

REIMAGINING CAPACITY BUILDING PROGRAMMES IN EDUCATION WITH DIGITAL PUBLIC GOODS

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Acknowledgements

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Sattva Knowledge Institute (SKI), established in 2022, is our official knowledge platform at Sattva. The SKI platform aims to guide investment decisions for impact, shedding light on urgent problems and high potential solutions, so that stakeholders can build greater awareness and a bias towards concerted action. Our focus is on offering solutions over symptoms, carefully curating strong evidence-based research, and engaging decision-makers actively with our insights. Overall, SKI aims to shift intent and action toward greater impact by influencing leaders with knowledge. All of our content proactively leverages the capabilities, experience and proprietary data from across Sattva.

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Executive Summary

Capacity building programmes are crucial in the engagement strategy of nonprofits working in the education sector. They become drivers of landmark policy goals, such as the National Education Policy (NEP) 2020, in India which is one of the world's largest education systems. **By involving local stakeholders, nonprofits equip state governments, district administrations, schools and teachers with institutional, organisational and human capacities.**

Activities in capacity building programmes are of two types: **direct and indirect activities**. Direct activities include training, teaching and assessment, awareness generation and operational support. Provision of learning material, management and monitoring/evaluation activities are considered indirect activities. A dipstick study conducted by Sattva Knowledge Institute (SKI) involving 21 education programmes across 21 nonprofits showed that a majority (~80%) of the funds are allocated for capacity building programmes, out of which around **56% of these funds are spent on direct capacity building activities**.

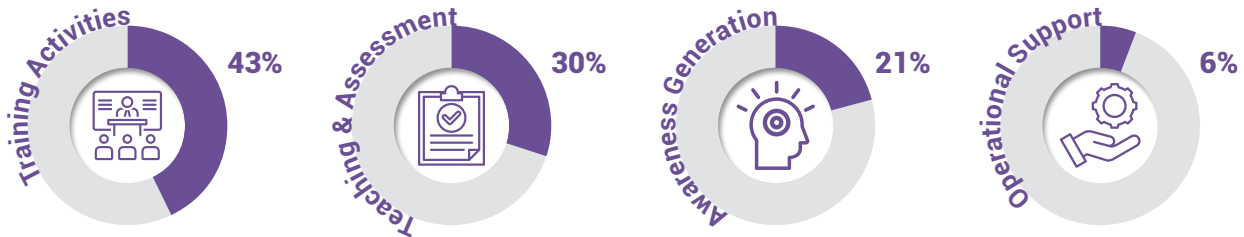
Several challenges for capacity building in education arise in a diverse country such as India despite the potential for impact and continued efforts. Large-scale capacity building programmes need to be tailored to account for nuances related to local context such as language, culture, local leadership and stakeholders. Thus, standardisation and scaling of activities become imperative to overcome **challenges such as limited human resource capacity, limited collaboration and coordination, and a multilingual user base** making the current capacity building process inefficient and time-consuming.

Digital Public Goods (DPGs) enable nonprofits to build local, contextual and scalable solutions for capacity building by using non-contextual blocks. **Digital Public Goods, like Kolibri, DRUPAL and Sunbird, have been used to optimise challenges related to education and skilling.** In institutional strengthening and capacity building, the independent, interoperable and configurable elements of digital public goods encourage coordination and collaboration among participants through common learning platforms, discussion forums and knowledge repositories. For nonprofits, **digital public goods provide a streamlined and efficient medium for skilling large populations by integrating other digital solutions such as Aadhaar and Digilocker.** Verifiable credentialing becomes convenient, thereby increasing the employability of the underserved youth population.

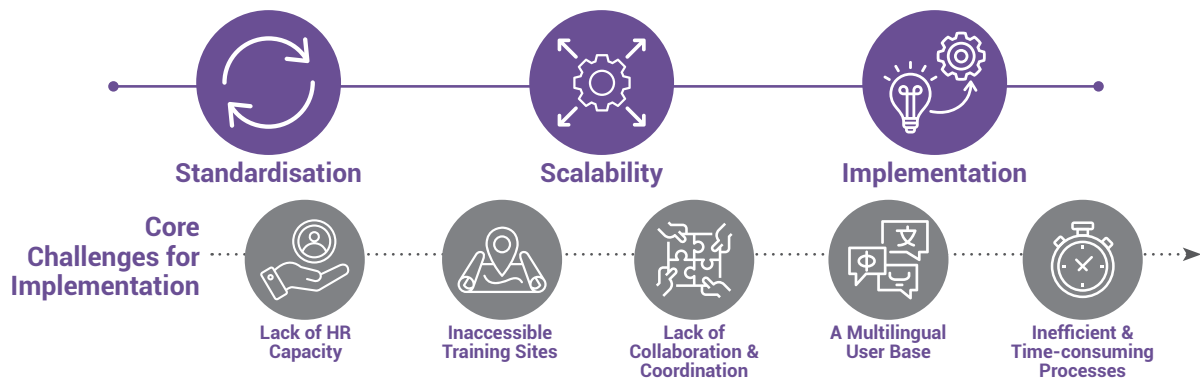
Considering that digital public goods are at an early stage of development, a multi-stakeholder engagement with the ecosystem should support the generation of multiple use cases. Philanthropic organisations, technology players and nonprofits are the primary drivers of digital public goods in capacity building programmes. Philanthropy, through patient capital, should enable research and development of DPG-led use cases, innovations, and technology. Technology players should enable and support the development of context-specific solutions. Further, nonprofits should focus on utilising existing digital public goods to develop tech solutions, create product requirements for their interventions and solve necessary conditions to achieve social impact.

DIGITAL PUBLIC GOODS (DPGs) CAN FACILITATE CAPACITY BUILDING BY NONPROFITS IN THE EDUCATION SECTOR.

Despite 80% of funding being channelled across key areas such as...



...challenges exist in the areas of:



DPGs can help overcome these challenges with standardised and scalable solutions.

DPGs enable nonprofits to build local, contextual, and scalable solutions for capacity building by using non-contextual blocks. These are some of the DPGs helping to reimagine education and learning today:



How can ecosystem actors catalyse their adoption?

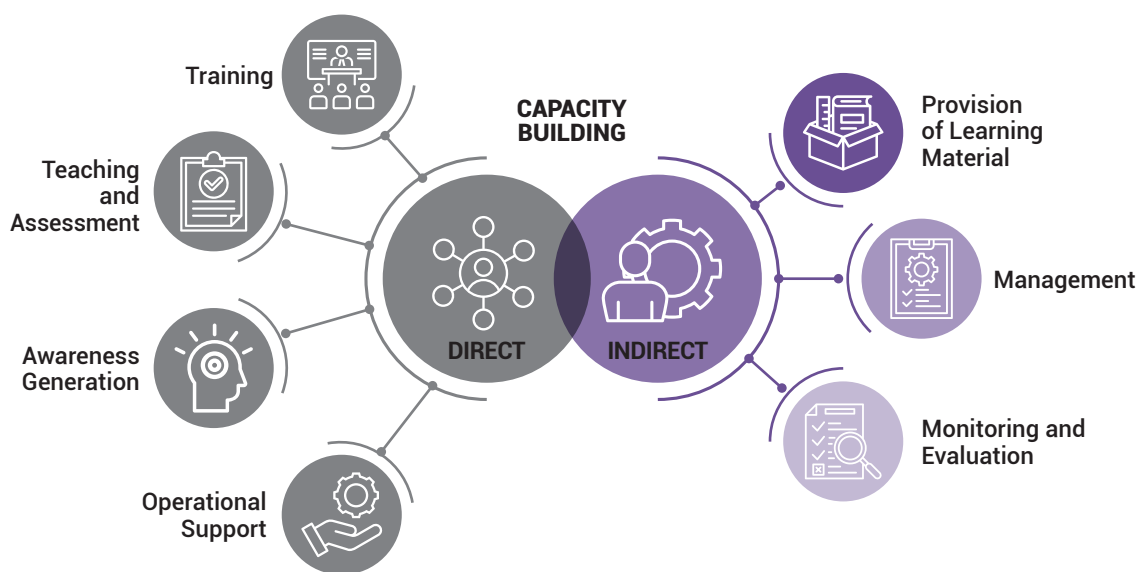


Capacity Development Forms an Integral Part of Social Impact Work in Education

Capacity building initiatives are an important component of the engagement strategy of nonprofits working in the education sector. They can become the drivers of worldwide policy goals, such as the Education for All movement launched in 1990, into concrete efforts at the national level.¹ In India, the NEP 2020 has been a landmark policy change envisioning a radical transformation in India's education system. It moves from "education for all" to "quality education for all" by 2040 across one of the world's largest education systems, with more than 15 lakh schools, 96 lakh teachers and 26.4 crore students.² In order to bring this vision to reality, state governments, district administrations, schools and teachers need to be equipped with institutional, organisational and human capacity.

The Indian education system has been falling short of its goals to achieve literacy and provide access to education across school levels, with the crisis further exacerbated by the gap in continuity and retention due to the COVID-19 pandemic. Elements of the public infrastructure have often turned to and been assisted by nonprofits aiming to enhance the quality of education delivered, encourage and maintain access to schooling, and thus fulfil the original objectives of increasing literacy and retention, especially in underserved communities. By involving local stakeholders and adapting to the local context, nonprofits can provide education and build capacity. Their focused capacity building initiatives are particularly valuable in addressing systemic challenges in education.

Figure 1: Different types of capacity building activities³



A dipstick study conducted by SKI involving 21 education programmes across 21 nonprofits indicated that the delivery of capacity building takes place in two ways: direct and indirect. Direct capacity building initiatives are conducted directly with target beneficiaries (e.g., execution of awareness/training/teaching modules to teachers, students, etc.) in line with the programme's objectives. Conversely, indirect capacity building initiatives are administrative and management-related tasks that support programme delivery.

Direct capacity building activities

- **Training:** Teachers and school administrators are provided training in pedagogy, assessment, governance and monitoring processes. Facilitators from nonprofits help teachers improve their pedagogy practice by observing the classroom and providing feedback.
- **Teaching and assessment:** Remedial programmes such as Teaching at the Right Level (TaRL) bridge learning gaps and help build students' capacity through practice exercises and guided reading sessions. Short-term skilling programmes enhance the employability of the youth and several vulnerable groups, such as women, thereby supporting their socio-economic mobility and financial independence.
- **Awareness generation:** Focussed group discussions, interactive awareness-building sessions, and nudges help mobilise the community through knowledge dissemination on aspects such as female education, the value of schooling, education-related schemes and more. These programmes are implemented to reframe attitudes and social norms. Personalised guidance is provided to students and parents regarding higher education choices.
- **Operational support:** Government and low-cost private schools often need support from nonprofits in organising and managing events such as science fairs, exhibitions and innovation camps. Such events enable peer learning through collaboration, networking and healthy competition.

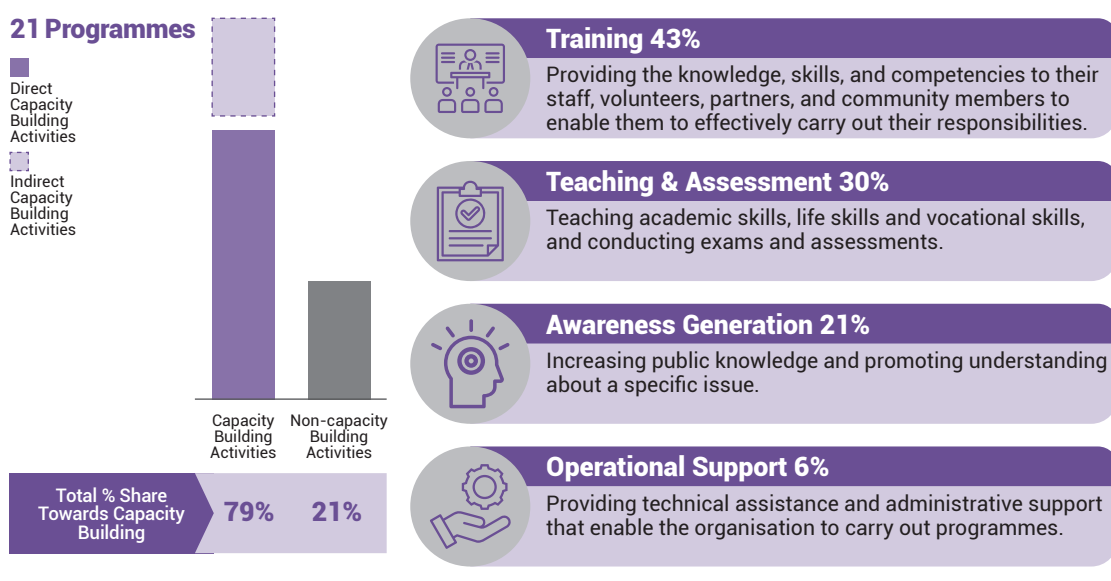
Indirect capacity building activities

- **Provision of learning material:** Nonprofits undertake curriculum design and lesson planning to assist teachers in providing instruction. Additionally, they provide academic resources such as curricula, teaching-learning materials, print, audio and video resources, etc.
- **Management:** Nonprofits as programme implementation partners often take the programme from the point of initiation to its completion. They are responsible for mobilising all necessary resources for the successful implementation of a programme.
- **Monitoring and evaluation:** Data is collected for specific educational interventions and analysed to measure progress towards achieving set goals and objectives.

A majority of nonprofit capacity building activities are direct capacity building activities.

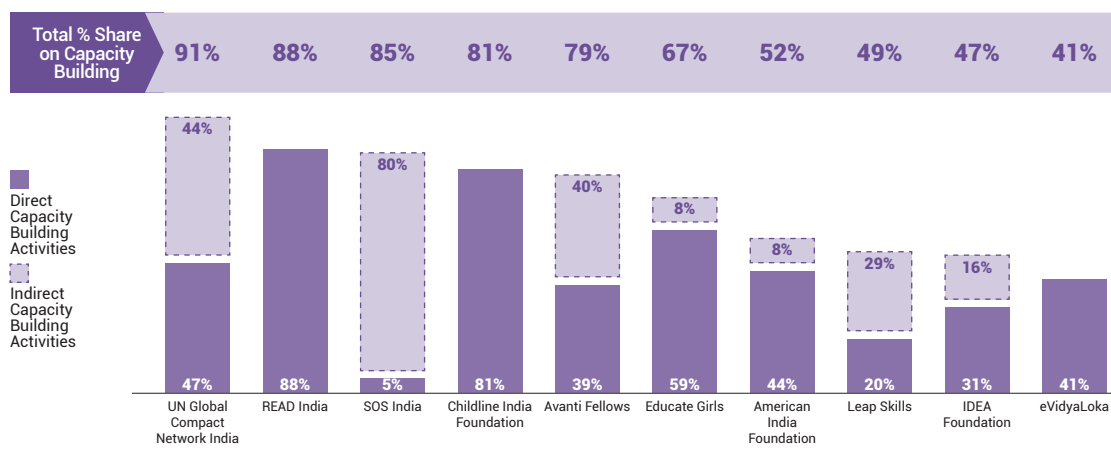
An analysis of the financial reporting of 21 nonprofits in SKI's dipstick study found that the majority (~80%) of the funds across their educational programmes are directed to capacity building initiatives, either to target beneficiary groups or trainers.

Figure 2: Percentage share of funds utilised under selected programmes and types of direct capacity building activities⁴



The funds allocated towards capacity building are leveraged directly for training, awareness-building or spent on administrative tasks related to the programmes.

Figure 3: Percentage share towards capacity building of the ten largest programmes by funds⁵



A few of the programmes allocate a larger share of funds to indirect capacity building activities due to the nature of the programmes. These programmes are educational sponsorship programmes and programmes aimed at introducing technology in educational institutions.

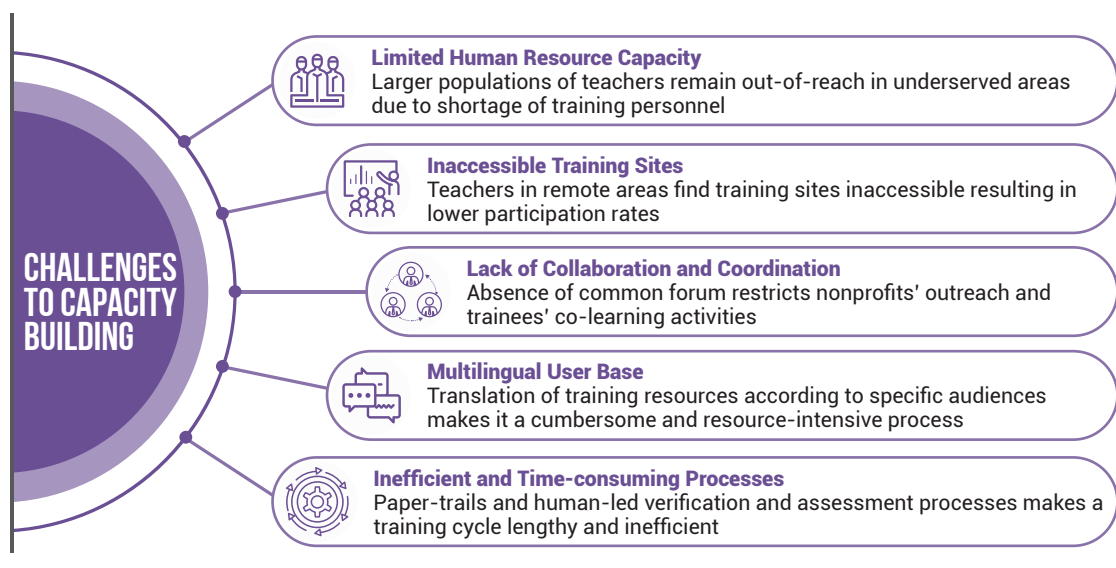
In these cases, indirect spending on capacity building includes the provision of financial resources, learning material, technology development, project management, identification and mobilisation of students for training, etc. and direct forms of capacity building are limited to teaching support provided to students and training of teachers in the use of technology.

Nonprofits Face Standardisation and Scalability Challenges in Implementing Capacity Development Programmes

Capacity development is complex and context-specific, requiring a comprehensive localised understanding and a focus on building the capacities of individuals, organisations, and systems. It is a continuous process requiring sustained effort and resources. Hence, it is essential to take a participatory approach that engages all stakeholders and ensures ownership and leadership by local actors.

Several challenges emerge in developing and implementing capacity development initiatives. The hurdles get more pronounced with large-scale programmes, especially in a diverse country like India. These challenges include limited human resource capacity, limited collaboration and coordination, and a multilingual user base making the entire capacity building activity inefficient and time-consuming.

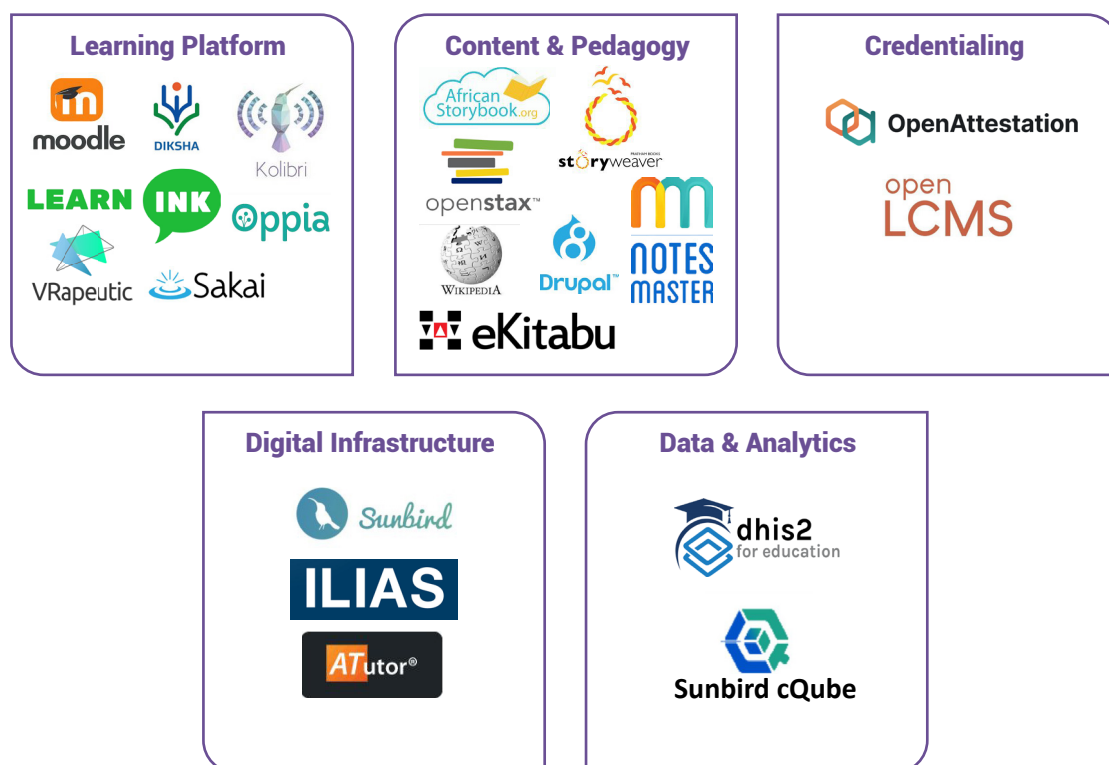
Figure 4: Different challenges to capacity building⁶



Digital Public Goods (DPGs) Enable Nonprofits to Reimagine and Redesign Capacity Building Initiatives





DPGs are replicable and open-access solutions which solve challenges in the ecosystem. By utilising building blocks within specific sectoral strategies, DPGs can address issues concerning standardisation and scalability. Nonprofits in the healthcare industry have adopted DPGs like Bahmni⁷ and Commcare⁸ to make tracking and analysis for on-ground teams easier. Aam Digital, a project management tool, has been used by nonprofits like YOJAK (Youth Organization for Joining, Action and Knowledge) and Ashayen to track data and compile donor reports in the education and livelihood sectors.⁹

Figure 5: An overview of the landscape of DPGs in Education and Learning¹⁰



DPGs have helped nonprofits navigate the challenges associated with capacity building in the education sector. For example, Khan Academy has bridged the digital divide by using Kolibri to take their instructional aids for teachers offline, making them more accessible.¹¹ Azim Premji Foundation uses DRUPAL to streamline its workshops, teacher development programmes and teaching materials across its extensive network of educators, facilitators and leaders.¹² DPGs are consistently used by nonprofits to enhance collaboration, standardise processes and create replicable solutions across large populations and geographies.

Figure 6: Examples of DPGs used in educational activities¹³

Digital Public Goods	What They Do
Kolibri 	A learning platform to support educational activities in areas without internet access. It is used to access educational resources and create assessments through coaching dashboards to track learners' progress.
DHIS2 	The DPG enables collection, analysis and visualisation of learners' data to manage classroom performance and learning outcomes. Aggregate data is also used to inform decision-making and optimise resource allocation to improve learning activities.
OpenAttestation 	A framework which allows the endorsement and verification of documents related to learning activities, such as marksheets, completion certificates, identification documents, and so on.
StoryWeaver 	An open access resource for multilingual storybooks for children in the most disadvantaged locations around the world to promote literacy acquisition. Storybooks are sourced from multiple publishers and made accessible, both online and offline, for children.

The Sunbird suite, with over 17 building blocks, presents a comprehensive starting point for reimagining capacity building initiatives in education.¹⁴ Multiple use-cases of its building blocks have been realised in other areas, such as health and skilling. Platforms such as DIKSHA, iGOT and NULP are powered by the building blocks to address sectoral challenges. The Integrated Government Online Training (iGOT) is an online, module-based training platform that offers training and certification for government officials across verticals and levels, while the National Urban Learning Platform (NULP) is a collaborative network for Indian administrators as a peer-to-peer learning platform. The national Digital Infrastructure for Knowledge Sharing (DIKSHA) is built on the open-source technology of Sunbird to devise solutions for several stakeholders across the education system, such as students, parents, teachers, school administrators and government functionaries.

Figure 7: Building blocks of Sunbird to be used for capacity building initiatives¹⁵

Sunbird as a DPG – Building Blocks			
Software			Specifications
Anuvaad AI/ML powered end-to-end document translation tool	coKreat Crowdsourcing of interactive content as digital assets	cQube Analysis & insight development for policy implementation	DSEP Framework for discovery of education and skilling elements
ED Multi-channel software for content distribution, learning as primary need	inQury Assessment & survey tool allowing question banks in various formats	Knowldg Tools & services to organize, curate, create and maintain content	QuML Question Markup Language, for interoperable & reusable questions
Lern Create, manage, track learner journeys through active engagement	Obsrv Captures metrics, enable analytics through custom dashboards	RC Build & deploy electronic registries and trusted credential sourcing	Telemetry Specification for collecting real-time data and forwarding it to applications
Saral OCR capabilities for writing-to-text and other document digitisation	Serve Enables volunteer crowdsourcing, registries and interactions	UCI Omnichannel interface for logic-based automated chat conversations	VC Specs Specification for verifiable credentials across software and other applications

DPGs provide standardised and scalable solutions for capacity building programmes by nonprofits.

DPGs can solve the above-outlined challenges for capacity building programmes through various building blocks, which are independent, interoperable and configurable elements (specifications, software code, platform, or applications) that have the potential to be used independently or with each other. For example, by leveraging content such as videos, text lessons, quizzes, and multimedia resources through learning management systems like DRUPAL¹⁶ and Moodle LMS¹⁷, understaffed and low-resource nonprofits can facilitate self-paced courses for teachers' training. DPGs like Learn.ink bring learning platforms to mobile devices, making them affordable and accessible to a wider population. Nonprofits can benefit from a more streamlined and efficient delivery of capacity building initiatives with the help of DPGs.

Sunbird's building blocks as an illustrative example, help reimagine capacity building initiatives using DPGs. Coordination and collaboration are encouraged through the open-source, interoperable and evolving nature of DPGs such as Sunbird Lern that leverage knowledge repositories like Knowlg to facilitate the flow of information among trainers and trainees. Possibilities for multilingual content across platforms are enabled by the Anuvaad and Vakyansh building blocks. Furthermore, the evaluation of trainees' performances is conducted efficiently through the integration solutions such as Saral, inQuiry, and cQube. By leveraging document wallets, such as Digilocker, skilling programmes linked with verifiable credentialing becomes streamlined, increasing efficiency and scope of impact for the programmes, especially the underserved population.

Use Case 1: Training teachers for effective classroom teaching

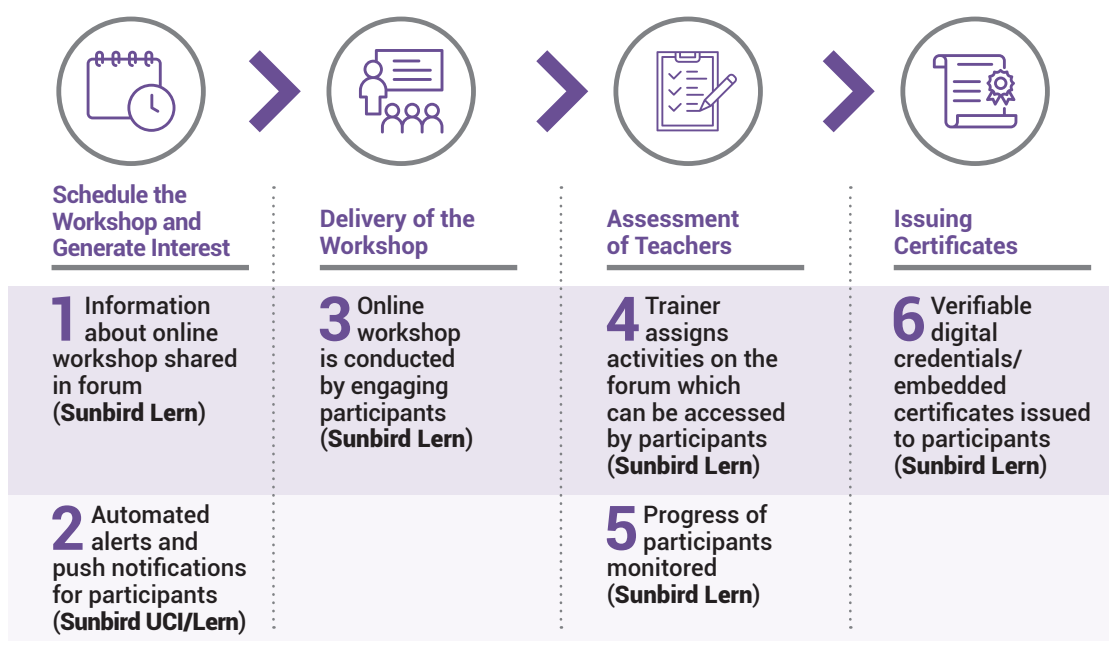
Nonprofits like Peepul and STiR Education have been conducting teacher training programmes in collaboration with state governments across India. Their large-scale capacity building programmes target over two lakh teachers and require the mobilisation of resources and efficient collaboration among the participants. By integrating building blocks from DPGs, e.g. Sunbird Lern, nonprofits will be able to optimise their programmes to be scalable to increase the pace of improvement in learning outcomes and address the global learning crisis.¹⁸

Mobilisation of participants and access to resources are major challenges for large-scale training programmes. Additionally, the delivery of in-person workshops and assessments of teachers to issue certifications becomes a resource-intensive and time-consuming process. DPGs, such as the DIKSHA platform, have been leveraged by Peepul to launch digital learning modules for teachers spread across Madhya Pradesh and monitor their progress for steady assessments.¹⁹ These courses have achieved over 60 lakh enrolments at over 90% completion rates. Consecutively, they have also been replicated by other state governments in Rajasthan and Haryana, thereby contributing to an extended impact on the government education system.²⁰

Sunbird Lern, which powers DIKSHA built on the NDEAR ecosystem, will help optimise teacher training programmes. Using this building block, nonprofits will be able to solve challenges by engaging large cohorts of teachers spread across several locations:

- **Common forum for collaborative learning:** Sunbird Lern helps the master trainer create an online training course where teachers are grouped into batches. Using a login ID, participating teachers can access course details and training resources on Sunbird Knowlg. Every batch has discussion forums to encourage collaboration among participants, thereby enriching the learning experience. Additionally, common forums also help trainers coordinate activities with reduced effort. Participants can be easily notified about upcoming activities and deadlines.
- **Continuous progress monitoring:** The batch-based training on Lern enables trainers to review and monitor user progress. Notifications about assessments scheduled on the platform are sent to users. With information derived from the platform, the compilation of progress reports and certification are easily managed towards the end of the course. Online assessments enhance accessibility and streamline the pre-certification process for nonprofits.
- **Issuance of verifiable credentials:** Based on the rule of qualification, embedded certificates are issued for each participating teacher. The certificates linked to each user ID contains details of the training completed, competencies or learning outcomes achieved by the teacher and the issuing authority. All these details are pulled from the Sunbird Lern interface in a streamlined and time-efficient process.

Figure 8: Training of teachers made more efficient using DPGs like Sunbird Lern²¹



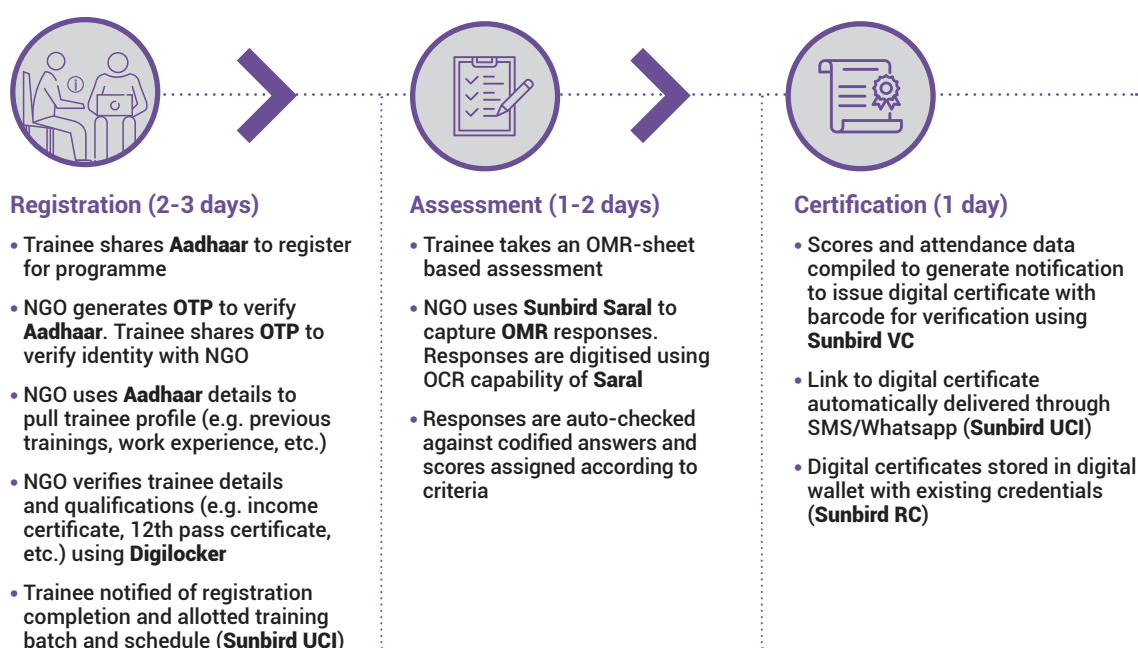
Use Case 2: Vocational training of school students for job readiness

Nonprofits deliver vocational training to recent school graduates to address the skills shortage in the country. It is estimated that there are 1.28 crore young people newly entering the labour market every year, and not enough Industrial Training Institutes (ITIs) to cater to them.²² Labournet, a for-profit enterprise, has pioneered vocational ed tech to harness the benefits of standardised and scalable skilling along with the stacking of micro-skills to increase the employability of their trained candidates, specifically underprivileged youth and women. Nonprofits like Lend A Hand India (LAHI) and Bosconet, which work to enable school students to attain a dignified livelihood through marketable skills, will be able to achieve large-scale impact by integrating NDEAR-compliant DPGs.

The open-source content and interoperability of DPGs like Sunbird will help nonprofits build cost-effective tech solutions for vocational training. For example, Sunbird RC and Sunbird VC used in congruence to create a repository of users' credentials will be useful in generating verifiable credentials for participants who have completed the training programme. Coupled with digital wallets, such as Digilocker, credentialing of a candidate becomes seamless making them job-ready and unlocking several employment opportunities in the market.

The journey of a vocational training programme led by a nonprofit has six notable steps: mobilisation, registration, training, assessment, certification and placement. Three of these steps—registration, assessment and certification are the most resource-intensive and time-consuming processes. By combining the capabilities of Sunbird's building blocks, such as Sunbird UCI, Sunbird Saral, Sunbird VC and Sunbird RC—along with digital credentials and wallets such as Aadhaar and Digilocker, nonprofits will be able to streamline and fast-track processes to increase efficiency and scale of impact.

Figure 9: Making verifiable credentialing efficient using DPGs²³

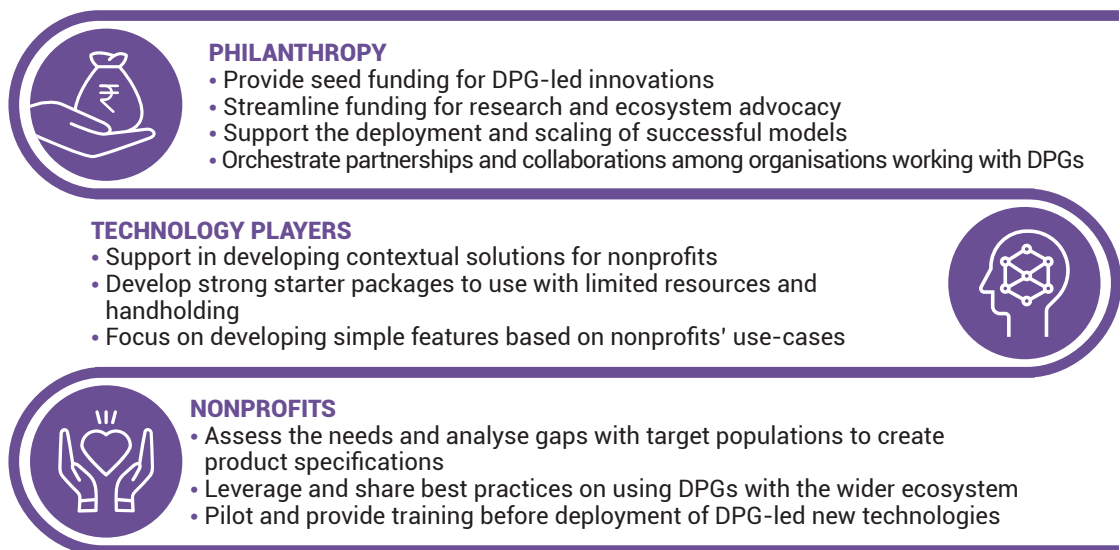


A Multi-stakeholder Engagement Supports the Scalability of DPGs for Capacity Building Purposes

Capacity building as a continuous process requires the sustained efforts of diverse stakeholders such as philanthropic organisations, technology providers and nonprofits. DPGs are relatively new in being imagined as potential solutions for challenges in capacity building programmes. The patient capital of philanthropy should help drive research and development of tech solutions built in collaboration with technology players. Consequently, nonprofits should drive the usage of these new technologies and present ground-level feedback to help in their optimisation. Therefore, an ecosystem-level solution would address drawbacks associated with limited funding, shortage of personnel and the lack of an existing network to drive the reimagination of capacity building processes.

Below we recommend steps towards increasing the accessibility and growth potential of technology products created with the help of DPGs to address some of the existing challenges in capacity building programmes.

Figure 10: Recommendations for multiple stakeholders in the DPG ecosystem



RECOMMENDATIONS FOR PHILANTHROPY

Provide seed funding for innovations fueled by DPGs.

Philanthropy capital should drive the usage of DPGs when building technology solutions for capacity building programmes. By providing access to resources for content creation, platform development, technology infrastructure and user interface design, the patient capital of philanthropy will enable the production of high-quality technological products for mass consumption. A significant case in point is Kolibri, a DPG in the ed-tech space, which has

REIMAGINING CAPACITY BUILDING IN EDUCATION WITH DPG

expanded to over 220 countries and territories with the support of the William and Flora Hewlett Foundation and Vodafone Foundation, among others.²⁴ Their ongoing innovation of an Android application will further benefit learners and make access to learning materials more convenient.

Streamline funding for research and ecosystem advocacy.

Research funded by philanthropic capital will help envision use cases for DPGs to solve challenges within capacity building programmes and others. Additionally, it will open up the space for conversations surrounding the potential of DPGs to create a greater impact in other social sectors besides education. Investments made in research projects that explore the impact and effectiveness of DPGs will strengthen the potential of future possibilities using DPGs. For example, ONDC recently funded a report by McKinsey and Co. to understand the landscape of digital commerce in India and how DPGs such as ONDC help democratise it to scale economic growth.²⁵ The report (drawn extensively from primary research with stakeholders) presents insights on the current state of ONDC in India with regard to the digital economy while presenting a roadmap for future possibilities.

Support the deployment and scaling of successful models.

Philanthropy capital helps scale successful DPGs by providing funding for deployment and implementation activities. By engaging the ecosystem through awareness-raising initiatives and partnering with other organisations, philanthropy should help DPGs reach a wider audience, gain mass support, generate more use cases and replicate successful models for further use. Furthermore, disseminating case studies of DPGs enhances scaling and wider reach maximising the impact and benefits on society.

Orchestrate partnerships among educational institutes, technology companies and government entities.

Philanthropic funding should support collaborative initiatives, networks and consortia that bring together technology providers, educational institutions, content creators and other stakeholders. By fostering collaboration and partnerships among organisations working with DPGs, through knowledge sharing, resource pooling and collective action, there will be enhanced growth and impact of DPGs across a larger population.

RECOMMENDATIONS FOR TECHNOLOGY PLAYERS

Support in developing contextual solutions for nonprofits.

Through collaboration and coordination with nonprofits, technology players should curate context-specific technology solutions for current challenges in the social sector. Beginning with the identification of the whitespace for emerging technologies, tech companies should ensure scalability and interoperability across their development process. It will enable them to create impactful digital solutions that address user needs and drive positive change in capacity building programmes, among others. For example, Tekdi Technologies has created Sunbird SAAS and PAAS that are easily adaptable to address societal challenges such as girl education (Educate Girls) and learning losses in school (Transform Schools: Project ALT).²⁶

Develop strong starter packages for nonprofits to use with limited resources and handholding.

Technology players should create comprehensive documentation and user-friendly tutorials to explain features, functionality and usage of new technology products. The aim of the documentation should be to make it as accessible and easy to understand as possible. Instructions on installation and configuration of new software should also be included and automated, if possible, to streamline the initial setup process. Other preconfigured templates with a basic workflow that aligns with common nonprofit use cases help nonprofits visualise and adapt the software according to their evolving contexts.

Focus on developing simple and limited features which focus on nonprofit use cases.

Technological products which are intuitive and easy to use make them more accessible, increasing the scope of their reach and scalability. It allows for faster development and deployment at the ground level, thereby optimising resource utilisation and also fast-track the intended social impact. By narrowing down the features to the most critical functionalities, technology companies should ensure the easy comprehension and engagement of the intended users. They should also ensure that the product is perfectly aligned with the user context and provides maximum value. For example, Bahmni was designed by Thoughtworks with the intent to create a feature-rich hospital management system for users unfamiliar with technology. Consecutively, the product was optimised to work in low-resource (including monetary, infrastructure and human resources) environments. This way, Bahmni aims to improve patient care through data-driven decision-making by addressing the digital divide as an existing challenge within the healthcare system in India.²⁷

Similarly, Glific allows nonprofits to quickly and efficiently launch a two-way interactive platform to engage a large number of community members. Its ready-to-use technology platform for outreach and communication is customisable according to the user's language and content preferences, making grassroots communication seamless, effective and cost-efficient. It aims to solve the scarcity of resources, namely expertise, time/attention and varied content.²⁸

RECOMMENDATIONS FOR NONPROFIT ORGANISATIONS

Assess the needs and analyse the gaps within target populations to create product specifications.

Research and analysis by nonprofits to understand the existing landscape of capacity building programmes within a community helps identify areas where digital solutions using DPGs make a significant impact. It is critical to develop product specifications before DPGs are transformed into solutions for their programmes. Nonprofits should assess their specific requirements and preferences by directly interacting with end-users and beneficiaries. Informed by the recommendations based on the nonprofits' understanding of the local context, tech products need to be aligned with the needs and realities of the target beneficiaries.

Leverage and share best practices on using DPGs with the larger ecosystem.

By establishing an ongoing conversation about the best practices of using DPGs in the social sector, nonprofits' engagement with the larger ecosystem will encourage the development and adoption of digital solutions for social issues. This conversation will further influence collaboration among users and developers to envisage novel possibilities through DPGs across all social sectors.

Pilot and provide training before full-scale deployment of technology products created using DPGs.

Nonprofits should help in the seamless integration of DPGs into day-to-day activities with the help of training workshops for users of such digital solutions. They should assist in the deployment of new technologies by coordinating pilot programmes with small user groups, thereby ironing out any difficulties in the initial stages.

In general, to drive the usage of tech products, there is a need to enhance the digital literacy and skills of target users. Nonprofits should guide the community to use tech products effectively for capacity building purposes. Additionally, they should also work towards improving access to technology and infrastructure in underserved areas by advocating for improved internet connectivity, supporting the availability of low-cost devices, and addressing barriers such as lack of electricity or internet access. By resolving these systemic issues, nonprofits can drive the growth of tech products, thereby flagging the need for DPGs as non-contextual solutions for contextual problems.

Conclusion

DPGs hold immense valuable potential for capacity building by nonprofits due to their characteristic open-source framework and diverse use cases. For nonprofits in the education sector, in particular, they present a unique opportunity to design, develop and implement initiatives that are standardised and replicable across states, age groups and other contextual factors. Existing use cases like the development of DIKSHA already showcase platforms/all-in-one solutions, while other tailored solutions also exist. DPGs will help drive the standardisation and scalability of capacity building programmes for underserved populations. Platform-thinking of capacity building programmes will help target a larger population by integrating existing databases such as Aadhaar and Digilocker.

At the same time, leveraging the full benefits of such DPGs needs sustained long-term effort from ecosystem players, especially in terms of capital and building networks for continued open-source contribution and scaling of usage. While philanthropy should support the above objectives, non-funding support such as implementation or deployment assistance from technology players for wider adoption and consistent updates will be instrumental for effective DPG usage for capacity building.

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