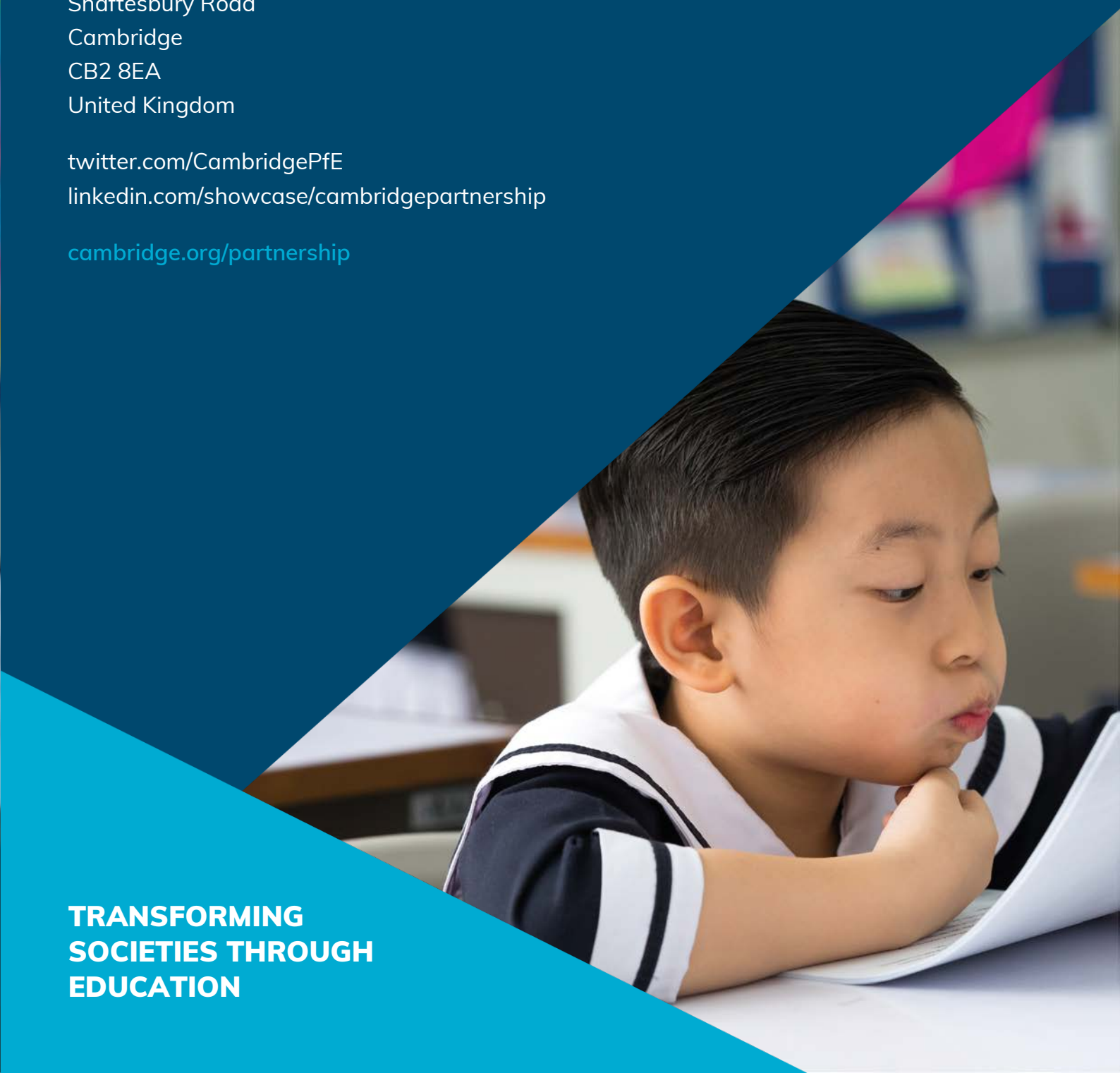
CAMBRIDGE

Contact us

Cambridge Partnership for Education
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA
United Kingdom

twitter.com/CambridgePfE
linkedin.com/showcase/cambridgepartnership

cambridge.org/partnership



TRANSFORMING SOCIETIES THROUGH EDUCATION