



21st CENTURY SKILLS IN INDIA

STATE OF THE SECTOR REPORT 2022



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FOREWORD

India's transformative generation of adolescents and youth are poised to inherit and shape the future of work. The need to equip them with the skills, knowledge, and attitudes to survive and thrive in the 21st Century, has therefore become a crucial policy imperative. This is most prominently exemplified by the National Education Policy 2020, which highlights the urgent need for '21st century skills', marking a significant step towards an enabling policy and governance ecosystem for the facilitation of frontier skills and capacities among India's youth. In this context, the first step is to build an informed understanding of this space.

In times of tectonic change, confronted with a digital future, the changing nature of work, complex challenges like intersectional deprivations and climate change, and new economic frameworks, young people need to learn a range of unconventional competencies. The 21st century skills portfolio helps build confidence and nurture a growth mindset, allowing young people to forge suitable, creative, and sustainable career paths. It includes the basic 4 Cs - Communication, Collaboration, Creativity and Critical Thinking - and over the decades, through extensive multi-stakeholder collaboration, an expanded list of more than 40 skill set, with over 65 international and national frameworks to guide 21st century skills development efforts.

The report helps build collective understanding on the India-centred assessments and interventions of 21st century skills, taking a step ahead from the limited, and fragmented evidence currently available on the sector. By thorough research and comprehensive stocktaking of various large-scale interventions, studies and assessments (of learning levels) across age groups and states in India, it offers a macro-view of this skills sector.

This comprehensive State of the Sector Report on 21st Century Skills in India will be a useful guide and reference for youth leaders and policy makers and influencers at all levels in understanding the landscape, challenges, enablers, opportunities, and best practices related to this domain. The research team has collated rich and diverse insights from extensive literature review, and by consulting experts, and youth themselves.

I am confident that it will be a key tool among stakeholders in government, civil society

organizations actively engaged in the space of education and skill development at the grassroots level, as well as organizations imparting and delivering entrepreneurship or life skills program, and update the industry at large.

I hope that this unique initiative will lead to more in-depth analytical annual reports on elements of the 21st century skills space, with this report being the first of many more to follow. I congratulate the teams of YuWaah (Generation Unlimited in India) at UNICEF and GRAAM that have invested conscientious efforts in preparing this report within a short span of time.



Yasumasa Kimura,
Deputy Representative, Programmes, UNICEF India



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We would also like to express our gratitude to Ms. Geeta Goel, Country Director, Michael and Susan Dell Foundation for structuring the vision and scope of the report, and offering her valuable inputs. The study team thanks Ms Anumeha Singh (Executive Director-Management Consulting), Ms Atshara Nelson (Associate-Management Consulting), and other team members from the PwC team who have reviewed the draft report and given useful suggestions for its enhancement. The initial methodological framework for this study, prepared by PwC, YuWaah and Dream a Dream has contributed to the enrichment of the report by guiding the collection of perspectives from visionaries and other stakeholders.

A great deal of credit for the interesting insights presented in this report goes to the 33 visionaries (experts) interviewed for this study. The study team is extremely grateful to these highly accomplished policy, academic and corporate experts for generously sharing their valuable time and original insights.

Representatives of the core stakeholders in the 21st Century skills space - i.e. the youth, parents and principals - have enthusiastically participated in the Focused Group Discussions conducted to gather data for this report. The study team conveys its heartfelt thanks to all the school, college and ITI principals, parents and youth from Punjab, Jharkhand, Assam, Gujarat and Karnataka who shared their experiential insights in these discussions. The 12,000 plus youth who responded to the U-Report poll also deserve a special mention and thanks.

Sd/-

Dr. Basavaraju R Shreshta
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INDEX

Page No.

Executive Summary

12

Chapter 1 : Introduction

15

1.1	Importance of 21 st Century Skills	15
1.2	State of Policy on 21 st Century Skills	19
1.3	21 st Century Skills : Fragmented Space and Understanding	21
1.4	Rationale for the Report	22
1.5	Objectives of the Report	22
1.6	Methodology	23

Chapter 2 : Landscape Analysis

29

2.1	Landscape Map of Large-Scale Interventions	29
2.2	Insights from Landscape Analysis	32
2.3	Deep Dive into Select Programmes	33
2.4	Key Findings of the Chapter	47

Chapter 3 : Challenges, Whitespaces and Enablers

49

Part A - Challenges and Whitespaces	49	
3.1	Challenges in Implementation	49
3.2	Challenges in Measurement	54
3.3	Whitespaces in Transacting 21 st Century Skills	56
Part B - Enablers and Opportunities	57	
Part C - Key Findings of the Chapter	61	

Chapter 4 : Best Practices for Scale

63

4.1	Introduction	63
4.2	Convergence and Partnerships	65
4.3	Role of Technology	66
4.4	Training of Teachers/Master Trainers	68
4.5	Other Best Practices for Reaching Scale	68
4.6	Key Findings of the Chapter	69

Chapter 5 : Way Forward

71

5.1	Critical Success Factors to Transacting 21 st Century Skills at Scale	71
5.2	Recommendations for Stakeholders in 21 st Century Skills	73

	Page No.
Annexure I : Understanding the State of Knowledge, Research and Policy	77
Part A - 21 st Century Skill Frameworks and Definitions : National and International	77
Part B - State of Policy on 21 st Century Skills	83
Part C - Main Topics covered in the Literature on 21 st Century Skills	89
Part D - State of Research on 21 st Century Skills and Gaps in Research	91
Annexure II : International Best Practice	93
References	95
Appendix I : Details of Methodology	98
Appendix II : List of Interviewed Visionaries	104
Appendix III : Extracts of Visionary Interviews for Identifying Key Interventions	106
Appendix IV : Additional Insights from Stakeholder FGDs and UReport Polls	108
Appendix V : Description of Available Assessment Scales	112

LIST OF TABLES

Chapter	Table No.	Titles of the tables	Page No.
Chapter 2	Table 2.1	Programmes shortlisted for deep dive amongst large scale 21C skill interventions	34
Chapter 5	Table 5.1	Summary of Best Practices for various dimensions	71

LIST OF FIGURES

Chapter	Figure No.	Titles of the figures	Page No.
Chapter 1	Figure 1.1	Importance of 21 century skills according to principals	17
	Figure 1.2	Summary of data collection methods for the report	24
	Figure 1.3	Response rates in the UReport poll	25
Chapter 2	Figure 2.1	Landscape analysis of shortlisted large-scale interventions	31
	Figure 2.2	Summary of geographical coverage of shortlisted large scale interventions	32
	Figure 2.3	Age-group targeting of large-scale interventions	33
	Figure 2.4	21 century skill components addressed by large-scale interventions	33
Chapter 3	Figure 3.1	Assessment related challenges in the 21 century skills domain	54
	Figure 3.2	21 century skills whitespaces	56
Chapter 4	Figure 4.1	Challenges faced in scaling up 21 century skills interventions	63
	Figure 4.2	Major approaches used for successfully scaling up 21 century skill interventions	64
	Figure 4.3	How technology helps in enhancing the scale of interventions	66
Annexure I	Figure A (1)	YuWaah/GenU 21 century skills framework of UNICEF	77
	Figure A (2)	The P21 Framework on 21 century skills	78
	Figure A (3)	WEF framework on 21 century skills	79
	Figure A (4)	CASEL-5 SEL framework	79
	Figure A (5)	CBSE Handbook's classification of 21 century skills	80
	Figure A (6)	Life skills identified in the National Curriculum Framework 2005	81
	Figure A (7)	Skill components of the Employability Skills Curriculum of DGT, MSDE	81
	Figure A (8)	NSDC's Social-Emotional Learning (SEL) Framework for Integration into QPs of Vocational Skill Courses	82
	Figure A (9)	MEPSC's Generic Skills for Employability	82
	Figure A (10)	21 century skills policies and programmes of different ministries of Government of India	83

LIST OF ABBREVIATIONS

ANI	Asia News International
ASER	Annual Status of Education Report
ASLS	After School Life Skill
B.Ed	Bachelor of Education
BGMS	Bhartiya Grameen Mahila Sangh
CAPI	Computer Assisted Personal Interviewing
CASEL	Collaborative for Academic, Social, and Emotional Learning
CBSE	Central Board of Secondary Education
CCE	Continuous and Comprehensive Evaluation
CCT	Creative and Critical Thinking
CEO	Chief Executive Officer
CIFF	Children's Investment Fund Foundation
COVID 19	Corona Virus Disease of 2019
CRC	Cluster Resource Center
CSSL	Center for Science of Student Learning
CTS	Craftsmen Training Scheme
DET	Departments of Employment and Training
DGT	Director General of Training
EMC	Entrepreneurship Mindset Curriculum
FGD	Focus Group Discussion
FLIPS	Flexibility and adaptability, Leadership and Responsibility, Initiative and Self direction, Social and cross cultural interaction
GEC	General Education Council
HC	Happiness Curriculum
IALSE	the Indian Association of Life Skills Education
ICRW	International Center for Research on Women
IIM	Indian Institute of Management
IMT	Information literacy, Media literacy, Technology literacy
ISELF	Indian Social and Emotional Learning Framework
ISO	International Organization for Standardization
ITI	Industrial Training Institute

J-PAL	Abdul Latif Jameel Poverty Action Lab
LAN	Local Area Network
LMS	Learning Management System
LSAS	Life Skills Assessment Scale
LSC	Life Skills Collaborative
MEPSC	Management & Entrepreneurship and Professional Skill Council
MOE	Ministry of Education
MoHFW	Ministry of Health and Family Welfare
MOOC	Massive Open Online Courses
MSDE	Ministry of Skill Development and Entrepreneurship
NAAC	National Assessment and Accreditation Council
NCERT	National Council of Educational Research and Training
NCF	National Curriculum Framework
NEP	National Education Policy
NGO	Non Governmental Organization
NIE	National Institute of Education
NIMHANS	National Institute of Mental Health and Neurosciences
NRMC	NR Management Consultants
NSDC	National Skill Development Corporation
NSFE	National Strategy for Financial Education
NSQF	National Skill Qualification Framework
NSS	National Service Scheme
PARAKH	Performance Assessment, Review, and Analysis of Knowledge for Holistic Development
PE	Peer Education
PPP	Public Private Partnership
PSSCIVE	Pandit Sunderlal Sharma Central Institute of Vocational Education
PwC	Pricewaterhouse Coopers
QP	Qualification Pack
RBI	Reserve Bank of India
RGSEAG	Rajiv Gandhi Scheme for Empowerment of Adolescent Girls

EXECUTIVE SUMMARY

The 21st Century is a time of significant technological change, which in turn is driving changes in society and the economy. Young people need to be equipped with the relevant skills, attitudes, and knowledge to deal with such changes. UNICEF-YuWaah's 21st Century skills Framework defines 21st Century skills as a set of knowledge, capabilities, and attitudes that “equip youth to transition into a fast-changing world of opportunities and create success for themselves”.

The 21st Century skills space is a complex and fragmented one, since there are multiple terminologies, definitional and content frameworks, and players. Therefore, it is crucial to systematically study, map and analyze it to promote a coherent understanding of the status of this sector. Hence, UNICEF commissioned the writing of the State of the Sector Report on 21st Century skills in India, which has been prepared by GRAAM. Secondary data from the available literature and primary data from visionary (expert) interviews, Focused Group Discussions with core stakeholders such as youth, parents and principals and from an online poll of youth have been used for preparing this comprehensive report.

This report aims to identify the key stakeholders and agencies, and key scalable interventions catering to young people in the domain of 21st Century skills in India. It also draws attention to the best practices, enablers and challenges in the 21st Century skills space and makes actionable recommendations for strengthening the 21st Century skills ecosystem.

This report examines the policy and intervention landscape of 21st Century skills in India. In the policy domain, the National Education Policy (NEP) 2020 and the CBSE Handbook on 21st Century skills have been amongst the most significant initiatives. NEP 2020 gives centrespaces to 21st Century skills by envisioning the development of 21st Century skills as the aim of education and the integration of 21st Century skills in mainstream educational instruction. Apart from these initiatives of the Ministry of Education, certain other ministries including the MSDE have taken up initiatives for promoting 21st Century skills among young people.

In the intervention domain, this report has identified six large-scale interventions that have more than one lakh beneficiaries and are mentioned by interviewed visionaries as being the most significant programs for young people in the field. These are Happiness Curriculum of Dream a Dream, Adolescent Education Programme of Magic Bus, School Cinema of LXL Ideas, MyQuest of Quest Alliance, Adolescent Empowerment Programme of Breakthrough and Entrepreneurship Mindset Curriculum of Udhyam Learning Foundation.

The use of technology, government partnerships and the training of trainers/teachers are the common strategies that such organizations have used for scaling up. Partnerships with state governments have helped these organizations achieve massive scale and comprehensive reach. The use of technology has helped by making pedagogy more effective, and delivery and assessment more efficient.

Evidence of impact is also crucial for organizations to achieve scale. The use of RCTs and multiple evaluations are some of the best practices of large scale interventions for producing robust impact evidence for their 21st Century skill interventions. In their endeavour to achieve scale and impact, large scale organizations in the space are adopting innovative practices such as gamified learning and the use of mass media including cinema. Best practices of large scale organizations include enhancing social inclusion through the use of 21st Century skills for changing gender attitudes and overcoming gender discrimination.

A number of challenges exist in the 21st Century skills space. The space is very fragmented with a plethora of low scale interventions and with less collaboration among different players. One of the most critical challenges in taking 21st Century skills to youth relates to the building of capacity of teachers for transacting 21st Century skills. More support is needed for 21st Century skills promotion from key stakeholders like parents and principals. Providing 21st Century skills to less privileged sections with a background of nutritional and educational adversity is another major challenge. Assessment of 21st Century skills is ridden by difficulties like the lack of tools to measure 21st Century skills as a whole, and the lack of common understanding of 21st Century skills and their outcomes.

Lack of enough interventions for out of school young people, remote rural areas, marginalized youth like SC / STs and for orienting parents are the major whitespaces for the domain of 21st Century skills.

Notwithstanding the above mentioned challenges and gaps, a number of enablers enhance the likelihood of more high quality, collaborative and large-scale work happening in the future in the 21st Century skills space. The importance given by NEP 2020 to 21st Century skills has given a boost to the prominence of such skills with policymakers, educationists and other actors. In the context of a fragmented 21st Century skills space, the Life Skills Collaborative has done pioneering work in bringing organizations together for designing programmes and assessments. The India Life Skills Glossary developed by the Life Skills Collaborative is a significant step for building a common understanding and common metrics related to such skills. Available content frameworks such as the Generic Skills Qualification Pack developed by the MEPSC for industry roles are a major enabler for upcoming 21st Century skills interventions in the vocational skills domain.

For the further development of 21st Century skills in India, it is critical to develop a unified national framework of 21st Century skills. There is also a need to intensify and support collaborative platforms on the lines of the Life Skills Collaborative and UNICEF-YuWaah's Young Warrior NXT initiative. To ensure that youth (including trainees of vocational/skill development courses) are better equipped with 21st Century skills, there is a need for a systematic dialogue between policy makers and industry to map the most industry-relevant 21st Century skills. Vocational skill programmes should

enhance the time and attention given to 21st Century skills. To take forward NEP 2020's vision of mainstreaming 21st Century skills in education, teachers should be trained at scale through a systematic strategy for developing the competencies for integrating such skills in their teaching. There is a need to re-examine and reform the existing teacher training curriculum to ensure that teachers are equipped for the massive task of inculcating 21st Century skills amongst young people.

CHAPTER

1

Introduction

1.1 Importance of 21st Century Skills

The 21st Century is a time of significant technological change, which in turn is shaping changes in society and the economy (CBSE, 2020; UNICEF, 2020). New technological developments and the widespread automation of work have created the need for youth to be well-versed not only in fundamental digital skills but also in new technologies (UNICEF, 2020). Young people need to be equipped with certain skills, attitudes and knowledge to deal with such changes. Disruptive technological changes have made it difficult to predict what the jobs of the future will be like. Therefore, youth need to be equipped with the mindset and competencies to face jobs that don't even exist yet (Dede, 2010). The unpredictable nature of employment in the 21st Century requires youth to be cultivated into lifelong learners.

India is currently experiencing a demographic dividend, i.e., the majority of its population is in the working-age bracket of 15-59 years. However, the true benefits of a demographic dividend can be reaped only when youth possess the relevant skills to contribute productively to the economic growth and progress of the nation. In the Indian context, a significant challenge in equipping youth with the competencies required for becoming effective human capital is the inadequate quality of education, since young people lag behind in age-appropriate literacy and numeracy skills.¹ Even educated youth lack employability skills; the India Skills Report 2022 noted that only 46.2% of graduates are highly employable (Wheebox, 2022). Such findings reinforce the importance of facilitating the development of 21st century skills in youth from diverse educational backgrounds.

UNICEF-YuWaah's 21st century skills framework defines 21st century skills as comprising knowledge, capabilities and attitudes that “equip youth to transition into a fast-changing world of opportunities and create success for themselves”. This definition stresses that such skills allow youth to build on their potential and contribute as productive and responsible citizens in shaping a sustainable and inclusive global environment (UNICEF, 2020).

To adjust to the unpredictable social and economic scenario in the 21st Century, young people also need to possess socio-emotional competencies such as resilience and adaptability. Therefore, 21st century skills encompass not only higher-order thinking skills (like creativity and critical thinking) and technology-related literacies, but also a range of socio-emotional skills, which are necessary for the holistic development of the individual (CBSE, 2020).² The 4Cs of communication, collaboration, creativity and critical thinking,

¹ ASER reports for 2018 reveal that only 25% of youth aged 14-18 were able to read basic text fluently (Current Affairs Review, 2020)

² Annexure I provides details of the components of 21st century skills

as highlighted in the well-known Partnership for 21 Century Learning framework (Battele for Kids, 2019) are key skills for young people to progress successfully into the 21 Century as resilient, empathetic and skilled individuals.

Further, evidence from different research studies shows that 21st century skills (including life skills) help youth enhance their academic learning, improve their mental health, and empower themselves in family and community contexts. Such evidence reinforces the importance of 21st century skills for the holistic development, well-being and empowerment of youth. As detailed in Annexure I of this report, different studies show multiple impacts of 21st century skills :

- Improvement in self-esteem and confidence (Yadav & Iqbal, 2009; Rani & Singh, 2015).
- Enhancement of academic learning outcomes among young people (Subasree, 2015) and motivation towards higher education (Akshaya Patra & Edumedia, 2012).
- Empowerment of girls (Edmunds, Feigenberg and Leight, 2016; Arur & DeJaeghere, 2019). Such skills enhance the coping skills of girls, make them more assertive, and have been proven to enhance the age of marriage.
- Positive outcomes for youth from vulnerable communities, including enhanced emotional stability and empathy (Joseph & Thomas, 2017).
- Reduction of suicidal thoughts amongst adolescents (Kaur, 2021).

Principals and parents who participated in discussions (FGDs) for this study demonstrated conviction about the importance of 21st century skills. Principals mentioned social, economic, technological and mental health-related reasons to substantiate the importance of 21st century skills (Figure 1.1). Parents who participated in the FGDs added that students need to be equipped with 21st century skills since higher marks in school exams did not necessarily make them employable.

In young people's FGDs conducted for this study, it was seen that some young people had not heard the terms 'life skills' or '21st century skills.' However, they demonstrated awareness of some components of

Today, the curriculum is being updated frequently, however, by the time the updated curriculum is implemented, a lot of changes/advancements in technology would have taken place. This is where 21st century skills come into play. Creative thinking and critical thinking should be used to prepare for future challenges.

ITI Principal - FGD Participant

such skills. Youth from different geographical contexts and educational backgrounds (ranging from school dropouts from Assam to college graduates from Punjab) spoke about similar reasons why 21st century skills are important – to build confidence and achieve personal and professional growth.

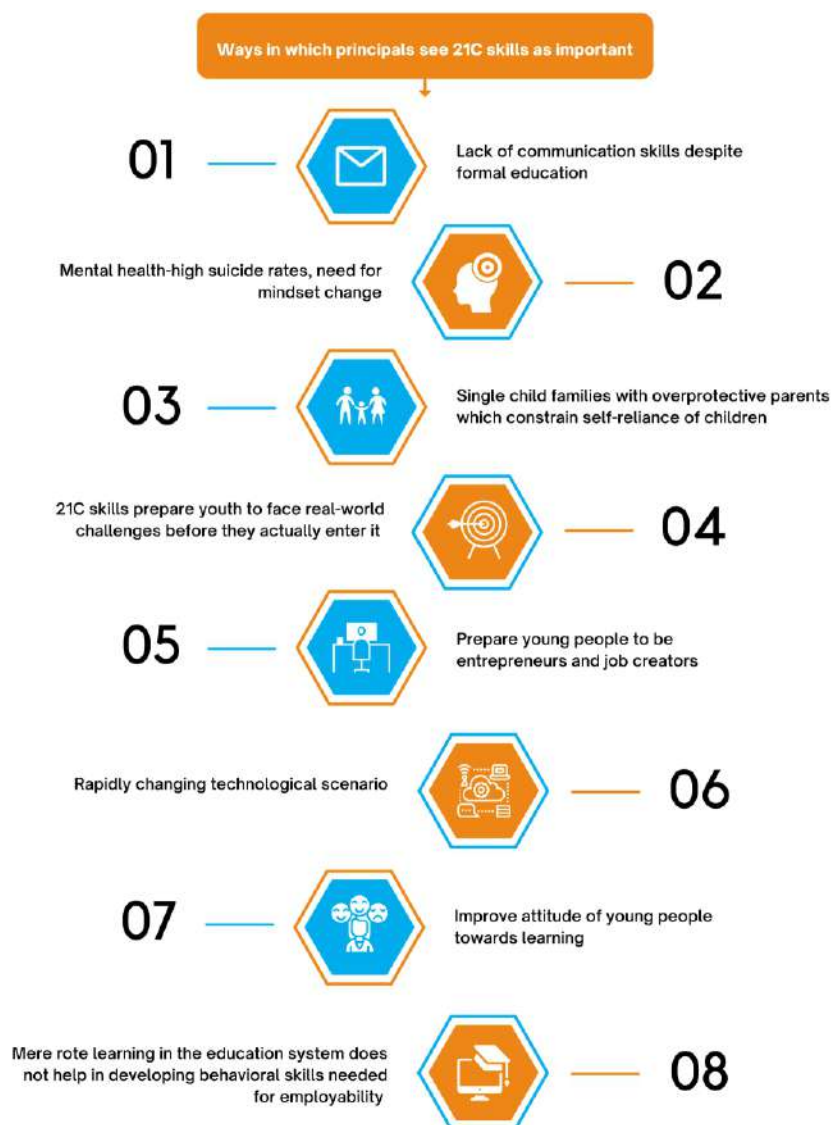


Figure 1.1 Importance of 21st century skills according to principals

Interestingly, youth from diverse educational backgrounds identified certain common 21st century skills as being the most important. Communication skills and confidence³ were among the most frequently mentioned skills that are considered important by youth. There were also unique elements identified by specific groups, for example, school dropout girls from Jharkhand mentioned their desire to cultivate the abilities of 'new ways of thinking' (creativity), of distinguishing right and wrong, and of basic digital skills. Appendix IV includes details of the skills considered important by young people of various educational backgrounds.

³ Though confidence is not mentioned as a separate 21st Century skill in the UNICEF-YuWaah framework on 21st century skills, it is closely related to resilience, which falls in the category of personal skills.

'Himmatwali' (courageous and resilient) people can speak more freely to *'bade log'* (authorities); that way our work can be done (for example getting signatures). We feel scared to speak to the authorities.

Young out-of-school girl, FGD participant, Jharkhand

On being briefed about the concept and components of 21st century skills, youth participants of the poll done for this study also attested to the significance of such skills. 71% of such youth responded that 21st century skills would help one get a job more easily.

Employers also attach importance to 21st century skills as being critical competencies for potential employees. Visionaries from the corporate sector interviewed for this study perceive certain 21st century skills as being the most important for enhancing the employability of young people. Collaboration was the skill most frequently mentioned by such visionaries, followed by learnability, communication and digital literacy. Interestingly, collaboration and communication are social skills and find a place in the well-known 4Cs life skills framework. Such 21st century skills, therefore, prepare youth both for life and employment.

In school, students compete with each other, but in the corporate world, they have to collaborate with each other.

PK Jain, Group HR Head, Transport Corporation of India Ltd (TCIL)



1.2 State of Policy on 21st Century Skills

At the policy level, the term '21st century skills' has come into prominence since its mention in the National Education Policy 2020 (NEP 2020). NEP mentions the very aim of education as being the creation of holistic, well-rounded individuals equipped with 21st century skills.⁴⁵ NEP envisages the setting up of the General Education Council (GEC) which would be responsible for identifying the skills (including 21st century skills) that students must acquire in their studies to emerge as well-rounded individuals. The intent of the government to implement NEP recommendations in a time-bound manner is evident from its formulation of SARTHAQ, the implementation plan for NEP (Ministry of Education, 2020).

“NEP focuses on learning instead of studying and is based on critical thinking rather than curriculum, with a special focus on 'passion, practicality, and performance.' The policy will help tackle brain drain issues and help India become a 'knowledge economy' in the 21st Century.

Prime Minister Narendra Modi

”

NEP has brought 21st century skills to the mainstream educational discourse, however, required teacher training efforts for the same have not yet been taken up. NEP or SARTHAQ have also not indicated how the teacher training (Bachelor of Education) curricula would be reformed for preparing teachers for integrating 21st century skills. Another significant policy effort to incorporate 21st century skills in educational instruction was the launching of CBSE's handbook on 21st century skills in 2020 (CBSE, 2020). The CBSE handbook paves the way for a structured integration of 21st century skills in school

⁴ Though 21st century skills are newly prominent in the policy discourse, policy development on life skills, which constitute a significant part of 21st century skills, is not recent. In 2005, the National Curriculum Framework developed by NCERT had mentioned the need for linking education to life skills, and the CBSE subsequently introduced life skills in the curriculum. One important difference in the discourse related to 21st century skills and that related to life skills must be noted - 21st century skills are mainly understood to focus on preparing youth for the future of employment, whereas life skills are understood to focus on providing skills for managing the present life challenges (UNICEF, 2020) that adolescents or children face such as identity issues, managing emotions and handling relationships, resisting peer pressure and negotiation for protecting one's health, safety and agency (CBSE, n.d.). Life skills are often understood as social and emotional skills, which find an important place in 21st Century skill frameworks under the categories of personal skills and social skills.

⁵ Life skills related policy development has been described in the previous footnote. In addition, there has been some policy development on financial and digital literacy components. The National Digital Literacy Mission has been adopted to impart IT training to 52.5 lakhs non IT-literate persons. In selected blocks of the country, one person per eligible household is entitled to free training in computer skills under this mission (NIELIT, n.d.).

With respect to financial literacy, the Reserve Bank of India (RBI) has launched the National Strategy of Financial Education (NSFE) 2020-2025. The policy aims to teach financial literacy concepts among ordinary people. As far back as 2007, RBI had established Financial Literacy and Credit Counseling Centers throughout the country, which are aimed at offering free financial education and counselling to urban and rural populations. It may be noted that these digital and financial literacy related policies and programmes are not specifically youth centric.

education. Its significance lies in providing teachers with a resource to guide the integration of 21st century skills in classroom instruction of various subjects. Furthermore, the handbook provides an age-group-wise list of 21st century skills along with their corresponding learning outcomes.^{6&7} CBSE has adopted activities such as the Creative and Critical Thinking (CCT) Weekly Practice Programme⁸ to execute the integration of 21st century skills. Nevertheless, the implementation of the CBSE handbook remains at a nascent stage, since teachers have not yet been trained to use the handbook, and a wider set of structured activities for its execution is yet to be developed by CBSE

In addition to the Ministry of Education, the other noteworthy work in the area of policy development for 21st century skills have been done under the Ministry of Skill Development and Entrepreneurship (MSDE). The Office of the Director General of Training (DGT), which oversees vocational training in Industrial Training Institutes (ITIs), introduced the dedicated Employability Skills Curriculum for ITI students in 2012, with the goal of making ITI students more employable.⁹ The Employability Skills curriculum, however also incorporates competencies other than 21st century skills (such as occupational health and safety) and excludes core 21st century skills components including creativity and critical thinking.

Efforts have also been made under the MSDE umbrella to integrate 21st century skills in short term vocational skill courses. The Qualification Packs (syllabi) for all Sector Skill Council courses incorporate 'Generic and Professional Skills' (i.e. soft skills and life skills) in addition to the core trade-related competencies or standards (NSDC, 2020). However, only a minor share of time is allocated for the same in vocational skill training. Recent efforts of the newly created MEPSC (Management and Entrepreneurship and Professional Skills Council) under the MSDE/NSDC umbrella have focused on creating dedicated standards for 21st century skills in a job context (which MEPSC terms 'generic' skills).

The efforts to develop 21st Century skill-related frameworks such as the CBSE framework on 21st century skills and the Employability Skills Curriculum of DGT are commendable early steps in providing policy guidance for establishing and mainstreaming 21st century skills. Nevertheless, policy related to 21st century skills is at an early stage of development, as evident from the following :

- a) National frameworks for 21st century skills are at a nascent stage of development. The CBSE Handbook is commendable for laying down a framework of skills and learning outcomes for school children aged 3-18. However, standard indicators and metrics for the specified learning outcomes are yet to be developed.
- b) Accreditation, inspection and quality control mechanisms for 21st century skills training (on the lines of NAAC for higher education) have not yet been created.

⁶ The range of behavioral outcomes mentioned in the CBSE document are indicative and not comprehensive.

⁷ Intervention visionary Gaurav Singh from Slam Out Loud opined that the CBSE handbook is valuable as a resource for teachers, but is very basic. It needs to be supplemented with training of teachers on how to integrate insights from the handbook in everyday educational practice.

⁸ Through the CCT programme, CBSE shares a set of 5 reflective questions every week for engaging teachers as well as students (CBSE, 2020, January 8)

⁹ This curriculum, called the Employability Skills (blended learning) for Craftsman Training Scheme and Apprenticeship Training Scheme was modified in 2019

- C) Teacher training is critical to integrating 21st century skills into educational instruction. However, systematic teacher training strategies are yet to be worked out.

It is noteworthy that several state governments have taken up 21st century skills programmes in partnership mode with different organizations (details in Annexure I). Some of these partnerships have contributed significantly to scaling up 21st Century skill programmes (details in Chapters 2 and 4), and have resulted in the incorporation of 21st century skills sessions across the entire public school system (e.g. Happiness Curriculum in Delhi and Umang in Madhya Pradesh). However, these interventions involve the teaching of such skills as a standalone subject, and not through their integration in the teaching of mainstream subjects as envisaged by NEP and CBSE. Furthermore, these diverse programmes are guided by diverse frameworks of content and standards; the coherence and standardization of the 21st century skills space thus remain constrained.

Policy development on 21st century skills in India, therefore, remains nascent.¹⁰ This has important implications for existing and future interventions in the space, since policy guidance is critical for ensuring the clarity of standards, alignment with national development goals and adherence to quality. Available literature related to policy development on 21st century skills in India, too, is inadequate.¹¹ Research-based inputs on the state of 21st century skills policy and programmes, on intervention challenges, enablers and whitespaces and on core stakeholder views and expectations (including those provided in this report) are expected to be helpful inputs for the further development of such policy. Specific policy recommendations for strengthening the 21st Century skills ecosystem are provided in Chapter 5 of this report.

1.3 21st Century Skills : Fragmented Space and Understanding

The 21st century skills space is extremely complex and fragmented in multiple ways. Therefore, it is crucial to systematically study, map and analyze the sector. This section explains why the space may be considered as being fragmented.

- There is a plethora of terminologies in circulation - such as life skills, socio-emotional skills, transversal skills, soft skills, employability skills, generic skills and transferable skills - which refer to similar (though not exactly equivalent) concepts. Also, there is no common or universally accepted definition of 21st century skills. The development of national frameworks is at a nascent stage, and there is a lack of nationally accepted comprehensive standards for the curriculum and assessment of 21st century skills.

¹⁰ More details on 21st Century policy in India are provided in Annexure I

¹¹ Certain reports and studies have described and analyzed policy development in the life skills domain (Talreja & Krishnamurthy, 2018; Singh and Menon, 2015; Nair and Ranjan, 2020). Some works have analyzed the policy interventions in the domains of literacies such as digital literacy (Dwiwedi, 2020; PwC et al., 2020; Gahlot and Gahlot, 2019) and financial literacy (Arya, 2018; Jayaraman, Jambunathan and Adesanya, 2018; Chakrabarty 2013). The authors of this report have not come across works that examine, in depth, policy development on 21st century skills in an integrated sense, going beyond commentaries on the significance of NEP.

- There are numerous interventions in the space which include a multitude of low impact low scale ones and very few high impact high scale ones.¹² *It is thus critical to map the 21st century skills space to identify the key players, who may be the potential drivers of large-scale programmes in different parts of India.*
- Research and knowledge on 21st century skills in India are diverse, scattered, available in numerous sources (including academic and practitioner works, published literature and grey literature) and *need to be synthesized and collated.* Though there is not much literature available on '21st century skills' in India per se, there are plenty of reports and papers about life skills (which are a part of 21st century skills).

1.4 Rationale for the Report

A consolidated and analytical understanding of the 21st century skills sector would be a useful input for policy and the planning of programmes for this space. Hence, YuWaah in UNICEF commissioned the writing of this 'State of the Sector' report to present a consolidated understanding of the 21st century skills space in India.¹³

--Understanding the real-world challenges and the latest developments in the field in a concise, synthesized and triangulated manner requires the blending of insights from the literature with primary insights from visionaries and other core stakeholders. Hence, the State of the Sector Report on 21st century skills in India aims to collate, synthesize and analyze multiple perspectives and insights for a thorough and updated understanding of the 21st century skills space.

1.5 Objectives of the Report

- a) Identify the key stakeholders and agencies, and key scalable interventions in the domain of 21st century skills in India.
- b) Highlight and draw attention to the best practices, enablers and challenges of prevalent 21st century skills interventions and in the 21st century skills ecosystem as a whole.
- c) Present a well-grounded understanding of the 21st century skills space by incorporating the experiential insights and opinions of key stakeholders.
- d) Make actionable recommendations to the Government and other decision-makers in the 21st century skills space for standardizing, facilitating, mainstreaming and strengthening 21st century skills and creating a suitable enabling environment for the same.

¹² Observation made by Madan Padaki, interviewed visionary.

¹³ In 2018, UNICEF initiated the global Generation Unlimited partnership to expand education, skill development and employment opportunities for young people across the world. The India chapter of Generation Unlimited – YuWaah – was created in 2019. YuWaah is expected to play an important role in bringing greater coordination and collaboration to the space of youth interventions through catalytic partnerships between different players, including Government, civil society organizations, and the private corporate sector. It aims to equip 200 million young people with skills to lead productive lives and be ready for the future of work. These skills include not only vocational skills but also 21st century skills. More details are available in the website of YuWaah (YuWaah, n.d.)

1.6 Methodology

The objectives of this study were further developed into specific research questions on the levels of policy, intervention, stakeholder and research/knowledge. These research questions are stated in Appendix I of this report.

Data has been collected and analyzed for this State of the Sector Report through a mixed-methods approach (with a dominant qualitative component). This study combines primary data and desk review (secondary data collection) to arrive at an analysis of the 21st century skills interventions in India. The study team has collected robust, reliable and comprehensive insights by using a combination of a thorough literature review and interviewing experienced and knowledgeable actors (visionaries) concerned with the field of 21st century skills. Representatives of key stakeholder groups who shape and are affected by 21st century skills interventions have been another source of insights. Finally, the insights are supported by a large-scale online poll conducted with 12,099 young people, to find out their awareness of 21st century skills and perception of their awareness.

The study has made use of the following methods to collect primary data :

- 33 Visionary Interviews : Interviews of 33 experts who are knowledgeable about the 21st century skills space in India were conducted. Visionary interviews were chosen as a method to obtain credible insights from actors who are highly knowledgeable about 21st century skills in India, either as practitioners, academics, corporate players or policy actors.
- Eight Focused Group Discussions (FGDs) of youth, parents and principals : Youth are the main stakeholders whose lives and future employability prospects are affected by 21st century skills. Therefore, FGDs were conducted to collect the voices of the youth on their awareness and perceptions related to 21st century skills. Parents and principals are key influencers for youth lives, and their preferences and behaviours shape the access that youth have to 21st century skills. For these reasons, it was decided to conduct youth, parent and principal FGDs.
- Survey (poll) of young people through the UReport platform of UNICEF, to which 12,099 young people responded : The purpose of the poll conducted on the UReport platform of UNICEF was to gauge the awareness of youth and how they understand 21st century skills, along with their recognition of the significance of 21st century skills. The poll complemented the youth FGDs by providing quantitative results/summary statistics.

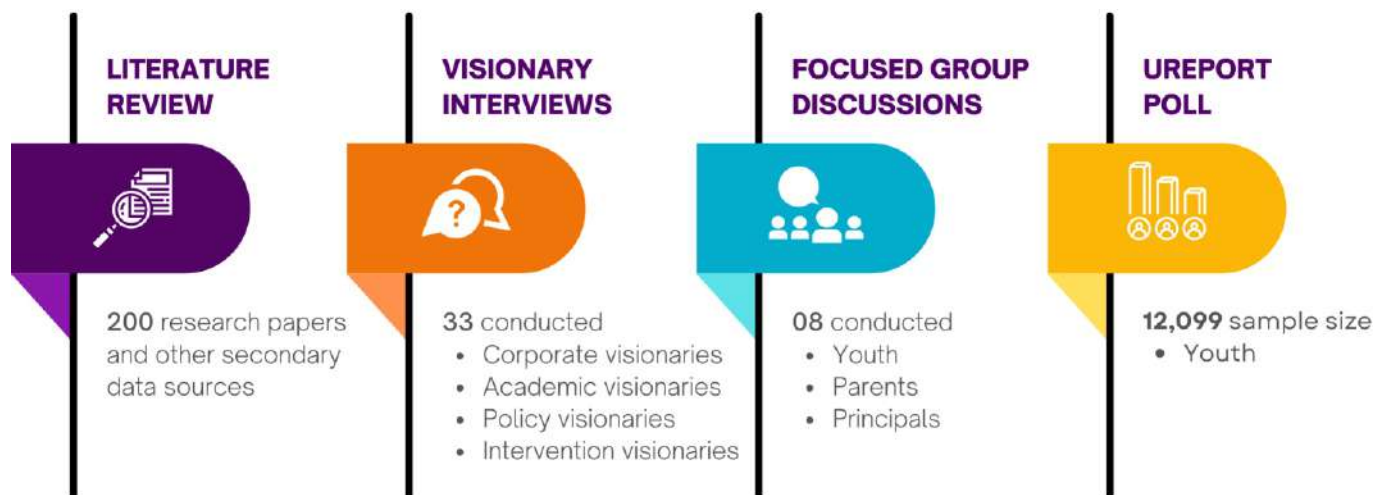


Figure 1.2. Summary of data collection methods for the report

200 plus research papers¹⁴ and other secondary data sources, interviews of 33 visionaries, eight stakeholder FGDs, and a poll answered by more than 12,000 youth - all these have been used to gather rich insights for putting together a consolidated report on the state of 21st century skills in India. Details of the methodology used for the study are provided below :

1.6.1 Literature Review or Desk Review Component

The study team has made the literature search and analysis more organized by adopting certain elements of a systematic review of literature. These elements include definition of selection criteria, systematic online search strategies and methodical data extraction and analysis techniques. The literature review has covered works about 21st century skills, life skills, soft skills and transferable skills. The literature review has focused on works published after 2010. Only English language works have been covered. The literature review largely focused on finding insights for the Indian context. Mostly online sources, including both peer-reviewed journal articles and grey literature, have been searched and identified from databases such as Google, Google Scholar, NCBI/PubMed, JSTOR and Research Gate. Data pertaining to the research questions of the study was extracted from the relevant works, and thematic coding of the extracted data was conducted. Details are in Appendix I.

1.6.2 Visionary Interview

Certain prioritization criteria were defined with respect to the visionaries intended to be interviewed (see Appendix I). The actual visionaries interviewed, however, depended on the visionaries' availability and their response to the study team's invitation for appearing in the interviews. Appendix I gives details of the intended and actual sampling for visionary interviews and the sampling criteria followed. In total, 9 corporate visionaries, 16 intervention visionaries, 3 academic visionaries and 5 policy visionaries were interviewed. Appendix II provides a list of interviewed visionaries.

¹⁴ More than 200 research papers were retrieved from the search, out of which 97 have actually been cited in the report

1.6.3 Focused Group Discussions

Eight FGDs. i.e. five of youth, one of parents, and two of principals were conducted, of which seven were in the online mode. All FGD participants were selected through purposive and convenience sampling. Since the youth FGDs included some youth below 18 years of age, the study team sought and obtained prior approval from the Ethics Review Committee of Swami Vivekananda Youth Movement (SVYM), located in Mysore District, Karnataka, which is a registered IRB. The youth FGDs covered a diversity of states (from North, South, Eastern and Western India), educational categories (ranging from school dropouts to college graduates) and age groups (15 years to 24 years).

In the principals' and parents' FGDs, participants belonged to multiple states such as Karnataka, Tamil Nadu, Odisha and Delhi. The parents covered in the FGD were from professional and English-speaking backgrounds. The principals covered represented different institution types such as government schools, high-end private schools, ITIs and degree colleges.

1.6.4 UReport Poll

The UReport poll, broadcasted on UNICEF's UReport platform, provided the advantage of reaching several thousands of young people from different regions of the country through a single platform. The poll questions were translated into multiple languages such as Hindi, Marathi, Bangla, Punjabi and Malayalam. The figure below reveals that the response rate of the poll was 94%, and that almost equal numbers of men/boys and women/girls responded.

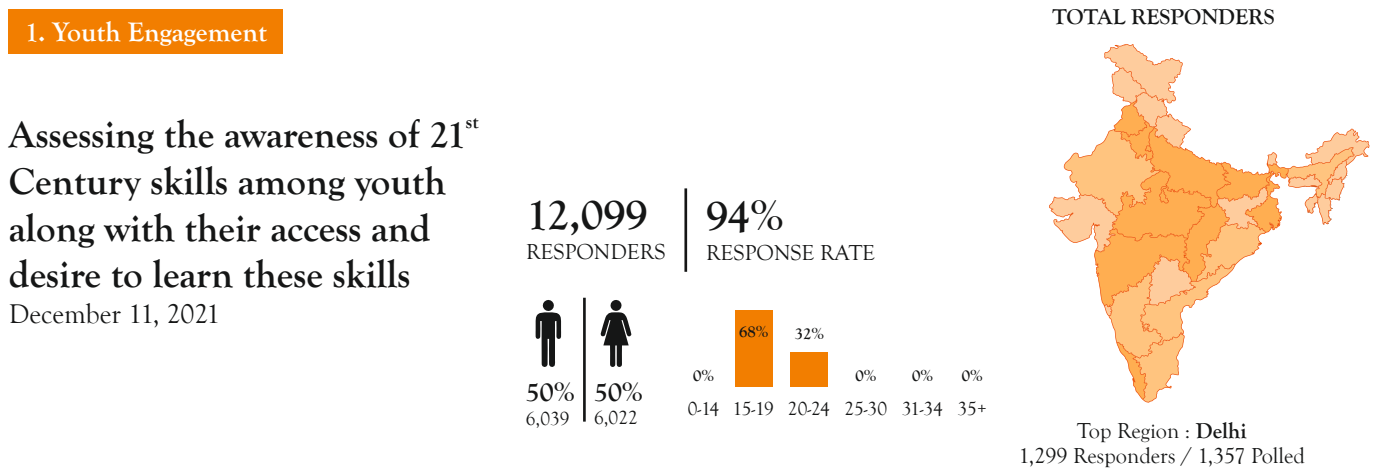


Figure 1.3. Response rates in the UReport poll

1.6.5 Landscape Analysis

For this study, landscape analysis is understood as a classification or categorization of the 21st century skills space and identification of major players and interventions in each category. Landscape analysis for this report was done through the identification of large-scale interventions (defined as interventions having more than one lakh beneficiaries) in the 21st century skills space. This exercise was done based on secondary data available in the public domain.

The compilation of a database of 145 21st Century skill interventions was the starting point for the landscape analysis. The intervention details in the database were coded according to parameters such as the number of beneficiaries, number of states, educational and age groups covered, 21st Century skill cluster catered to and scalability approaches used. After this, there was shortlisting of 30 interventions that met the defined scale criterion of one lakh plus beneficiaries.

A landscape analysis of these 30 shortlisted interventions is presented in Chapter 2. Out of the 30 selected large-scale interventions, six major interventions of interest were further selected for a deep dive analysis. These were shortlisted basis what interviewed visionaries identified as the major interventions and organizations in the 21st century skills space (Appendix III provides the relevant extracts from visionary interviews). A detailed analysis of the scale, impact and innovation features of these six interventions has been presented in this report.

1.6.6 Data Analysis

Steps such as the coding of qualitative data, tracing of linkages between codes, writing of a narrative synthesis and triangulation of data from multiple sources have been followed in the process of qualitative data analysis for this report.

1.6.7 Limitations of the Report

- 1) **Limitations in literature search :** Literature search itself can be a time-intensive activity. To make the task manageable, a limited number of pages of each online search result has been seen. Also, all possible search term combinations have not been viable to use.
- 2) **Limited representativeness of FGD participants :** Because of time constraints, a limited number of FGDs in each stakeholder category was conducted. Furthermore, the participants were chosen through the contacts and connections of the study team. The FGD participants, especially for the parent FGD, were limited in their representativeness since all the participants were from professional backgrounds and fluent in English.
- 3) **The intended composition of visionaries could not be entirely maintained :** Reaching out to and obtaining responses from the visionaries was not easy, especially because of their busy schedules. Several intended visionaries could not eventually be reached and had to be replaced. The targeted number of academic and policy visionary interviews could not be reached. However, the total planned visionary sample size of 20 was exceeded, and eventually, 33 visionaries were interviewed.
- 4) **The UReport poll results are not necessarily representative of gender, age categories and geography of youth** who are members of the UReport platform. The broadcasted UReport poll was not based on pre-decided sample size or stratified sampling. The age, gender and geography composition of the final results thus may have been shaped by the higher response rate of certain age/gender/geographical categories. The results show that certain age groups and geographies have a relatively larger representation among the final respondents.
- 5) **Limitations of online mode of data collection :** Face to face modes of interview or FGDs enable

better engagement between the interviewer/moderator and the subject/s, and are likely to yield richer responses compared to remote modes such as online data collection. These could not be used because of time constraints and the challenges of the COVID-19 pandemic.

- 6) **Challenges in drafting landscape analysis based on secondary data :** Because of the gaps in the availability of details about 21st Century skill interventions on organizational websites, there were difficulties in preparing the landscape analysis. Data gaps on specific data points were present for certain interventions.
- 7) **Challenge in identifying 6 key scalable interventions in a maze of large-scale interventions :** 30 interventions met the scale requirements of having more than one lakh beneficiaries. It was a challenge to shortlist 6 key interventions out of these. Scoring of interventions was tried out as a possible method for shortlisting, but had to be dropped because of gaps in the available secondary data. The limitation of the shortlisting exercise done for this report is that visionary views identifying the major players in the 21st century skills space (which represent subjective perceptions) have been used to identify the 6 key interventions.

1.7 Structure of the Report

Chapter 2 : This chapter provides the landscape analysis of 30 shortlisted 21st Century skill interventions. This is followed by detailed accounts of six further shortlisted interventions. These detailed accounts provide insights on scaling up strategies and challenges, impact and impact measurement approaches and innovative practices of the six major large-scale interventions.

Chapter 3 : This chapter sheds light on the implementation challenges in the 21st century skills space (overall and for specific groups such as in-school and out of school young people, along with vocational trainees). Assessment challenges are also identified. It also elaborates the whitespaces, enablers and opportunities for the space.

Chapter 4 : Scale is a critical parameter of success for 21st Century skill programmes. This chapter, therefore, examines the best practices and approaches that have helped in the scaling up of prominent interventions in the space. It provides insights on the partnership approach, use of technology and other drivers of scale.

Chapter 5 : The conclusion to this report sums up the best practices revealed in the report, with respect to key parameters such as partnerships for scale, impact measurement, innovation, inclusiveness, assessment, convergence and facilitation, and research. The chapter also provides actionable recommendations for strengthening the provision of 21st century skills and their ecosystem.

Annexure I : This postscript to the report provides details on various international and national frameworks of 21st century skills for the interested reader. Details are provided on 21st century skills policies and programmes in India, and on the state of research on 21st century skills.

Annexure II : This provides an international case study and elaboration of its best practices.



Landscape Analysis

To understand the 21st century skills sector, it is important to understand the major organisations and large-scale interventions in it. In a domain as fragmented as the 21st century skills space, it is critical to identify organisations that have successfully attained scale. Such organisations have valuable lessons to share on how such scaling up can be achieved. As described in Chapter 1, a secondary data-based landscape analysis¹⁵ has been conducted in this study. The aim of the landscape analysis is to identify the large-scale 21st century skill interventions with more than one lakh beneficiaries.¹⁶

In order to understand the large-scale interventions better, specific details were obtained on their geography, age and educational target groups and the categories of 21st century skills covered. An analysis of the landscape map reveals the areas of concentration and whitespaces, as far as various geographies, age groups and educational categories are concerned. Along with the parameters mentioned above, the analysis of scalability has also been taken up in this landscape analysis.

2.1 Landscape Map of Large-Scale Interventions

The secondary-data based landscape map presented below provides the following details of the 30 shortlisted interventions :

- Geographical coverage :
 - Number of states covered : Interventions are categorised in terms of covering a single state, two states, 3-5 states and more than 5 states
 - Regions of the country covered : Interventions are categorised in terms of coverage of different regions of India (North, South, East, West, Central, Northeast)
- Coverage of 21st Century skill components/clusters : Interventions are categorised in terms of the addressing of 21st Century skill clusters. These are the clusters mentioned in the UNICEF-YuWaah framework on 21st century skills (Higher order thinking skills, Personal skills, interpersonal skills, digital literacy, other/multiple literacies)
- Age brackets addressed : Interventions are categorised in terms of coverage of different age groups (10-15, 15-18, 18-24)

¹⁵ There were some gaps in the secondary data collected, because of which data on certain landscape analysis parameters was not known for certain interventions.

¹⁶ Reasons for taking more than one lakh beneficiaries as the criterion are elaborated in Chapter 1

- Educational categories addressed : Interventions are categorised in terms of the educational groups targeted (in-school, out of school and others).¹⁷
- Scalability approach : In the landscape analysis, partnership approach, use of technology and other scalability approaches (including Training of Trainers)¹⁸ were considered as the markers of scalability. Interventions are categorised in terms of the specific scalability approaches used by them.

Landscape Mapping

NAME OF THE ORGANIZATION - PROJECT NAME	NO. OF STATES	REGIONS COVERED	21ST CENTURY SKILLS CLUSTER	AGE BRACKETS			EDUCATIONAL CATEGORY			SCALABILITY MARKERS	
				10-15	15-18	18-24	In School	Out School	Others	Partnerships & Technology	Others
Udhyam Learning Foundation - Udhyam Shiksha Program	5+	All		✓	✓		✓				
Udhyam Learning Foundation - Youth Engagement Programme	5+	All		✓	✓		✓				
Design for Change - Ican School Challenge	5+			✓	✓		✓				
Dream a Dream - Happiness Curriculum	2	N		✓			✓				
Save the Children - Adolescent Programme	5+	NEWSC		✓	✓	✓					
Meljoui and Aflatoun	5+	EWS		✓	✓	✓	✓				✓
Shyamchi Ai Foundation - Life Skills Curriculum	1	W		✓	✓		✓				✓
The Naz Foundation - Young People's Initiative	3-5	NWS		✓	✓	✓					
Magic Bus India Foundation - Adolescent Programme	5+	All		✓	✓						✓
LXL Ideas- School Cinema				✓	✓		✓				✓
LXL Ideas - Krayon							✓				

¹⁷ Others under educational categories refers to the catering of those enrolled in educational institutions other than schools such as colleges, vocational training institutes and ITIs.

¹⁸ Other scalability approaches include Training of Trainers (ToT) and also other outreach methods like mobile vans. The selection of ToT as a scalability approach is validated by the primary data collected (visionary interviews)

NAME OF THE ORGANIZATION - PROJECT NAME	NO. OF STATES	REGIONS COVERED	21ST CENTURY SKILLS CLUSTER	AGE BRACKETS			EDUCATIONAL CATEGORY			SCALABILITY MARKERS	
				10-15	15-18	18-24	In School	Out School	Others	Partnerships & Technology	Others
Quest Alliance - Anandshala	2	E	High Order Thinking Skills, Interpersonal/Social Skills	✓	✓		✓			Partnerships & Technology	
Quest Alliance - Secondary Schools Programme	5+	EWS&NE	Personal Skills, High Order Thinking Skills, Digital Literacy	✓	✓		✓			Partnerships & Technology, Use of Technology	✓
Quest Alliance - MyQuest	5+	NEWS&NE	Digital Literacy, Multi Literacy Skills	✓	✓	✓				Partnerships & Technology, Use of Technology	✓
Quest Alliance - Master Coach and Trainer Tribe	5+	NEWS&NE	High Order Thinking Skills, Interpersonal/Social Skills							Partnerships & Technology, Use of Technology	✓
Child Fund International - Pencil	5+	NESC	High Order Thinking Skills, Personal Skills, Digital Literacy, Multi Literacy Skills	✓	✓		✓			Partnerships & Technology	
Breakthrough - Taaron Ki Toli	3-5	NE	High Order Thinking Skills, Interpersonal/Social Skills, Personal Skills	✓			✓			Partnerships & Technology	
Govt. of Madhya Pradesh / Umang	1	C	High Order Thinking Skills, Interpersonal/Social Skills, Personal Skills	✓	✓		✓				✓
Shantilal Mutha Foundation - Mulyavardhan	3-5	W	Personal Skills, Interpersonal/Social Skills	✓			✓			Partnerships & Technology	
American India Foundation - Digital Equalizer	5+	NEWS	Digital Literacy							Partnerships & Technology, Use of Technology	
ICICI Foundation - Academy for Skills	5+	All	Multi Literacy Skills							Partnerships & Technology	
ICICI Foundation - Financial Inclusion	5+		High Order Thinking Skills, Digital Literacy, Multi Literacy Skills	✓	✓	✓	✓		✓	Partnerships & Technology	
HDFC HT Parekh Foundation - Driving Equity in Secondary Education	5+		Multi Literacy Skills	✓	✓					Partnerships & Technology	
Ikea Foundation - Disha	3-5	NWS	Digital Literacy, Multi Literacy Skills							Partnerships & Technology	
Smile Foundation - Mission Education	5+	All	High Order Thinking Skills, Interpersonal/Social Skills, Personal Skills, Multi Literacy Skills	✓	✓		✓			Partnerships & Technology	✓
Smile Foundation - Child for Child	5+	All	Interpersonal/Social Skills	✓	✓		✓			Partnerships & Technology	✓
Digital Empowerment Foundation - Digikargha	5+	NSC	Digital Literacy							Partnerships & Technology, Use of Technology	
Dharma Life - Lighting Up Young Minds Learning	5+	NEWC	Personal Skills, Interpersonal/Social Skills, Digital Literacy	✓	✓		✓			Partnerships & Technology, Use of Technology	✓
Nasscom Foundation - National Digital Literacy Mission	5+	NEWS	Digital Literacy	✓	✓	✓				Partnerships & Technology, Use of Technology	
Parinaam Foundation - Diksha Financial Literacy Programme	5+	All	Multi Literacy Skills	✓	✓					Partnerships & Technology, Use of Technology	



Figure 2.1 : Landscape analysis of shortlisted large-scale interventions

2.2 Insights from Landscape Analysis

The landscape analysis of 30 large scale interventions also generated a summary picture of the coverage of different educational, age, geographical, 21st Century skill and scalability categories. Summary insights from the Landscape Analysis are presented below :

- **Geographical coverage :** 20 out of the 30 shortlisted interventions cover more than 5 states. This indicates that organisations with more than one lakh beneficiaries have largely achieved such scale by diversifying their intervention locations. As seen in Figure 2.2, all the regions of the country are addressed by large-scale 21st Century skill interventions, with relatively lesser interventions in Central and North East India.
- **Targeting of educational categories :** The landscape map shows the dominance of in-school models of intervention. As per available secondary data, none of the 30 large scale interventions has addressed out of school children. This is thus apparent as a major whitespace of 21st Century skill interventions. Chapter 3 of this report analyzes why the reach of out of school children is a whitespace.
- **Targeting of age groups :** The 10-15 age group is catered by the largest number of interventions, followed by the 15-18 age group. There are much fewer interventions for the 18-24 age group (see Figure 2.3). This may be due to the predominance of in-school models among 21st Century skill interventions.
- **Coverage of 21st Century skill clusters :** As seen in Figure 2.4, interpersonal skills is that component of 21st century skills which has the largest number of large-scale interventions. The 'personal skills' cluster also has 50% of the identified 30 large scale interventions catering to it. Digital literacy has the least number of large-scale interventions.
- **Frequency of scalability approaches :** The secondary data-based landscape analysis presented above reveals that partnership approach is the most common scalability approach (adopted by 19 out of 30 interventions). This is followed by use of technology and other scalability approaches such as ToT (each adopted by 11 out of 30 interventions).

Geographical Analysis

Northern	: J & K, Ladakh, Himachal Pradesh, Punjab, Uttarakhand, Uttar Pradesh & Haryana
Western	: Rajasthan, Gujarat, Goa and Maharashtra
Eastern	: Bihar, Orissa, Jharkhand and West Bengal
Southern	: Telangana, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu
Central	: Madhya Pradesh and Chattisgarh
North Eastern	: Assam, Sikkim, Nagaland, Meghalaya, Manipur, Mizoram, Tripura and Arunachal Pradesh

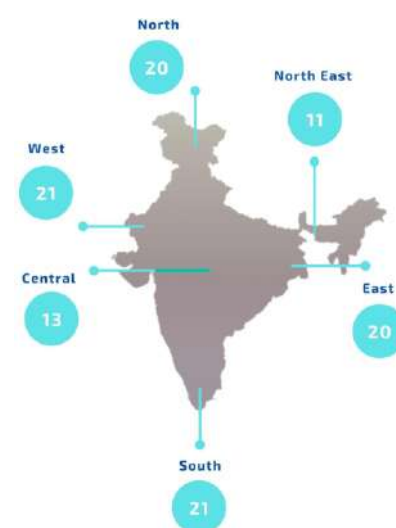


Figure 2.2 : Summary of geographical coverage of shortlisted large scale interventions



Figure 2.3 : Age-group targeting of large-scale interventions

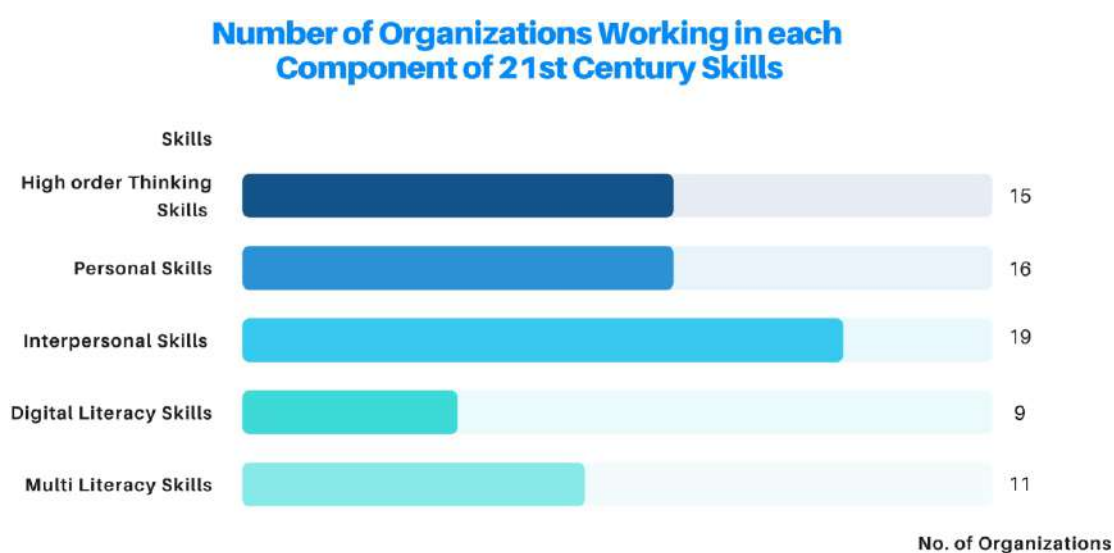


Figure 2.4 : 21st century skill components addressed by large- scale interventions

2.3 Deep Dive into Select Programmes

From among the 30 large scale interventions identified, this report also attempts to further shortlist a smaller number of interventions for detailed study. Amongst these 30 interventions, six interventions, which were also mentioned by interviewed visionaries as being the major players/projects in the field, were further shortlisted, in order to provide a detailed analysis of strategies related to scale, impact and innovation.¹⁹

¹⁹ Certain organizations were identified by the visionaries as being major ones, but were not among the 30 large scale interventions with more than one lakh beneficiaries identified through the secondary-data based analysis. These included ICRW, Kaivalya Education Foundation, Pratham and Akshaya Patra.

Table 2.1 : Programmes shortlisted for deep dive amongst large scale 21C skill interventions

Sl. No.	Intervention	Organisation
1	Happiness Curriculum	Dream a Dream
2	MyQuest	Quest Alliance
3	Adolescent Programme	Magic Bus India Foundation
4	School Cinema	LXL Ideas
5	Adolescent Empowerment Programme (including Taaron ki Toli)	Breakthrough
6	Udhyam Shiksha Program - Entrepreneurship Mindset Curriculum (EMC)	Udhyam Learning Foundation

For each of these interventions, brief details about the organisation and intervention model are listed below, along with an account of crucial programme aspects of :

- How the organisation achieved scale
- Challenges faced in scaling up and how some or all of these challenges were addressed
- Impact evidence and how impact was measured
- Innovation of the programme as a whole or particular components of it.

2.3.1 Dream a Dream : Happiness Curriculum

2.3.1.1 About the Organization and Intervention

Founded in 1999, Dream a Dream's main mission is to empower young people from vulnerable backgrounds to overcome adversity and thrive in a fast-changing world (Dream a Dream, n.d.). Dream a Dream itself implements 21st century skills programmes such as the After School Life skills programme for school children²⁰ and Career Connect Programme.²¹ Additionally, it has entered into strategic partnerships with state governments such as Delhi, Uttarakhand and Andhra Pradesh for the implementation of the 'Happiness Curriculum' developed by it.

²⁰ In the After School Life Skills programme, life skills are transacted through arts and sports

²¹ More details about Dream a Dream and its programmes are available in its website <https://dreamadream.org/>

Dream a Dream partnered with the Delhi Government in providing the Happiness Curriculum to children from grades 1 to 8 in all the schools run by the state government. The overall purpose of the Happiness Curriculum is to support students in their journey to sustainable happiness through engagement in meaningful and reflective stories and activities.

Dream a Dream's Work on promoting Life Skills among Scheduled Caste Students

Through its partnership with Telangana Social Welfare Residential Educational Institutions Society (TSWREIS), Department of Scheduled Caste Development, Government of Telangana, Dream a Dream has embarked on efforts to promote life skills among Scheduled Caste youth who have a background of severe adversity. This partnership is intended to introduce life skills in all TSWREIS schools, and empower teachers with the skills needed to be able to integrate life skills in academic and nonacademic sessions (Dream a Dream, 2020)

2.3.1.2 Strategies for Achieving Scale

In Delhi, the Happiness Curriculum (HC) has been introduced in 1024 government schools and 20000 classrooms. As per Dream a Dream's impact reports for 2019-20 and 2020-21, it is reaching 8,00,000 students (Dream a Dream, 2020; Dream a Dream, 2021).²² For achieving scale, Dream a Dream has used the following strategies :

- **Refining model over a 15-year time span and demonstrating impact before scaling up :** As revealed by an interview with the CEO of Dream a Dream, the organisation has, on an enduring basis, focused on generating evidence of its impact. It has also refined its model through a close examination of what works and what does not work, for over 15 years.
- **Sharing evidence of impact and advocacy with state governments :** The evidence of impact has helped Dream a Dream strengthen its advocacy with state governments. Such advocacy has led to state governments realising the significance of life skills. It has also established the suitability of Dream a Dream's intervention models.
- **Redefining role from being implementer to being solution provider :** Dream a Dream is supporting state governments to integrate life skills into the public school system. In the Happiness Curriculum, it develops the curriculum, trains teachers and leaves the rest of the execution to the state government and the state's public school system.²²
- **Use of technology :** During the COVID pandemic, the organisation has reached out to a much larger number of teachers through online Training of Trainers (ToT).

²² The Happiness Curriculum is also being implemented in the state of Uttarakhand as the 'Anandam Pathacharya' in 3025 schools touching 1.35 lakh students (Dream a Dream, 2020)

²³ Dream a Dream tentatively intends to retain the impact assessment role for itself, as revealed through an interview with its CEO.

2.3.1.3 Challenges in Scaling Up

In its 20-year journey, Dream a Dream has faced and addressed certain challenges in scaling up :

- Building the organisation itself from being a founder-focused organisation to having a well-developed team
- Earlier funders did not necessarily understand the importance of 21st century skills, which led to difficulties in mobilising funding. However, the situation has changed where many funders now realise their importance and are willing to fund such programmes
- Dream a Dream faced difficulties in finding assessment methods suited for measuring life skills amongst less privileged young people. Consequently, Dream a Dream itself invested efforts in developing assessment tools such as the Life Skills Assessment Scale that are suited for measuring life skills for young people from a background of adversity.

2.3.1.4 Impact

- While the overall impact of the Happiness Curriculum on the life skills and happiness level of the children in government schools of Delhi has yet been measured and quantified,²⁴ a preparatory measurement exercise for the refinement of tools and scales has been conducted (Care et al., 2020). The following outcomes were discovered by this initial outcome measurement of Happiness Curriculum :
 - Interaction and relations between students and teachers have improved.
 - Students feel less inhibited to raise their hands and share their opinions in class.
 - The focus on calmness and mindfulness makes the students feel relaxed, reflective and recharged. (Care et al., 2020).

"When we are feeling hot and really tired, we bring air conditioning to our homes, and we feel happy and relaxed about it. The Happiness Curriculum is doing exactly the same thing. If I am feeling tired and stressed in other classes, the Happiness Curriculum is like an air conditioner to me."

(Grade 5 student in Delhi Government School) (quoted in Care et al., 2020)

²⁴ Dream a Dream has however quantitatively measured the life skills outcomes of programmes it is itself implementing, including the After School Life Skills (ASLS) programme. The outcome measurement of ASLS showed that 76.7% of the participants had improved their life skills significantly (at least by one standard deviation) (Dream a Dream, 2021)

2.3.1.5 Innovation

- By virtue of providing a dedicated school curriculum for happiness, Happiness Curriculum has been recognized as an innovation in school education that makes going to school a joyful experience for children, and addresses the issue of high anxiety and suicide rates among students (Srivastava, 2021).
- The Happiness Curriculum has been hailed as a major school education reform in the country, since it has begun a shift from unhealthy competition to happy collaboration, and from teacher domination to learner participation (Rayan, 2020). Happiness Curriculum won an education innovation award in the World Innovation Summit for Education 2021²⁵ (Srivastava, 2021).
- Dream a Dream is also an innovator in the domain of assessment, since the Life Skills Assessment Scale developed by it is the “first of its kind, peer-reviewed, standardised and published impact measurement tool in the world to measure improvement in life skills amongst disadvantaged children.” (Pearson et al., 2020).

2.3.2 Quest Alliance : MyQuest

2.3.2.1 About the Organisation and Intervention

Quest Alliance is a not-for-profit trust that equips young people with 21st century skills by enabling self-learning. Quest Alliance has multiple 21st century skills initiatives for different age and educational groups, which include its Secondary School programme and MyQuest.

MyQuest provides 21st century skills to ITI (Industrial Training Institute) students. It aims to enhance the employability and employment prospects of ITI students, who lack a foundation in non-trade/21st century skills. It also intends to prepare ITI students for a 21st Century workplace (Quest Alliance, n.d.). MyQuest trains ITI students in Employability Skills such as life skills,²⁶ Digital Skills, communicative English and Career and workforce readiness.²⁷

The Employability Skills training is provided to ITI students through blended modules. MyQuest is directed not just at young people but at the full spectrum of stakeholders in the entire ITI ecosystem. It aims to strengthen and create an enabling environment in ITI's for 21st century skills through means such as transformation of ITI pedagogy,²⁸ leadership development of ITI principals, creation of student hubs and promotion of parent and community engagement.

²⁵ Out of 12 projects in 9 countries that were nominated, HC was one of the six winning projects. (Srivastava, 2021)

²⁶ The life skills covered include decision making, collaboration (teamwork) and overcoming gender stereotypes.

²⁷ The Employability Skills Curriculum was introduced in the ITI curriculum by the DGT in 2012. Given the limited capacity of ITIs to deliver this curriculum, specialised private entities such as Quest Alliance and Tata Strive have been engaged by several state DETs for delivering it.

²⁸ Through its engagement with ITIs, MyQuest aims to change the lecture-dominated teaching style of ITIs to a more engaging, participatory one that includes digital and blended methods of learning and activities such as hackathons and market scans.

2.3.2.2 Strategies for Achieving Scale

Over its 17-year journey, Quest Alliance has reached 10,00,000 youth and educators through technological innovations, and partnerships with government, civil society and business. Partnerships and the use of technology are the mainstay of Quest Alliance's approach towards achieving scale. It has used the following strategies to achieve scale :

- **Partnerships with state governments :** At the government level, Quest Alliance partners either with the School Education department (for school programmes) or with the Departments of Employment and Training (DET) (for programmes in ITIs). The MyQuest programme, for instance, has been implemented over the past four years in 22 states of India and has reached 300000 youth²⁹ through partnerships with the respective state DETs.
- **Use of technology :** The use of technology to deliver content to youth is crucial for Quest Alliance to enhance its reach among large numbers of youth in different parts of the country. Quest Alliance also believes in the use of technology as a tool to facilitate reflection and interaction among learners.³⁰
- **Training of Trainers :** For its MyQuest programme, Quest Alliance uses the Training of Trainers (including existing ITI faculty) to deliver the Employability Skills Curriculum in ITIs; it has trained 3300 trainers till date under its MyQuest programme.³¹

2.3.2.3 Challenges in Scaling Up

In its journey of expanding to different locations, Quest Alliance has faced challenges such as :

- **Need for customization of 21st Century curricula to different contexts :** Because of the uniqueness of needs in different contexts and locations, there is a need for customization of curricula in different contexts. For instance, Quest Alliance found that it had to customise its curriculum for the North Eastern states for a greater emphasis on identity issues. Working with a network of local NGO partners has helped MyQuest in addressing the challenge of customising its programmes to local contexts.
- **Assessment challenges :** Quest Alliance found it challenging to train teachers to assess 21st century skills since teachers were used to assessing knowledge rather than application.
- **Challenges faced in working with Governments :** In working with government systems, Quest Alliance has had to face challenges such as constrained autonomy in delivering programmes and less than ideal monitoring and data management systems in government.

²⁹ Information from the Quest Alliance website <https://www.questalliance.net/program/myquest>

³⁰ Details in chapter 4 of this report and in the innovation sub-section of this section.

³¹ Information from the Quest Alliance website. Data from a Tracer Study of ITI graduates commissioned by the MSDE found that the placement rate for the Craftsmen Training Scheme (CTS) in ITIs was 64% (MSDE & Mott MacDonald, 2018)

2.3.2.4 Impact

- As far as the impact of MyQuest is concerned, it is known that 55% of the youth who underwent the MyQuest Employability Skills training have found work.³²
- Quest Alliance has recently commissioned a more detailed impact assessment of MyQuest in the states of Tamil Nadu and Gujarat. This impact assessment study is looking into the impacts of MyQuest on the employability skills and employment outcomes of ITI students who were exposed to the MyQuest programme.

2.3.2.5 Innovation

- **Gamification for enjoyable learning :** Quest Alliance has developed the Quest App with over 250 hours of gamified 21st century skills content loaded on it. This can be accessed through the smartphone app, or through the web-version, or can also be downloaded for later offline use.
- **Enhancing access and addressing the digital divide :** Youth from less privileged sections, especially those living in remote areas, may face barriers in accessing digital content. The MyQuest team has been exploring innovations to reduce such barriers and to ensure continuity of learning. It made the Quest App content available on a low-cost hardware (known as Learner Pi)³³ placed in the ITIs. This system did not need the internet to access content, and could be used through the Local Area Network (LAN). This was especially useful for remote areas where internet connectivity is weak or unstable.
- **Mobile Library and other measures to address the digital divide :** During the COVID-19 pandemic (when institutes such as ITIs closed down), Quest Alliance took up the 'mobile library' initiative to distribute learning devices such as smartphones on a rotational basis among students. This helped students to continue their learning. Quest Alliance is also trying to make content accessible at the village level through Learner Pi devices that can be connected to the LAN.³⁴

2.3.3 Magic Bus : Adolescent Education Programme

2.3.3.1 About the Organization and Intervention

Founded in 1999, Magic Bus works to equip children and young people in the age group of 12 to 18, with the skills and knowledge they need to grow up and move out of poverty. Magic Bus's Education Programme attempts to empower first generation adolescent learners from marginalized families, so that they can complete their formal education and develop high levels of self-reliance and self-efficacy. Its Education Programme includes the Life Skills programme for Adolescents, wherein adolescents are equipped with life skills to lead fulfilling and rewarding lives.

³² Information from the Quest Alliance website

³³ Learner Pi is an adaptation of the low cost computer known as Raspberry Pi.

³⁴ Insights on the technological innovation have been obtained from the R&D representatives of the Quest Alliance team (Mr Bijo Joseph and Mr Nikhil Nambiar) and Program Manager Mr Kotresh HB.

Under the life skills programme for adolescents, Magic Bus provides five core life skills i.e. problem solving, teamwork, communication, learning to learn, and managing the self to adolescents. Life skills in this programme are imparted through the in-school model, through activity-based sessions that are a part of the school timetable.

2.3.3.2 Strategies for Achieving Scale

The adolescent programme of Magic Bus has reached 400,000 adolescents in 22 states of India. As revealed by programme functionaries, multiple strategies have helped in achieving such scale :

- **Partnerships with public school systems and training of teachers :** Partnerships have brought efficiency to Magic Bus's attempts to deliver 21st century skills to young people. Partnerships with public school systems have enabled teachers (who are trained by Magic Bus) to deliver life skills education across schools. Magic Bus did not have to take up direct delivery of the same.
- **Standardization of processes :** Magic Bus has standardised processes including capacity-building which are crucial for maintaining standards and quality for implementation that is taken up in partnership mode.
- **Use of technology :** Automated monitoring has helped Magic Bus in managing its partnerships. The use of LMS (Learner Management System) has helped in efficiently delivering content, and tracking learners and reporting outcomes.
- **Community volunteer support :** Magic Bus has capitalized on the support from community volunteers who act as mentors and role models. These volunteers also work with parents and communities to ensure that children are effectively reached.
- **Impact evidence as a driving force for scale :** Evidence of impact through multiple impact evaluations has bolstered Magic Bus's standing in the 21st century skills space. This, in turn, has supported its endeavour to achieve scale.

2.3.3.3 Challenges in Scaling Up

In its attempts to achieve scale, it faced certain challenges :

- **Difficult to get funding :** It was difficult to get funding for Life skills education since donor interest concentrated on areas such as academic aspects of education and health. Magic Bus has dealt with funding challenges by diversifying the sources of funding by covering specific donors interested in socio-emotional learning and holistic education.
- **Difficult to convince governments :** While attempting to develop partnerships with state governments, Magic Bus found it difficult to convince government players on the importance of Life skills for adolescents : Consistent dialogue and cultivation of ties with state governments has helped Magic Bus strengthen its government partnerships. Magic Bus has also developed a high level of engagement with SCERTs and teacher training channels. Positioning life skills within the educational goals of state governments has also helped.
- **Difficult to get the focus of teachers :** Magic Bus faced difficulties in sustaining the intervention

through teachers, who are deployed for different government activities.

2.3.3.4 Impact

Magic Bus has been focused not only on achieving scale, but also on achieving and measuring impact. Magic Bus's programmes have undergone multiple evaluations, including a meta-analysis of multiple evaluations by a third party agency (Monk Prayogshala, 2020). Some of the evidence of the impact of the Magic Bus's life skills programme for adolescents, which demonstrates the positive life outcomes, is summed up below :³⁵

- The perceived self-efficacy of adolescents who attended the programme improved by 26%.
- In the short term, there was a 54.8% increase in the odds for girl participants of the programme to attend school.
- More than three-fourths of the participants of the programme have completed secondary school and transitioned to the higher secondary level, as compared to the national transition rate of 69%.
- 95% of the girl participants of the programme did not undergo child marriage.

2.3.3.5 Innovation

- **Integration of skills for life and skills for employment :** Magic Bus has an innovative approach to life skills training that integrates the perspective of skills for life and skills for employment. It has a vision of taking a child from poverty to meaningful livelihoods. The adolescent education program therefore embodies a multidimensional approach that brings together the following
 - life skills for improved socio-emotional learning,
 - work readiness training to prepare for the world of work, and
 - training on employability to be able to think through career pathways and identify livelihood options in their ecosystem.
- **Process innovations :** Magic Bus has taken up process innovations such as ISO certification of its training function, so as to deliver quality on an ongoing basis. It has also introduced a participatory field implementation approach by getting students to take part in building a vision for their schools.

³⁵ Data taken from Magic Bus Impact Report (Monk Prayogshala, 2020), Magic Bus website and Magic Bus programme team inputs

2.3.4 LXL Ideas : School Cinema

2.3.4.1 About the Organization and Intervention

Established in the year 1996, LXL Idea's mission is to 'Impact Learning with Lessons of Life'. As stated in the website of LXL Ideas, it aspires for a reality where the focus of education should be Learning for Life and not just for livelihood.

School Cinema, which is one of the most well-known interventions of LXL Ideas, uses the medium of short, 15-minute films to teach life skills to children. School Cinema features specially curated films for students on topics such as friendship, child safety, creativity and innovation, social justice and more. School Cinema also has films for teachers and parents.

2.3.4.2 Strategies for Achieving Scale

School Cinema has reached 1000 schools and more than 10 lakh students.³⁶ LXL Ideas has achieved its present levels of scale and overcame some of its scaling related challenges through the following approaches :

- **The use of film as a medium :** More than 150 issue based films have been created that relate to real world challenges faced by children. There are films made for each grade, from UKG to class XI. Films enable reaching out to children in large numbers, teaching them important life skills and yet retaining the consistency of messaging (Hundred.org, 2021).
- **The 'equipping' of school teachers as facilitators :** According to the Founder of LXL Ideas Syed Sultan Ahmed, the teacher is one of the most overlooked resources. He opined that the use of the teachers makes for a more sustainable and scalable model. Teachers are therefore oriented to facilitate the life skills sessions.

2.3.4.3 Challenges in Scaling Up

In its journey of taking 21st century skills to large numbers of children, LXL Ideas faced certain challenges :

- **Maintaining standardisation of content and outcomes :** In any facilitator-driven model, the same content could be delivered differently depending on the individual facilitator's approach. Furthermore, such differentiation also made it difficult to achieve standardised outcomes from sessions. To deal with such a problem, LXL Ideas introduced elements of standardisation through facilitator guides and worksheets. In the School Cinema programme, each film comes with a facilitator guide for the teacher, and activities, worksheets and assignments for students. Following the film, there are facilitated conversations that make the child relate the issue to his or her own life. The facilitator guides and worksheets ensure that the conversation and activities are steered towards the intended outcomes.

³⁶ As per the website of the organization <https://lxl.in/>

- **Carrying out the desired assessments at a large scale :** It was difficult to have teachers or facilitators assess (especially for large numbers of children) whether the children had internalised the message of the films and had been able to relate it to their lives. To address such an issue, LXL Ideas adopted digitized assessments, which ensure that answers to reflective questions related to the films are efficiently and instantly captured.

2.3.4.4 Impact

- Primary and secondary research done by LXL Ideas reveals the impacts of watching issue-based films on the life skills of children. A sample survey of 1200 students in 6 schools (cited in the website of LXL Ideas) reveals that self-esteem is the life skill where the highest percentage of students experienced high change (32%) and moderate change (57%). 36% of children experienced moderate change with respect to the parameter of emotional maturity.
- Testimonials presented on the website of LXL Ideas reveal the benefits perceived by important stakeholders such as principals. One principal commented on the effectiveness of School Cinema, on the grounds that the multisensorial medium has proven effective for influencing youth, who have a short attention span.

2.3.4.5 Innovation

- **Film as an engaging and impactful medium :** The film medium blends storytelling, emotions and entertainment all in one medium, thereby making it a powerful medium of teaching (Hundred.org. n.d.).
- **Targeting of parents and teachers :** The inclusion of separate, customised films for parents and teachers adds to the innovativeness of the model. The model can also be considered innovative by virtue of catering to the whitespace of lack of 21st century skill interventions for parents.

Films are a great medium and I'm surprised nobody uses it as much as they should to teach.

Syed Sultan Ahmed, Founder, LXL Ideas

2.3.5 Breakthrough : Adolescent Empowerment Programme

2.3.5.1 About the Organization and Intervention

Breakthrough is a women's rights' organization. It is working to create a cultural shift and make discrimination and violence against girls and women unacceptable. Since 2012, Breakthrough has been attempting to change the gender-related attitudes and behaviours of adolescents through its Adolescent Empowerment Programme. The Taaron ki Toli (TkT) is at the core of the Adolescent Empowerment programme. TkT is a 2-year school-based gender equity programme for students of grades 6-8.

The Adolescent Empowerment Programme empowers adolescents with life skills so that they are equipped to act against gender discrimination in a non-confrontational manner. These life skills include self-esteem, leadership, negotiation skills and decision-making capacities. Breakthrough gives importance to changing gender attitudes of boys and girls at a young age, when these attitudes can still be moulded.

2.3.5.2 Strategies for Achieving Scale

Since 2012, Breakthrough's Adolescent Empowerment programme has reached over 10,95,148 adolescents across 13 districts in 4 states of India. Its TkT component has reached 5,50,760 school students. Breakthrough has achieved its large scale of intervention through multiple strategies.³⁷

- **Demonstration of impact before scaling up :** Breakthrough has executed and tested its model in multiple contexts. The evidence of impact from multiple contexts has given it the confidence to strengthen advocacy with state governments and scale up the model.
- **Strategic partnership with state governments and curricular integration :** Breakthrough is rolling out its gender equity curriculum in Punjab in collaboration with the state education department. The rollout is being done for students of grades 6-8 in all 6000 government middle schools of the state. The integration of the gender equity curriculum in the school education curriculum of the state enhances the likelihood of continuity of the initiative and its future outreach to even larger numbers of adolescents.
- **Making of inroads into multiple state government departments :** Breakthrough has developed linkages not just with the education department of the state education department of Punjab, but also with the health and women child development departments. Such linkages enhance the likelihood of the programme's further expansion beyond the school education domain.
- **Partnership with multiple stakeholders in society and attempt to achieve multiplier effect :** In order to achieve societal level change in gender norms, Breakthrough works to influence multiple stakeholders such as civil society organisations, state and central governments, local governments and frontline health workers. Based on the assumption that these stakeholders would go on to influence other people, Breakthrough aims to achieve systemic change through a multiplier effect.
- **Training of Teachers :** Breakthrough has trained 23,000 teachers in Punjab on the gender equity curriculum using a cascade model.³⁸ It is also supporting teachers through an app that enables them to watch demonstration videos for every session, and seek solutions for problems faced and answers for queries related to the gender equity curriculum.
- **Use of technology :** The digitization of the TkT curriculum and the use of online sessions has ensured that students continued to be reached even during the COVID-19 pandemic.

2.3.5.3 Challenges in Scaling Up

- **Balancing quality and scale :** In scaling up the programme through the training of government school teachers, Breakthrough faced the challenge of maintaining the desired levels of quality in the training that would eventually reach students. It addressed such concerns through continuous monitoring and handholding of teachers, and utilizing the aforementioned app for providing continuous support to teachers.

³⁷ Information on the scaling up, innovation and impact-related strategies of Breakthrough has been collected from the programme team of Breakthrough.

³⁸ A cascade model involves the training of Master Trainers, who in turn go on to train many other individuals.

- **Aligning partners to a common vision :** The organization also found it challenging to constantly align its multiple societal partners to its progressive vision of gender equity and ending violence against women. It attempts to maintain such alignment through constant handholding and motivation of its various partners.

2.3.5.4 Impact

- **Use of multiple RCTs and evidence from multiple contexts :** Breakthrough has had the impact of TkT evaluated through the Randomized Control Trial (RCT) methodology, which is the gold standard in impact measurement. Furthermore, two RCTs (by J-PAL in Haryana and by CMS in Bihar) have been conducted to assess the impact of TkT, which makes it a robustly tested programme with reliable evidence of impact.
- **Impact evidence related to change in gender-related attitudes :** The RCT conducted by J-PAL for assessing the impact of TkT in Haryana (for the 2014-16 cohort) found that in the short term (a few months after the programme ended), 16% of students who initially held discriminatory gender attitudes changed their views to be more gender-equal, and equal impacts were seen for boys and girls (Jayachandran, Dhar and Jain, 2016).
- **Impact evidence related to change in the lives of girls :** Breakthrough's programme is backed not only by evidence of impact on attitudes but also by evidence on positive changes in the lives of girls. The RCT by CMS in Bihar found a decline in early marriage rates by 28% for the Breakthrough cohort (compared to 22% for the control group).
- **Evidence of impact over time :** Impact assessment studies are usually point-in-time and do not frequently assess long term changes in life skills or attitudes among young people. Breakthrough's programme is however substantiated with evidence of long-term impact. The J-PAL assessment for the 2014-16 cohort of TkT found that even three years after completion of the programme, adolescent attitudes remained progressive (15.5% higher than control).

2.3.5.5 Innovation

- **Using 'culture to change culture' and use of media campaigns :** Breakthrough complements its stakeholder partnership approach with the use of pop culture, the arts and the media to catalyse change in repressive gender-related cultural norms. Since its inception, it has used media campaigns like Bell Bajao (Ring the Bell) and Dakhal Do (Intervene) to reach a wider audience and ensure that its message of gender equity resonates well with a diverse audience.
- **Working with boys and young men :** Breakthrough engages men and boys as critical allies in preventing violence against women and changing unequal gender norms. Therefore, it works not only with girls but also boys and young men in schools, colleges and communities.
- **Working with parents :** There are few programmes for parents in the 21st century skills space. Breakthrough, however, engages with parents so that they provide girls with the support they need to complete their education and realise their full potential.

- **Participatory approach including Team Change Leaders** : Breakthrough has adopted a participatory approach by incorporating the voices of local stakeholders in shaping its programmes and curricula. For instance, the TkT curriculum was shaped through extensive consultation with adolescents in Haryana. Breakthrough also builds the capacity of young people in the community so that they can become 'Team Change Leaders' who are champions of social change in their communities.

2.3.6 Udhyam Learning–Foundation : Udhyam Shiksha - Entrepreneurship Mindset Curriculum

2.3.6.1 About the Organization and Intervention

Udhyam Learning Foundation aspires to equip individuals so they can discover their own potential and claim ownership over their future. Its Udhyam Shiksha Wing engages with education ecosystems to ensure “intrinsic (mindset) learning”.

Under the Udhyam Shiksha wing, Udhyam has been running the Entrepreneurship Mindset Curriculum (EMC), which aims to foster 21st century skills and entrepreneurial mindsets in young people (Udhyam Learning Foundation, n.d.). EMC is a 4-year program being offered from grade 9 to 12 where students learn various entrepreneurial skills and mindsets through a set of structured activities and reflection questions, both through in-class and out of class sessions. Apart from the EMC component offered in schools, Udhyam has a similar program for Industrial Training Institutes (ITIs).

2.3.6.2 Strategies for Achieving Scale

The EMC curriculum reaches 8.4 lakh students, in 10 states (out of which the rollout is at a pilot phase in 3 states). Udhyam has relied on strategies such as partnering with state governments and training teachers in achieving this scale.

- **State government partnerships** : Udhyam was clear from the beginning that the way to bring about a change in the education system was to work with the education system instead of outside of it. Therefore, they worked with various state governments to inculcate entrepreneurial mindsets in students through government schools and Industrial Training Institutes. In Delhi, for instance, the programme is being implemented in all the 1000+ government high schools of Delhi in partnership with the state government & SCERT.
- **Training of Teachers** : One part of the EMC curriculum is classroom-based engagement for learners (potential entrepreneurs). In such classroom sessions, teachers facilitate learners to develop an entrepreneurial mindset and to reflect on and evaluate possible ideas for entrepreneurial ventures. Udhyam uses a cadre of master trainers to train and monitor teachers in such tasks of facilitation.

- **2.3.6.3 Challenges in Scaling Up Finding time slots in school and ITI timetables :** One of the challenges in integrating the EMC with instruction in educational institutions was to find time slots in the school/ITI time tables. Udhyam also found it difficult to get focus and time from teachers to transact the experience-based curriculum. Udhyam addressed these challenges through the following strategies :
 - In ITIs, Udhyam has been able to find time in class schedules by aligning Entrepreneurial Mindset Curriculum (EMC) with the existing Employability Skills Curriculum.
 - In schools, Udhyam is slowly overcoming the challenge of getting time allotment in timetables by using the results of impact derived from pilot projects done in a few districts, to persuade state governments.
 - Udhyam has also utilized 'Bag-less Saturdays' which provide a window for dedicated non-academic work once a week by integrating EMC into such days.

2.3.6.4 Impact

There is preliminary evidence available about the impact of Udhyam's work in the 21st Century skill space. In 2020, Udhyam evaluated its pilot project done in Kerala. Evidence was generated on the extent of change brought about by the pilot project on life skill dimensions such as locus of control³⁹, autonomy and growth mindset :

- 81% learners shifted positively in locus of control, which implies that they felt more in control of their destiny
- 53% learners developed a greater sense of autonomy
- 52% learners developed a stronger growth mindset.⁴⁰

2.3.6.5 Innovation

Practical Orientation-empowering students to come up with actual entrepreneurial plans : Udhyam's EMC not only equips students with entrepreneurial mindset and skills but also empowers each student to come up with an idea and a plan to earn profit or solve a real-life social problem, by applying the learnt entrepreneurial mindset and classroom reflections.

2.4 Key Findings of the Chapter

- A landscape analysis of large-scale interventions in the 21st century skills space shows that the targeting of out of school children is a clear whitespace.
- Interpersonal skills are the 21st Century skill component most frequently covered by the large-scale interventions as identified in this study.

³⁹ Locus of control is an individual's perception about the underlying main causes of events in his/her life. Or, more simply : Do you believe that your destiny is controlled by yourself or by external forces (such as fate, god, or powerful others)? (Neill, 2006).

⁴⁰ Impact evidence shared by the Udhyam Program Team

- Most of the large-scale interventions shortlisted in this study cover more than five states.
- Organizations most frequently use the partnership approach in order to achieve scale in their 21st Century skill interventions, which include partnerships with state governments.
- Demonstration of impact evidence, the use of technology and the training of trainers/teachers are the other common strategies that organizations use for scaling up.
- The use of RCTs and multiple evaluations are some of the best practices of large-scale interventions for producing robust impact evidence.
- Gamified learning, the use of the mass media including cinema, and building young people's participation into programmes are some of the innovative elements in large scale 21st Century skill programmes.



Challenges, Whitespaces and Enablers

Part A – Challenges and Whitespaces

3.1 Challenges in Implementation

Conversations with stakeholders such as intervention visionaries and principals reveal the major implementation challenges in providing 21st century skills to young people. The reviewed literature and landscape analysis provide additional insights on implementation challenges.

Some challenges such as the fragmentation of the 21st century skills space may be considered as an overriding issue for the entire domain. However, there are also unique challenges in transacting 21st century skills to particular groups such as in-school children, out of school children and vocational trainees. Additionally, there are specific challenges in transacting particular components of 21st century skills such as digital and financial literacies.

3.1.1 Challenges in the Field

Adverse life conditions and poor quality of education : Experts from Dream a Dream have drawn attention to early life nutritional and educational adversity faced by Indian youth from less privileged backgrounds (Talreja & Krishnamurthy, 2018). Because of such adversity, physical and intellectual growth remains hindered. Even basic levels of foundational literacies are constrained, as revealed by recent ASER reports.⁴¹ In such a context, it is challenging to foster the higher-order competencies such as critical thinking that are needed for the 21st Century workplace.

India is the stunting capital of the Asian region and we have more stunted children than Africa has. What do stunting and wasting do? They basically inhibit one's ability to have good judgement and do analytical thinking.

Subroto Bagchi, Chairman, Odisha Skill Development Authority

Fragmentation and duplication of the space : Visionary and literature-based insights shed light on the problem of fragmentation and duplication in the 21st century skills space. Mr Arjun Bahadur, Lead, Life

⁴¹ ASER reports for 2018 reveal that only 25% of youth aged 14-18 were able to read basic text fluently (Current Affairs Review, 2020)

Skills Collaborative pointed out that different players are doing the same thing in different parts of the country.

Since different organizations have different definitions, they often create their own version of life skills (UNICEF, 2020). Such variation in understanding has led to challenges for collaborative discussions in the domains of assessment and designing of interventions (Bapna, Sharma, Kaushik, & Kumar, 2017). Work happens primarily in silos, and collaborative engagement is rare (Talreja & Krishnamurthy, 2018).

Lack of unified frameworks of 21st century skills : Geeta Goel, Country Director, Michael and Susan Dell Foundation, argued that there are no standard definitions, nomenclature etc., for the 21st century skills landscape in India.

Furthermore, there is no comprehensive framework for 21st century skills available. Digital and financial literacy are aspects of 21st century skills; however, these have different frameworks. While life skills frameworks are more easily available than 21st century skills frameworks, there is a need for a common 21st century skills framework that incorporates these aspects.

Getting parents to take interest : The parents FGD conducted for this study showed parents to be aware of 21st century skills.⁴² However, the lack of awareness and interest of parents was mentioned as a challenge by some of the interviewed visionaries. As the intervention visionary Syed Sultan Ahmed expressed, “The biggest blame has to be taken by the parents, because they're the ones who are pushing schools, and their matrix of measurement is only academic grades.” Principal FGD participants also mentioned that parents requested exams that do not demand much application, which may hinder honing of critical thinking and creativity skills.

Rapidly changing nature of 21st century skills : Principals and visionaries spoken to mentioned the rapidly changing nature of 21st century skills as a challenge. One principal gave the example that the financial literacy curriculum, to his knowledge, had not yet incorporated cryptocurrency as a topic.

Industry moves at a much more rapid pace than academia. Our textbooks are dead, we just have not buried them. By the time you publish a cyber security textbook, it's already defunct.

(Ajay Kela, CEO and President, Wadhvani Foundation)

Limited dedicated funding for 21st century skills : There is less dedicated funding for 21st century skills, since they are often funded from the available pool of education programmes (UNICEF, 2020). Organizational accounts presented in Chapter 2 revealed that persuading government and corporate stakeholders to fund such programmes has been a challenge for scaling up 21st Century skill interventions.

⁴² It may be noted that the parents covered in the parents FGD were from professional backgrounds and fluent in English, and only one parent FGD was conducted. The viewpoint expressed in the parents' FGD thus represents a sub-section of parents, and may not represent a diversity of parents' groups.

Lack of continuity : 21st century skills need to be fostered over a period of time. Most skills initiatives in developing countries such as India are designed as one-time or short-term interventions instead of long term or continuing ones (Nasheeda et al, 2018).

Nascent stage of development of age-appropriate life skills framework : As per a 2015 report, there are few available frameworks detailing age-appropriate life skills (Singh and Menon, 2015). However, since then, the Teacher Foundation has released its Indian Social and Emotional Learning Framework (ISELF), which is an age-differentiated socio-emotional skills framework for Indian young people (Teacher Foundation, n.d.). The CBSE handbook on 21st century skills (CBSE, 2020) has also drawn the very basic contours of age-appropriate life skills and 21st century skills.

3.1.2 Challenges for In-school Models

Schools/teachers don't understand the urgency : The relative unimportance of life skills as a skill set is perpetuated by the education system (UNICEF & Sattva, 2020). Insights from the literature, visionary interviews and principal FGDs reveal that there is a need to change the mindset of teachers for delivering 21st century skills. For most teachers, the life skills programme adds an extra class to their already busy schedule (Lions Quest in India Foundation and Saath Charitable Trust, 2011). It is a challenge to shift life skills from the boundaries (i.e., as recreational or passive 'values education') to the centre of schooling (Singh and Menon, 2015). This is validated by the inputs given by the Principal FGD participants, who mentioned that teachers and students often don't realize the importance of 21st century skills; they consider classes for such skills as a 'leisure period'. The policy visionary Rajesh Khambayat from PSSCIVE argues that positioning 21st century skills as 'Employability Skills' may enhance its accessibility among industry, parents, teachers and youth.

“Unless a teacher is able to see herself differently from 'I'm just preparing this child for the 10 Std exam' to 'I'm preparing this child to respond to an unpredictable, complex future and how am I being measured on doing that', the resistance of the teacher is understandable

Suchetha Bhat, Dream a Dream

Getting good quality trainers and suitable, dedicated teachers : Rajesh Aggarwal, Secretary, MSDE, mentioned that the same teacher who's teaching a vocational trade like welding is often responsible for teaching employability skills to skill development trainees. 21st century skills however require a different style of transaction. According to another policy visionary, 21st century skills “cannot be run by typical traditional teachers. It has to be run by people who are facilitators, and experiential learning has to be brought into it” (Shrikant Sinha, CEO, Telangana Academy of Skill Development). Insights from the principal FGD reveal that there is a lack of role models; many teachers who try to teach skills such as conflict resolution are unable to demonstrate these skills in their own conduct. Thus, there is a need for intensive and deep capacity building of teachers.

“ Life skills are best taught when you relate it to real world real life around us.

Syed Sultan Ahmed, LXL Ideas

Time and capacity constraints for integration into school instruction : Even though the integration of 21st century skills into school instruction is widespread (in the form of separate life skills sessions), time constraints and compulsions of completing the syllabus make such integration challenging. Mr Ajay Kela, CEO and President of Wadhvani Foundation argues that the scope of 21st century skills is vast, and multiple years are needed to teach them. It also requires a certain level of capacity on the part of trainers to integrate 21st century skills into the teaching of core subjects such as math.

The literature mentions shortcomings in the schools' efforts to provide such skills to students; school efforts often employ a general approach of 'life skills information delivery' or moral/values education, which is prescriptive or information-driven with less focus on the building of practically relevant skills (Singh and Menon, 2015) Principal FGD participants mentioned the limited engagement time available due to the pressures of completing the educational curriculum. Often, after-school classes are the only option to deliver sessions on 21st century skills. In institutes such as ITIs, students spend only six months, a year or two years for courses, which provides a short time frame for bringing about change. The account on Udhyam Learning Foundation in Chapter 2 showed how it had to adopt innovative strategies to accommodate 21st Century skill sessions within the school and ITI timetables.

3.1.3 Challenges in Reaching Out of School Young People

Conversations with visionaries working in the out of school space⁴³ revealed that 21st century skills for out of school children are integrated into the educational instruction through activities, instead of being taught in standalone sessions. Both life skills and instruction in foundational literacies are used to prepare such children to be mainstreamed in school. According to the intervention visionary Mom Banerjee of Samriddhi, life skills are a path for building the hunger for learning and the motivation to go to school among out of school children. Many challenges are faced in taking these skills to out of school young people from marginalized backgrounds :

- **Adverse social, economic and familial context :** It is difficult to get the support of parents for educational and life skills programmes, since children are expected to cater to domestic responsibilities. The children often have disturbed and unstable lives and some of them live in slums where there is a constant threat of eviction. Older children may prefer to work instead of attending educational or life skills instruction.
- **Lack of trust and lack of exposure to classroom environment :** Since the children have no prior experience of classroom learning, it is difficult to obtain the trust of such children and to motivate them to enter a disciplined learning environment.
- **Lack of support of local authorities and other decision-makers :** The children often belong to communities on the margins such as street dwellers and migrant groups. As a result, there is little support from local authorities (panchayats or municipalities) and local communities. At all levels, empowering out of school children remains a low priority for decision-makers.

⁴³ The visionaries interviewed were Mom Banerjee of Samriddhi, Souvik Saha of People for Change and Bappaditya Mukherjee of Prantakatha.

- **Lack of reliable data on out of school children :** Many out of school children belong to vulnerable and itinerant communities such as migrants. The available datasets on out of school children may not accurately reflect the true number of such children. Many such children are enrolled in school and are thus counted amongst enrolled children, but have extremely meagre levels of attendance (Rao & Koshy, 2021).
- **Lack of structured frameworks :** According to the intervention visionaries who work on promoting 21st century skills among out of school children, there is a lack of defined guidelines, structured content frameworks, case studies and evidence from pilots for this group. These could help in guiding the transaction of educational and life skills competencies for out of school children from disturbed backgrounds.
- **High requirement of individual attention :** Such models require individual attention to the children/young people, and are difficult to scale up, especially when the children are required to be handheld for a period of time even after being mainstreamed in school.

3.1.4 Challenges in Integrating with Vocational Training

Vocational training does not devote enough time or emphasis to 21st century skills : A conversation with the Secretary of MSDE revealed that the trade skill-soft skills balance in skill development courses is overall around 70 :30. The limited number of hours available (for example only 160 hours in a one-year ITI course) is also a constraint for the in-depth, impactful honing of 21st century skills amongst vocational trainees, especially for less privileged youth who have lacked quality schooling.

Lack of comprehensive standard curricula on the lines of the Qualification Packs : Comprehensive QPs (Qualification Packs)⁴⁴ for 21st century skills have not yet been developed, because of which organizations need to work hard at putting together the content framework for 21st Century skill courses. The MEPSC (Management and Entrepreneurship and Professional Skills Council) has drafted QPs for 'generic' or employability skills (which comprise certain, but not all 21st century skills).

3.1.5 Challenges in Delivering Breadth of 21st Century Skills

Challenges in delivering digital literacies : For digital literacy, internet connectivity related issues, shortage of trained teachers and poor maintenance of equipment are major challenges faced (Gond and Gupta, 2017). The availability of quality digital education content for students in vernacular languages is also a major problem (PwC, UNICEF, YuWaah & Generation Unlimited, 2020).

Challenges in delivering financial literacy : According to a study conducted by IIM Ahmedabad, financial knowledge among students and young employees is very poor as compared to global standards (Arya, 2018). There are many challenges faced in transacting financial literacy at the school level. There are inadequate materials for teaching and an unclear curriculum and standards, due to which teaching

⁴⁴ A Qualification Pack (QP) is a set of occupational standards aligned to a particular job role. A QP is available for every job role in each industrial sector. A QP may be considered to be a syllabus outlining the competencies to be taught to vocational training candidates aspiring for that job role.

financial literacy is not effective. Teachers mostly use curricula designed by the RBI or other financial institutions. Such curricula are developed by those who do not understand the cognitive ability of children to understand the concepts (Jayaraman, Jambunathan and Adesanya, 2018).

3.2 Challenges in Measurement

For the field of life skills, various assessment approaches are prevalent, such as self-rating, teacher/observer rating and Behavioural Measure Activities (Singh and Menon, 2015). Appendix V provides details of the major scales available for assessing 21st century skills in India, such as the DLSAS (Dream a Dream's Life Skills Assessment Scale), NIMHANS Life Skills Scale and the Transferable Skills Scale used in the Young Lives School Surveys. Insights from the literature and visionary interviews reveal the following challenges with respect to the assessment of 21st century skills :

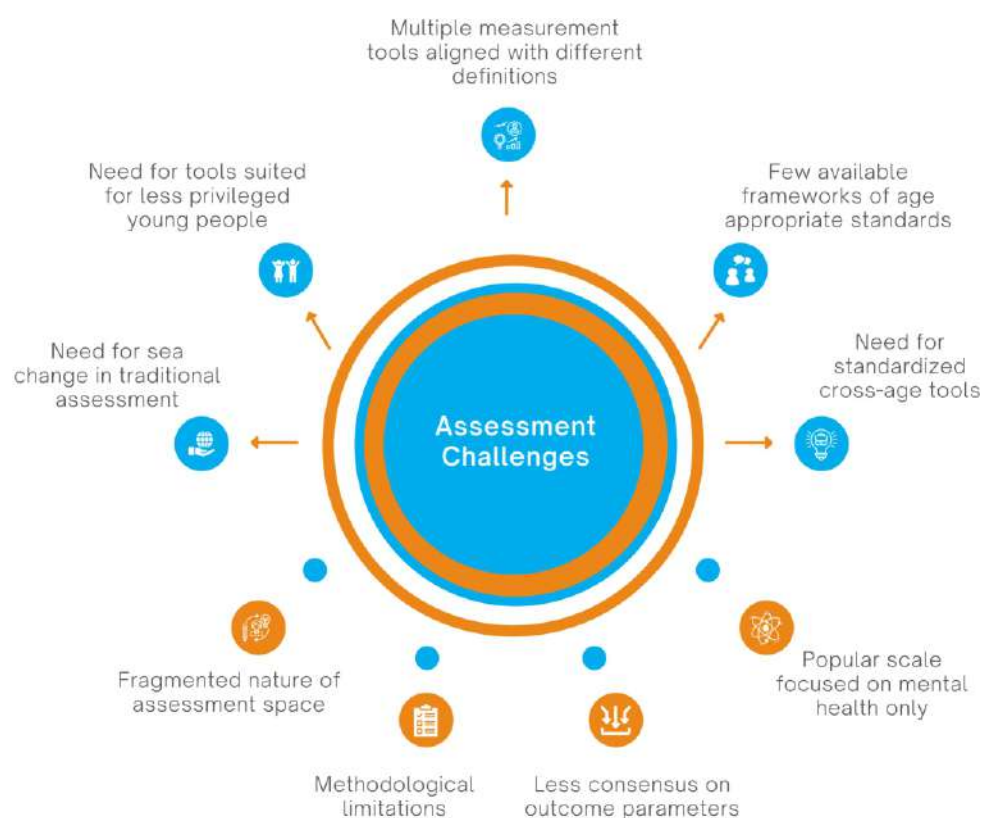


Figure 3.1 : Assessment related challenges in the 21st century skills domain

- a) **Multiplicity of measurement tools :** There are multiple tools measuring particular facets of life skills, and not life skills as a whole. This arises from the multiple ways in which life skills are defined (Talreja & Krishnamurthy, 2018).
- b) **Few available frameworks of age-appropriate standards :** There are only a few frameworks that define age-appropriate learning standards for social and emotional development (Singh & Menon, 2015). The CBSE Handbook on 21st century skills (CBSE, 2020) provides an indicative framework. Apart from this, the Teacher Foundation has come up with ISELF (Indian Social and Emotional Learning Framework), an age-banded framework for developing social-emotional competencies in Indian children, based on its long-drawn nationwide research (Teacher Foundation, n.d.).

- c) **Need for standardized cross-age tools :** Along with age-appropriate learning outcomes, a focus is also required to develop standardized tools that measure life skills across age groups. Such tools should allow for the measurement of outcomes over time (i.e., immediate and longer time outcomes) (Talreja & Krishnamurthy, 2018).
- d) **Less consensus on outcome parameters :** Life outcomes of life skills interventions are challenging to assess because of a lack of consensus on what to measure. There is less agreement on what constitutes a life outcome and how to measure it. For example, some scholars interpret the quality of life outcomes through a purely subjective lens, while others interpret it as material well-being (Talreja & Krishnamurthy, 2018).
- e) **Popular tool focused mostly on mental health :** The most popular measurement tool to measure life skills is the WHOQOL-100 scale developed by the World Health Organization (WHO). The challenge with this scale, however, is that most items on the scale are anchored in the mental health space and are not representative of different facets of life (Talreja & Krishnamurthy, 2018).
- f) **Need for sea-change in assessment approach :** Assessment of 21st century skills requires a sea-change in methods and approach from traditional methods of educational assessment. Traditional methods are usually less application-based, less equipped to assess skills such as critical thinking, and more suited to be tests of memory. NEP 2020 has recognized this need, and has led to the setting up of an assessment body known as PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development).⁴⁵ PARAKH is expected to come out with alternative assessment approaches, and also disseminate assessment best practices.
- g) **Fragmented nature of the assessment space :** According to one intervention visionary, many organizations have developed/adapted their own assessment scales. However, these scales are yet to be tested at scale for wider and more acceptable results. Also, there is a lack of communication between the entities who have developed/adapted different scales. Life Skills Collaborative (LSC) is attempting to address this lack of communication by bringing organizations together to co-curate and co-develop assessment tools.
- h) **Need for tools tailored to measure 21st century skills for children with adverse backgrounds :** Assessment scales should be appropriate in the context of the early life education and nutrition-related adversities that Indian children face. Teacher/observer rating-based scales such as the LSAS may be less suitable to apply at a large scale. LSC has recognized the gaps in the availability of tools suited to measure life skills for children from less privileged backgrounds. As a first step, it has created a glossary of life skills terms based on conversations with parents and other stakeholders on the ground and is working to derive a set of common indicators across different types of life skills interventions.
- I) **Limitations in the research methodology for measuring 21st century skills :** Social response bias, that is, the predisposition of respondents to present themselves in positive ways, affects the scales which are based on self-reporting by respondents. Also, underdeveloped language abilities affect the ability of children from adverse backgrounds to respond to self-reporting-based scales (Care et al., 2020).

⁴⁵ The mandate of NEP's GEC is to define the learning outcomes or competencies to be assessed. Given NEP's focus on 21st century skills, it is expected that the competencies to be defined by GEC will include 21st Century skill related competencies. It is thus also expected that PARAKH will develop methods of assessing such 21st Century skill competencies

J) **Challenges in administering tools with open-ended responses :** For tools, where students have to enter open-ended responses (for example for certain questions on creativity), children are not responding as well as expected, as revealed by visionary Vyjayanthi Sankar, Founder of CSSL. She attributed this to problems in the educational system, due to which children's writing skills remain underdeveloped.⁴⁶

3.3 Whitespaces in Transacting 21st Century Skills

Interviews with visionaries have revealed the following major whitespaces in the 21st century skills space :

- **Less targeting of out of school children and young people :** An earlier section in this chapter has elaborated the numerous implementation challenges in delivering 21st century skills to out of school children and young people. These challenges result in there being very few large-scale interventions for out of school children. While some organizations are doing valuable work in the space, they face a challenge in scaling up. Interviewed visionary Madan Padaki points out that from a distribution standpoint, it is more efficient to deliver such skills to in-school children, which is why out of school children remain neglected.
- **Remote rural areas :** Deep rural pockets also get left out. There is especially a dearth of interventions outside the school system in rural areas.⁴⁷
- **Marginalized groups such as SCs and tribals get left out :** Radhakrishnan Nair, the founder of the Indian Association for Life Skills Education argues that “The underprivileged are not benefitting – the tribals and scheduled castes. Well to do private schools are doing this very intently, very deeply and very meticulously.”
- **Fewer interventions for parents :** Multiple visionaries have pointed to the need to sensitize parents towards 21st century skills. Mr Madan Padaki also points to awareness campaigns for parents as whitespace. However, 21st Century skill interventions such as School Cinema and Breakthrough have incorporated interventions for sensitizing parents (see Chapter 2 for details).

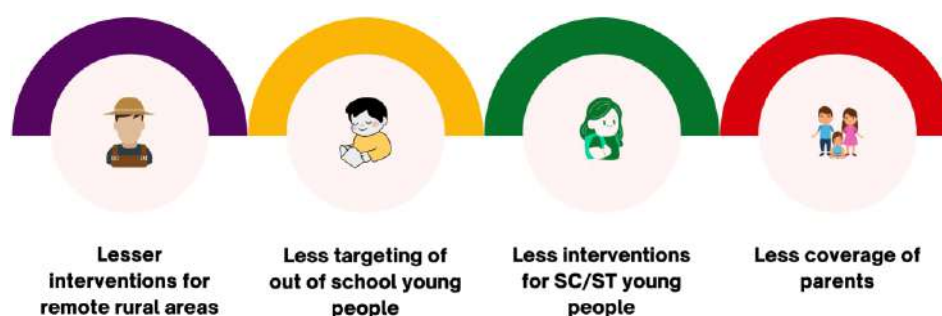


Figure 3.2 : 21st century skills whitespaces

⁴⁶ Principal FGD participants also spoke of the gaps in basic reading and writing skills among less privileged students coming from vernacular backgrounds, that make it a challenge to transact such skills.

⁴⁷ Point highlighted by Mr Madan Padaki

Part B - Enablers and Opportunities

Widespread efforts to integrate 21st century skills into school instruction : Integration of 21st century skills in school instruction ensures that students have assured access to structured orientation in 21st century skills as a part of their in-school experience. The literature (Singh and Menon, 2015) and the principal FGD reveal the tracks through which such integration is happening :

- firstly, through the instruction of mainstream subjects (also called the curriculum integrated in-school approach): This approach is advocated by the NEP, 2020 and the CBSE.
- secondly, by having 21st century skills as a separate subject (also known as the in-school standalone subject model).⁴⁸
- thirdly, through school-linked programmes in which 21st Century Skill teaching is considered an extracurricular activity.⁴⁹

A principal FGD participant mentioned that the curriculum integrated in-school approach had been initiated in CBSE schools. The principal elaborated that in CBSE schools, the Creative and Critical Thinking (CCT) Weekly Practice Programme has been launched to enhance the 21st century skills of students.⁵⁰ With respect to the standalone subject model, many examples are available, including Employability Skill sessions in ITIs⁵¹ (see textbox), and separate life skills sessions in schools.⁵² Both approaches have their merits, and a combination of both approaches may work best for inculcating 21st century skills among young people.

⁴⁸ According to Singh and Menon (2015), in this model, 21st century skills are taught as a separate scheduled subject. Time is dedicated in the weekly schedule for 'life skills' education. 21st century skills taught in this way may or may not be assessed. According to the authors, this is a model that has been widely used in India

⁴⁹ Singh and Menon (2015) explain that in the school linked model, the 21st century skills instruction may be affiliated with schools but not necessarily delivered in or by schools. Here children participating may be reached through schools, and school resources and facilities are often used. Such programmes are usually facilitated by trained and specialized peer educators, guidance counselors or social workers.

⁵⁰ Through the CCT programme, CBSE shares a set of 5 questions every week for engaging teachers as well as students. These questions are not necessarily related to the syllabus, but are connected to the overall learning of students in classes 7th to 10th (CBSE, 2020, January 8)

⁵¹ ITIs in many places are lacking in the capacity to deliver Employability skills sessions. Therefore private entities such as Quest Alliance are involved in transacting this curriculum in ITIs in several states of India.

⁵² Dedicated or standalone life skills sessions are being provided in schools by several organizations such as Dream a Dream, Magic Bus and Udhyam Learning Foundation and many others.

Integration of 21st century skills in the curriculum as a separate subject : Employability Skills in ITIs

The Employability Skills curriculum was introduced in ITIs in 2012, in view of the significance of soft skills for making ITI students more employable. The duration of these courses is 80 hours for six-month courses and 160 hours for one or two-year courses (MSDE, 2019a; MSDE, 2019b).

Quest Alliance has been involved in delivering this curriculum in ITIs in 22 states of India.

In Odisha, the Youth Development module prepared by Tata Strive has been introduced into the Employability Skills curriculum for providing additional life skills training hours to ITI students through immersive sessions and the use of behaviour change techniques (Tata Strive, n.d.).

Out of the box, extracurricular activities are being used to hone 21st century skills in school students :

Transaction through extracurricular activities is one of the prevalent approaches for delivering 21st century skills to young people. One principal FGD participant, who leads a private school, spoke of the dedicated 'academies' in his school, such as the leadership academy and sports academy, for inculcating 21st century skills. The 'storytelling' approach is also used in the same school for fostering such skills. (For more details on the extracurricular activities approach, see textbox). Such activities may be less burdensome and enjoyable for students (as long as they are aligned with the interests of the students), and thus may be a suitable way of transacting 21st century skills.

Extracurricular Activities for honing 21st century skills amongst school students : Insights from the ground

Youth and other stakeholders perceive that extracurricular activities help in honing 21st century skills. There are many instances of schools organizing or capitalizing on such activities to foster 21st century skills in students.

Government schools in Mysore district of Karnataka had facilitated 'Makkala Santhe' or the children's market initiative in which students, by participating as traders or shopkeepers, honed skills such as entrepreneurial skills, leadership skills and financial literacy. Participation in cultural competitions at the cluster, block or district level such as 'Pratibha Karanji' helped the students of government schools in Mysore district develop greater confidence.

Glossary of 21st century skills for the Indian context : The lack of a common definition of 21st century skills or even life skills was mentioned earlier as a major challenge in the implementation of such skills. As a solution to this problem, the Life Skills Collaborative (LSC) has developed the India Life Skills Glossary, which is an attempt to present a collaborative understanding of such skills for the Indian context.⁵³ In the process of developing this glossary, LSC's component organizations such as Pratham, Breakthrough and Quest Alliance had surveyed various stakeholders (parents, students and teachers) to understand how they understand or define such skills. Based on received inputs, LSC has also collated colloquial names for different life skills in different Indian languages.

India Life Skills Glossary is a big step towards strengthening the imparting of life skills education in India. It will be an invaluable resource for departments of education, school teachers and NGO partners, equipping them with accurate and accessible information on vital skills and how they are manifested in young people

Maya Menon, Founder Director, The Teacher Foundation

Life Skills Collaborative (LSC)

18 organizations working in the life skills space came together to form the LSC in 2021. The LSC was set up to champion the cause of 21st century skills for the youth. State governments like Mizoram, Rajasthan, Uttarakhand, and Maharashtra are partnering with LSC. The LSC comprises organizations with expertise in education, skill development, health, and gender.

LSC has 3 focus areas :

Voices : a nationwide engagement with youth, parents, and teachers to capture their voices that can inform the integration of life skills within public education systems.

Glossary : a set of definitions that serves as the vocabulary for the life skills discourse in India

Assessments : creation and dissemination of an assessment repository for adolescents, teachers, and the system. At the adolescent level, the focus will be on the assessment of students' capacities and strengths in the age groups 11-14 years and 15-18 years. At the teacher level, the focus will be on the assessment of the ability of the teacher to foster life skills in an adolescent. At the system level, the focus will be on the readiness of the system to deliver life skills.

⁵³ The India Glossary lists and explains 51 life skills that are important for Indian young people between the ages of 11 and 18 years. Each life skill is explained in terms of definition, life skills in action (how the life skill is manifested in a young person) and related life skills (ANI, 2021b).

Generation of interest in 21st century skills through mention in the NEP (National Education Policy) 2020: The National Education Policy 2020 (NEP, 2020) positions the aims of education as creating holistic and well-rounded individuals equipped with 21st century skills. Akash Sethi, CEO of Quest Alliance argues that NEP has led to the realization of the need for educational institutions to focus more urgently on 21st century skills. Additionally, Prof M K Sridhar, who is involved in implementing the NEP, revealed that the NEP has created an enabling environment for 21st century skills through the recommendation of university autonomy. Such university autonomy will give more freedom to universities and colleges to choose students not only based on marks and entrance test scores, but also on the assessment of 21st century skills.

Existence and work of Management and Entrepreneurship and Professional Skills Council (MEPSC) : MEPSC is a sector skill council for generic (non-trade) and employability skills. The website of the MEPSC mentions that it aims to further generic/behavioral/soft/employability skills, on the premise that “youth are hired for technical skills but are fired for lack of such generic skills” (MEPSC, n.d.). It has worked on creating Qualification Packs (QPs) for 'generic skills' on the lines of the QPs that exist for vocational training courses. Intervention visionary Anita Rajan from Tata Strive acknowledges the role of MEPSC in creating 'set standards' for industry-relevant 21st century skills.

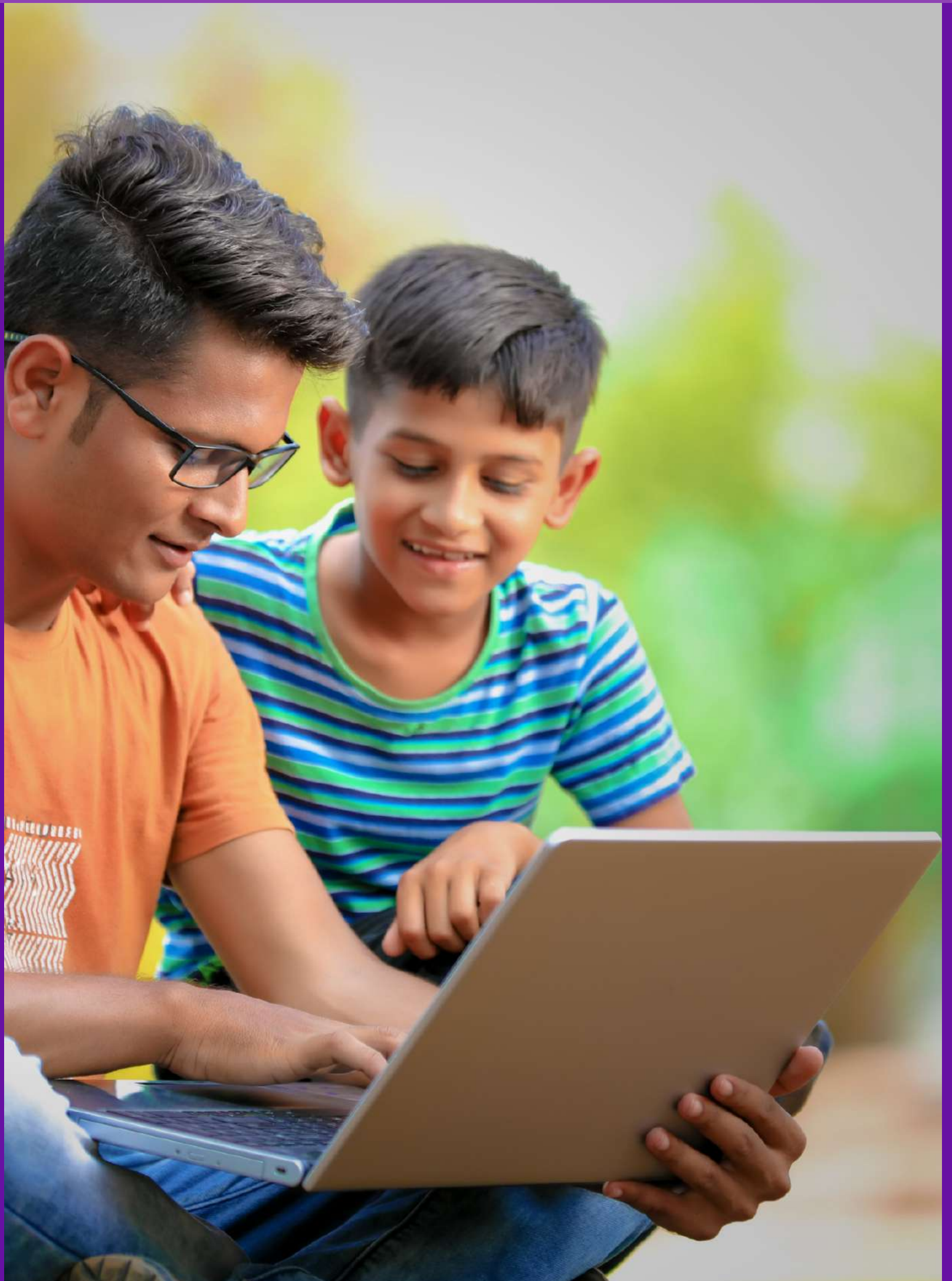
Existence of content frameworks : Content and curriculum frameworks from past and ongoing interventions are available. These resources can be capitalized on (after the required customization) for application to different contexts.

Available 21st Century and Life Skill Content Frameworks and guidelines

- CBSE's 21st century skills : A Handbook
- Nehru Yuva Kendra Sangathan Guidelines for Organization of Life Skills Training Camps
- UGC Life Skills (Jeevan Kaushal) Facilitators' Guidelines
- NCERT's Global Citizenship Education : A Handbook for Teachers for Upper Primary Level in India
- NSDC Framework on Social Emotional Learning for Integration into Qualification Packs
- MEPSC's Qualification Packs on Generic Skills
- LSC's India Life Skills Glossary
- Teacher Foundation's ISELF (Indian Social and Emotional Learning Framework)

Part C - Key Findings of the Chapter

- In the Indian context, providing 21st century skills to young people from adverse backgrounds is a major challenge.
- The 21st century skills space is very fragmented with a plethora of low scale interventions and with less collaboration among different players.
- More support is needed for 21st century skills promotion from key stakeholders like parents and principals.
- For in-school models where 21st century skills are taught as a standalone subject, it is difficult to find time slots in the school timetables for 21st century skills sessions.
- It is a major challenge to develop the capacity of teachers to teach 21st century skills, which need a very different approach from traditional subjects. It also requires teachers to be reflective about their own life skills and experiences.
- It is difficult to scale up 21st Century skill interventions for out of school young people because of factors such as the lack of guiding frameworks and the requirement of individual attention.
- Assessment of 21st century skills is ridden by challenges like the unavailability of scalable tools for measuring such skills among less privileged youth, lack of collaboration in the assessment space, and a lack of common understanding of 21st century skills and their outcomes.
- Lack of enough interventions for out-of-school young people, deep rural areas, marginalized youth like SCSTs and parents - these are the major whitespaces for the domain of 21st century skills.
- The importance given by NEP 2020 to 21st century skills has given a boost to the prominence of such skills with policymakers, educationists and other actors.
- In the context of a fragmented 21st century skills space, the Life Skills Collaborative has done pioneering work in bringing organizations together for developing a common understanding of 21st century skills.
- Available content frameworks such as the Generic Skills Qualification Pack developed by the MEPSC for industry roles are a major enabler for upcoming interventions in the 21st century skills space.



Best Practices for Scale

4.1 Introduction

Chapter 3 showed that the 21st century skills space is fragmented with a lot of duplication of similar work and not enough collaboration and coordination. Certain factors constrain the scaling up of 21st century skills, as a result of which a lot of work in the field remains small-scale. Most of these factors were also mentioned in the organization-specific accounts provided in Chapter 2.



Figure 4.1 : Challenges faced in scaling up 21st century skills interventions

Firstly, given the role of the teacher or facilitator (to a greater or lesser degree) in most life skills education interventions, any attempt to scale such programmes can result in a dilution of quality in the absence of effectively trained teachers.⁵⁴ It is also a challenge to maintain the standardisation of desired outcomes in facilitator-led models.

Secondly, 21st century skills are contextual and need to be adapted based on the nature of the target group and location. For instance, there should be differences between the 21st century skills taught to a rural, out of school, 15-year-old girl and those taught to an urban, upper middle class, in school, 12-year-old boy (though there may be some common elements). Aspects such as communication and managing emotions are common to different contexts, while some contexts require unique focus or emphasis

Thirdly, the scale-impact trade off also makes it difficult to scale up 21st century skills interventions. There are a very few high impact, high scale interventions. Many interventions are either high impact and low

⁵⁴ Singh and Menon (2015) observe that many life skills models in India are very hands-on and resource-intensive (e.g. with mentors and in group sizes of around 25 children) and typically reach smaller numbers of children.

scale or low impact and high scale. Additionally, there are many more that are low in both impact and scale. Certain intervention models (for example those that closely work with less privileged out of school youth in their entire journey from school to employment), may have the merit of depth of impact, but may be difficult to scale up. scale. Certain intervention models (for example those that closely work with less privileged out of school youth in their entire journey from school to employment), may have the merit of depth of impact, but may be difficult to scale up.

Fourthly, the availability of funding is constrained. Interviewed intervention visionaries mentioned the difficulty of persuading donors about the importance of life skills, given that they may prefer interventions with more tangible outcomes in domains such as education, health, and skill development. Also, any model can be scaled up only when its effectiveness is proven through a pilot. However, funders are sometimes reluctant to support pilots.

Fifthly, finding suitable assessment tools that can be applied on scale, and training teachers in assessing 21st century skills have been challenges encountered by large scale organisations in their scaling-up journey

Finally, 21st century skills organisations find it difficult to integrate their programme sessions into the packed timetable of educational institutions.

Given the abovementioned challenges in scaling up, it is useful to identify the frequently used approaches that organisations have successfully used to attain scale in 21st Century skill interventions. Figure 4.2 summarises the major best practices for scaling up. Chapter 2 had shown that these best practices are amongst the most common strategies used by the identified major 21st century skills organisations for scaling up. Chapter 2 had also provided specific details on how these organisations are operationalizing these scaling up strategies.

This chapter synthesises these best practices across organisations, and adds insights and examples from a wider set of organisations.

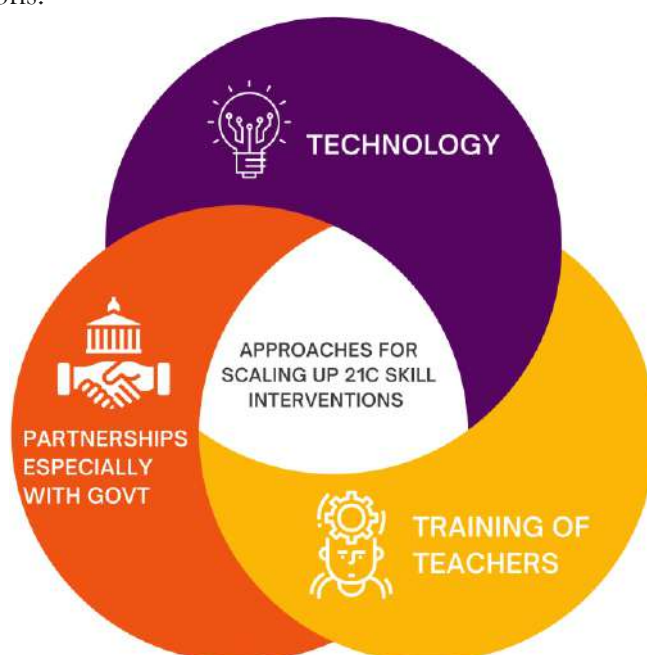


Figure 4.2 : Major approaches used for successfully scaling up 21st century skill interventions

4.2 Convergence and Partnerships

Intervention visionaries and programme staff interviewed for the study agree that it is not possible to achieve scale while working in silos. They emphasize the importance of partnerships, whether with other intervention organizations or with the government. Intervention visionaries are very cognizant of the ability and reach of the government to implement models at scale.

“The government is a very powerful machine, very powerful. They can do things that it would take years for private entities like us to do.”

Anita Rajan, Tata Strive

Organizations such as Quest Alliance and Dream a Dream have achieved multi-state scaling of their models through partnerships with state governments. Dream a Dream, for instance, achieved a large part of its scale by partnering with five state governments (Delhi, Uttarakhand, Jharkhand, Telangana and Karnataka). It was successfully able to integrate 21st century skills into the government school systems of these states. Partnering with the state government of Delhi allowed Dream a Dream's Happiness Curriculum to be implemented in all the 1000 plus public schools of Delhi. Quest Alliance has achieved presence in multiple states through its partnerships with the school education departments (for integration in school instruction) or with the DET (for integration in ITI instruction). Its MyQuest programme, for instance, is implemented in ITIs in 22 states of India through partnerships with the respective DETs (Departments of Employment and Training). Ms Sucheta Bhat of Dream a Dream shared that, partnerships with the government have the advantage of allowing the concerned organization to remain a solution provider (for example providing the curriculum and training of teachers), while the government and school systems take up the further tasks of execution on a large scale.

While the value of government partnerships has been repeatedly stressed by intervention visionaries, intervention organizations have also faced certain challenges in partnering with the government such as :

- Delays in approvals from state governments and need for better governance processes
- Need for better monitoring and data management of state government departments
- Need for autonomy and less interference
- Need for government officials to stress outcomes more than inputs and process
- Disruptions caused by events such as elections.⁵⁵

Notwithstanding the above-mentioned challenges, intervention visionaries such as Arjun Bahadur, Lead of Life Skills Collaborative and Ms Anita Rajan, CEO of Tata Strive shed light on the enthusiasm and interest of certain state governments. Such interest of state governments is making it easier to achieve scale for 21st Century skill programmes through the partnership track. Based on the experience of implementing the Tata Strive Youth Development Module in the ITIs of Odisha, Ms. Anita Ranjan said that, “Odisha is a great example of a very successful program with a government that is productive, which has people that are committed, has a wonderful vision of what it wants to achieve and is willing to be

⁵⁵ Points made by Mr Akash Sethi, CEO of Quest Alliance, Mr Anuj Alphonson, Director, Livelihood and Partnerships, Magic Bus and the programme team of Room to Read.

flexible and trusting of players like us.” The NEP has generated greater interest about 21st century skills among governmental actors. As a result, state governments such as Uttarakhand, Mizoram, Rajasthan and Maharashtra are showing great interest in implementing such skills. These state governments are also partnering with the Life Skills Collaborative to such an end.

4.3 Role of Technology

While the role of technology for executing interventions is all the more salient in the COVID age, organizations in the 21st Century skill space had been using technology even in the pre-COVID period to bring efficiency and scale to their programmes. Figure 4.3 shows that technology is a versatile tool for enhancing the scale of interventions.

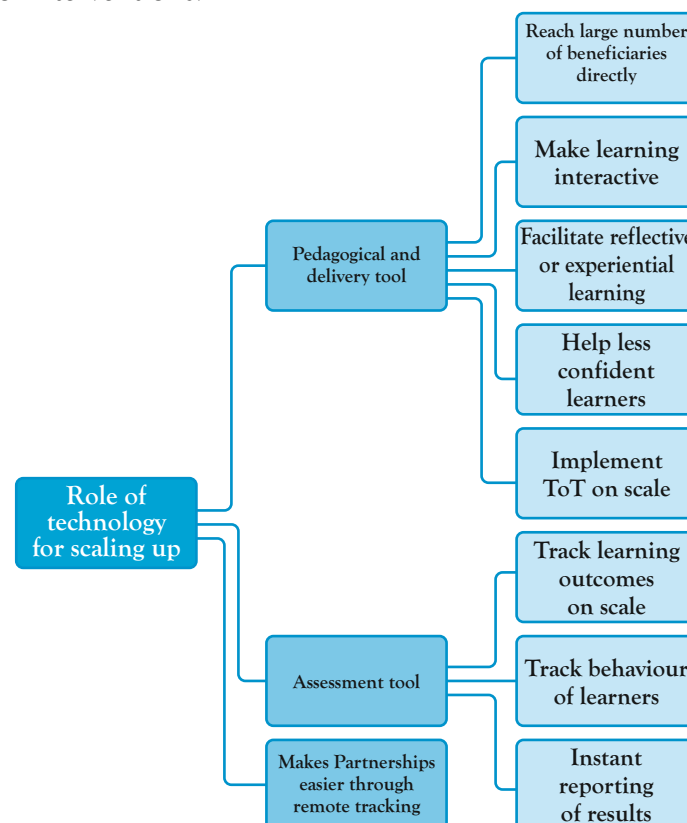


Figure 4.3 : How technology helps in enhancing the scale of interventions

As a pedagogical and delivery tool : Visionaries across the board perceive technology as a useful pedagogical or delivery tool. The head of Wadhvani Foundation, Mr Ajay Kela, perceives that the only way millions of Indian youth can be trained in 21st century skills and other job relevant skills is by replicating successful online education platforms such as Coursera, EdEx and Udacity. He perceives technology as having the potential to enhance greater direct contact with the student and reduce the role of the intermediary or facilitator, which in turn can make it easier to achieve scale. Technology enables not only direct but also indirect outreach to large numbers of beneficiaries by making ToT (Training of Trainers) efficient. Dream a Dream, for example, trained over 18,000 teachers online during COVID-19, which allowed it to exceed its pre-COVID reach.⁵⁶ However, according to Aakash Sethi , the CEO of

⁵⁶ M As revealed by Ms Geeta Goel, Country Head of Michael and Susan Dell Foundation

Quest Alliance, technology should not only be a means of disseminating information, but also a tool for enabling experiential learning, reflection on experiences and interaction between peers or between trainers and learners. Technology has the advantage of enabling asynchronous learning (learners learning at their own place). However, it also helps to facilitate synchronous learning (learners meeting with each other and facilitators to discuss, act and demonstrate) on online platforms such as Zoom.⁵⁷ Technology may also have the benefit of making learning more interactive and engaging, removing the fear of learning for less confident learners. The account on Quest Alliance in Chapter 2 had revealed that the digital divide can potentially constrain the optimal use of technology as a pedagogical tool. Quest Alliance is engaged in continuous technological innovation to enhance access to technology-based learning for less privileged youth in remote locations, even during the COVID-19 pandemic.

If I gamify some of the things, definitely people would be able to respond to it much faster, much better than even face to face communication

Shrikant Sinha, CEO, Telangana Academy for Skill and Knowledge

As an assessment tool : Aakash Sethi, CEO of Quest Alliance and Ajay Kela, CEO and President, Wadhvani Foundation shared that technology not only helps track learning outcomes but also (in the form of LMS) helps track the extent to which learners and teachers are engaging in the digital learning process. As revealed by the Founder of LXL Ideas Syed Sultan Ahmed, technology helps execute assessment at scale and makes for instant reporting of learning outcomes.

Our summative assessment generates data or data analytics at the student learning level. Therefore, we know not only what students scored in each of these tests, but how diligent they were in taking the test on time, every time. So based on all this, we produce a scorecard that reflects not just the final score, but also the behavior and attitude of the student in the journey...employers thus get access to a much richer resume.

Ajay Kela, CEO, Wadhvani Foundation

Remote tracking makes partnerships easier : Anita Rajan, CEO of Tata Strive shared that technology also facilitates partnerships with local implementation agencies in remote locations, since it helps in the monitoring of the performance of such agencies. Technological tools such as MIS, geotagging and CAPI (Computer Assisted Personal Interviewing) surveys are well-suited for monitoring programmes that are being implemented in remote locations by local organizations. Organizations such as Magic Bus are also using automated monitoring systems for tracking the performance of their local partners.

⁵⁷ Mr Akash Sethi elaborated one difference seen between the pre-COVID and post-COVID use of technology enabled and blended methods of learning. In the pre-COVID period, learners were able to physically meet to have peer and facilitator discussions, in addition to going through digital content. In the COVID scenario, such peer and facilitator meetings have gone online. Learners either had to rely on smartphones/relevant devices available at home, or had to be provided mobile learning devices. Since not all youth have access to personal devices, the digital divide posed an important barrier during the pandemic.

4.4 Training of Teachers/Master Trainers

Teacher training or the training of master trainers is perceived as being critical for scaling up by intervention visionaries such as Arjun Bahadur, Syed Sultan Ahmed and Rajesh Khambayat. Arjun Bahadur, Lead of Life Skills Collaborative, perceives the availability of standardized content as a necessary prerequisite for the success of teacher training programmes. Rajesh Khambayat, Joint Director of PSSCIVE opined that it is only through the preparation of Master Trainers that lakhs of teachers and huge numbers of students can be reached. However, as Chapter 3 elaborates, time and capacity constraints affect the delivery of 21st century skills through teachers of educational institutions.

Though the teacher may never, ever deliver the programme as well as I could do in a classroom, it's still a far more scalable and reliable model (to depend on teachers to deliver life skills)

Syed Sultan Ahmed, Founder, LXL Ideas

The assumption behind a ToT model is that the trained teachers or trainers will deliver the training to the targeted beneficiaries at the expected standards of scale, quality and timeliness. However, when depending on a ToT model, the trained trainers may not take it forward. One such example comes from the case of a large-scale youth life skills programme carried out by the Govt of Karnataka in partnership with NIMHANS, which depended on NSS facilitators to take life skills to youth. While five lakh youth were reached by the programme, only about 700 out of the 3000 facilitators trained, actually delivered life skills to the youth.⁵⁸ Such an example points to the need for constant tracking and handholding of trained trainers, which may be a time and resource intensive activity.

4.5 Other Best Practices for Reaching Scale

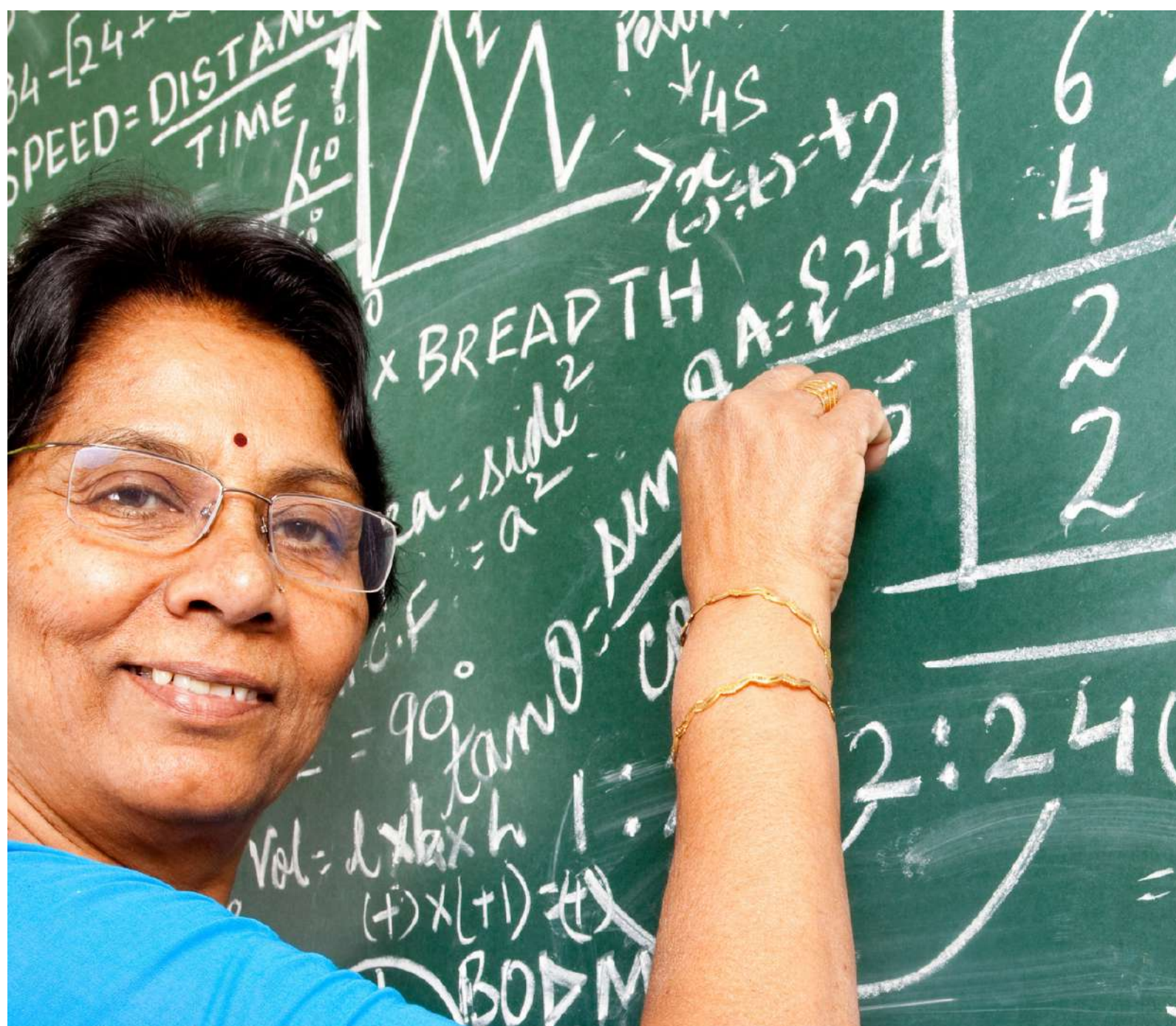
Intervention visionaries have identified other best practices for scaling up such as :

- Training not only teachers but also educational administrators such as Block and Cluster Resource Coordinators
- Demonstration of impact before scaling up, and assessment tools which give data on which interventions are working, to ensure that the better interventions get scaled up. This includes the use of pilot or 'demo' models used by organizations such as Room to Read and Udhyam Learning Foundation.
- Well-developed Standard Operating Procedures and protocols for delivery and assessment
- Available evidence on the efficacy of life skills interventions that can strengthen advocacy with the government to partner on such interventions, which in turn can lead to scaling up of interventions

⁵⁸ Revealed through interview with intervention and academic visionary Dr BS Pradeep of NIMHANS.

4.6 Key Findings of the Chapter

- 21st century skills organizations face challenges in scaling up such as balancing quality and scale, balancing impact and scale, finding adequate financial resources and coordinating with educational institutions to find dedicated time slots for sessions.
- Partnerships with state governments help organizations achieve the kind of scale and comprehensive reach (for example reaching all public schools in a state) that they could never have attained on their own.
- The use of technology makes pedagogy and delivery more efficient and effective. It also simplifies the execution of assessment. The digital divide (lack of access of poorer youth to devices and internet connectivity), however, remains a challenge.
- Training of teachers or Master Trainers is a frequent strategy to achieve scale. However, Master Trainers may not go on to reach the number of people that they are expected to reach.





CHAPTER

5

Way Forward

5.1 Critical Success Factors to Transacting 21st Century Skills at Scale

The major best practices and critical success factors examined in this report are summarized below :

Table 5.1 : Summary of Best Practices for various dimensions

Dimensions	Best Practice and Success factors
Partnerships for Scale	Strategic partnerships with State Governments have helped organizations like Quest Alliance, Udhyam Learning Foundation, Magic Bus and Dream a Dream to achieve significant levels of scale. These partnerships have enabled reaching lakhs of young people in 10 or more states, or coverage of the entire public school system in a single state.
Innovation - Technology for enhancing access and delivery	Quest Alliance's creation of the MyQuest App to make gamified 21C skills content easily available. Also, making available such content in low bandwidth areas through the Learner Pi systems
Innovation - Pedagogy to make 21 st century skills engaging	School Cinema's use of film, an infrequently used medium for 21 st century skills, which brings entertainment, storytelling and emotional connection to transact 21 st century skills. Also combining the use of films with teacher facilitation and activity-based workbooks for greater student reflection.
Inclusiveness : Gender empowerment through 21 st century skills	Breakthrough's work on changing the gender-related attitudes and behaviour of girls and boys. Girls and boys are equipped with life skills to counter gender discrimination in a non-confrontational way.
Inclusiveness : targeting of less privileged sections	Dream a Dream's partnership with the Department of Scheduled Caste Development, Government of Telangana to provide 21 st century skills to Scheduled Caste youth studying in Social Welfare Residential Schools.

Assessment	<p>Dream a Dream's work in developing the Life Skills Assessment Scale, a 5-item scale that considers the interconnected nature of life skills.</p> <p>It is the first of its kind, peer-reviewed, standardized and published impact measurement tool in the world to measure improvement in life skills amongst disadvantaged children.</p>
Long term Relevance	<p>Magic Bus' work on adolescent education combines life skills, work readiness and employability skills in a single model. It is thus relevant for taking young people towards meaningful livelihoods.</p>
Facilitation and convergence	<p>The formation of the Life Skills Collaborative (LSC) is a milestone in addressing the fragmented nature of the 21st century skills space. The component organizations of LSC have committed to collaborate in deepening the understanding of life skills and strengthening assessment through mutual learning.</p>
Standardization of curriculum	<p>MEPSC's work on developing the Qualification Packs for Generic Skills (on the lines of QPs which exist for vocational courses). This can be a precursor for more comprehensive QPs on 21st century skills frameworks and can be beneficial for integrating 21st century skills more meaningfully in vocational training.</p>
Measurement of Impact	<p>Breakthrough has had the impact of its Taaron ki Toli evaluated through two RCTs.</p> <p>This makes it a robustly tested programme with reliable evidence of impact.</p> <p>Breakthrough has also generated evidence on the long-term impact of its programme.</p>
Research and Knowledge	<p>LSC's work in developing a stakeholder-input based glossary of life skills, that will facilitate common understanding of such skills and form the basis for comparable assessment metrics.</p>

5.2 Recommendations for Stakeholders in 21st Century Skills

5.2.1 Need for Unified framework, Standardisation and Accreditation

- **Need for unified framework combining different 21st Century skill components :** Instead of depending on separate life skills, digital skills, financial literacy and other such frameworks, there should be a unified standard framework of the core 21st century skills. This would bring greater coherence to the understanding of and efforts to promote 21st century skills. This would also help bring focus on the high priority skills which need to be focused on.⁵⁹ Such a framework will be extremely useful to implementation agencies to align their programmes.
- **Need for combined framework across age and educational levels :** Efforts should also be invested in having a combined framework across different age and educational categories (and not just separate frameworks for school students, ITI students etc.) that can guide and help track the progression of expected 21st century skills from childhood to employment.
- **Need for accreditation and quality control :** Accreditation, inspection and quality control mechanisms for 21st century skills training (on the lines of NAAC for higher education) need to be created to ensure quality and adherence to standards for players in the space.

5.2.2 Need for Mapping, Convergence and Partnership to Achieve Coherence and Scale

- **Need for more large-scale partnerships including PPPs :** Insights presented in this report reveal that partnerships between state governments and intervention organizations are an important driver of scale. Having more large-scale interventions is the way to go for reducing the fragmentation of the 21st century skills space. Talreja and Krishnamurthy (2018) also argue that it is important to have Public-Private-Partnerships (PPP) and other such large-scale partnership models to leverage the importance of 21st century skills at a national level.
- **Need for mapping exercise :** There should be a comprehensive mapping exercise to understand the multiple innovative models and players in different parts of India. Such an exercise will help in the identification of models that can be scaled up (Talreja & Krishnamurthy, 2018). These entities should be brought together in convergence mode, for mutual learning and for implementation partnership.
- **Need for intensifying and supporting collaborative platforms :** The LSC is a commendable effort in bringing together multiple organizations in the life skills space for developing a common understanding of such skills and promoting collaborative action in designing interventions and carrying out assessments. Similarly, the ongoing Young Warrior NXT initiative anchored by UNICEF-YuWaah is creating a platform for collaborative action for the delivery of 21st century skills (see Textbox). Notably, state governments like Uttarakhand, Maharashtra, Rajasthan and Mizoram are joining hands with LSC. There is a need for intensifying and expanding such collaborative

⁵⁹ These suggestions are also made by visionaries Rajesh Khambayat, PSSCIVE and Anuj Alphonson, Magic Bus

efforts and for more Central Government ministries and departments⁶⁰ and state governments to support such efforts.

Young Warrior NXT (YWN) Initiative of UNICEF-YuWaah

UNICEF-YuWaah launched a pan-India program named Young Warrior NeXT (YWN) in 2021 to promote and scale-up life skills and employability skills in the Indian education system. YWN is being supported by Dell Foundation, Udhyam, ACT Grants, CIFF and others. Prominent civil society organizations working in the area of education including Kaivalya Education Foundation, Magic Bus, Pratham Foundation and Quest Alliance have also joined the program. YWN aims to build life skills and employability skills for 500K young people in 2022 by identifying impactful models to scale (YuWaah, n.d. (b)).

5.2.3 Catering to Whitespaces and Gaps

- **Need for more targeting of parents :** Given the important impact of parental attitudes and behaviours on the life and career prospects of youth (especially girls), there should be a focused effort to develop targeted 21st Century skill-related sensitization sessions for parents.
- **Need for more targeting of out of school children and less privileged youth :** Attention should be devoted towards providing 21st century skills to out of school youth, including urban slum youth, tribal youth and rural youth. Curricular, implementation and assessment standards and guidance documents for the same should be drafted for the benefit of players in the space.
- **Tailoring 21st century skills to the needs of girls :** As is well-known, girls and women widely suffer from gender discrimination and denial of agency with respect to employment, education and marriage. There is a need for more gender-focused 21st Century skill interventions along the lines of Breakthrough's Adolescent Empowerment programme. Negotiation and resilience should be highly prioritized 21st century skills for girls, especially those from less privileged social and economic contexts. More programmes should focus on the changing of boys' attitudes from an impressionable age onwards. The content of 21st century skills programmes for girls and women should be grounded in a recognition of the societal and familial challenges that they face on a routine basis.

⁶⁰ Annexure I of this report reveals that a number of Central Government ministries have launched life skills programmes, and therefore these entities are important players in the space that need to be engaged in convergence and partnerships.

5.2.4 Integration into Education and Training Teachers

NEP has already paved the way for the integration of 21st century skills in the instruction of all school subjects. This requires a comprehensive transformation of curricula and instruction methods followed in schools. Many major reforms need to be taken up, the most important being the planning and systematic transformation of teacher training.

- **Teacher training efforts should be taken up at scale through a systematic strategy :** The importance of teacher training for integrating 21st century skills in the teaching of mainstream subjects has been emphasized in this report. This report shows that training of teachers has been a crucial strategy for scaling up 21st century skills interventions. Therefore, systematic strategies should be adopted for training teachers at scale, especially for mainstreaming 21st century skills in educational instruction.
- **Planning for pre-service teacher training :** Chapters 1 and 6 of this report show that clear strategies for revamping the B.Ed curriculum for preparing teachers to integrate 21st century skills have not yet been developed. The Singapore case study (Annexure II) provides insights on restructuring pre-service teacher training for 21st century skills, especially through the definition of a new set of teacher competencies required to prepare students for the 21st Century. Suitable pre-service teacher training frameworks for 21st century skills should also be developed for the Indian context
- **In-service training of existing teachers should not be neglected :** For in-service teachers, extensive training (initial intensive training plus multiple update/review sessions over the school year) would need to be planned and scheduled for teachers of various standards and disciplines, so that they can learn the methods for incorporating 21st century skills into their existing teaching. Such training must be customized to the course/subject and grade (Rust n.d.)
- **Engaging NGOs to train and handhold teachers is a suitable approach :** NGOs with significant experience and demonstrated impact in the 21st century skills space should be engaged for training teachers and providing back end support to teachers, which includes assessment of how teachers are integrating 21st century skills into various subjects.⁶¹ For the time-being, both approaches - of integrating 21st Century teaching competencies into the pre-service (B.Ed) curriculum and of using NGOs for in-service training of teachers- should be followed. Eventually, all teachers would be trained through the reformed B.Ed curriculum.⁶²
- **For the time being, need for co-existence of curricular integration and standalone approaches :** Till the time 21st century skills are well-established and integrated in the entirety of school curriculum and instruction, there is a need for blending of curricular, co-curricular and extra-curricular approaches to promote such skills.⁶³ Considering the current limitations of teacher capacity, the practical approach, for the time being, would be to retain the co-curricular or standalone content, so that 21st century skills don't suffer because of being diluted in the instruction of core subjects.⁶⁴

⁶¹ According to the visionary Rajesh Khambayat, PSSCIVE and Geeta Goel, Michael and Susan Dell Foundation.

⁶² According to the visionary Geeta Goel, Michael and Susan Dell Foundation.

⁶³ According to the visionary Radhakrishnan Nair, Indian Association for Life Skills

⁶⁴ According to the visionary Geeta Goel, Michael and Susan Dell Foundation.

- **Educational policymakers should drive curricular integration in partnership with a national-level specialized technical partner :** Educational policymakers should drive the curricular integration of 21st century skills with the national-level partnership of a specialized NGO or other prominent innovating organization from the educational space. Such an organization should play the role of knowledge partner and should be involved in designing and planning the pedagogical experiments for integrating 21st century skills into the teaching and learning of mainstream subjects. The knowledge partner should also support the entities such as NCERT in developing modules for guiding teachers of separate subjects (say history) in integrating such skills.
- **Need to train educational administrators :** Training of not just the teachers but also educational administrators such as Cluster Resource Coordinators (CRCs) and block education officers is required. Such training will enable these functionaries to monitor the extent to which teachers are integrating 21st century skills in their teaching of different subjects.⁶⁵

5.2.5 Integration in Vocational Education and for Enhancing Employability

- **Need for mapping employer needs :** Policymakers and major intervention stakeholders should conduct a systematic dialogue with employers to understand their changing needs so that 21st century skills training can be better aligned to the needs of industry.⁶⁶
- **Vocational training courses should provide Foundation Courses on 21st century skills :** Vocational courses should enable candidates to strengthen 21st century skills through dedicated foundation courses or through the enhancement of the allotted time given for these skills. There is also a need to provide 21st century skills content on an easily accessible online platform akin to the Bharat Skills Portal (that makes available employability and vocational skill content to ITI students). The eSkillIndia portal of NSDC and the recently announced DESH-STACK e-portal for online skilling (PTI, 2022) may also be utilized for strengthening youth access to quality 21st century skills modules.
- **Need to strengthen and further update the Employability Skills Curriculum for ITIs :** The Employability Skills curriculum of ITIs should be better aligned with the competencies required for the 21st Century, and should be designed to facilitate meaningful changes in students' 21st century skills competencies. Tata Strive's work of introducing the Youth Development module in Odisha for providing additional life skills training hours to ITI students through immersive sessions and the use of behaviour change techniques (see Chapter 3) is worth examining in this regard.

⁶⁵ Geeta Goel, Michael and Susan Dell Foundation.

⁶⁶ Views of Visionary Ajay Kela, CEO and President Wadhvani Foundation

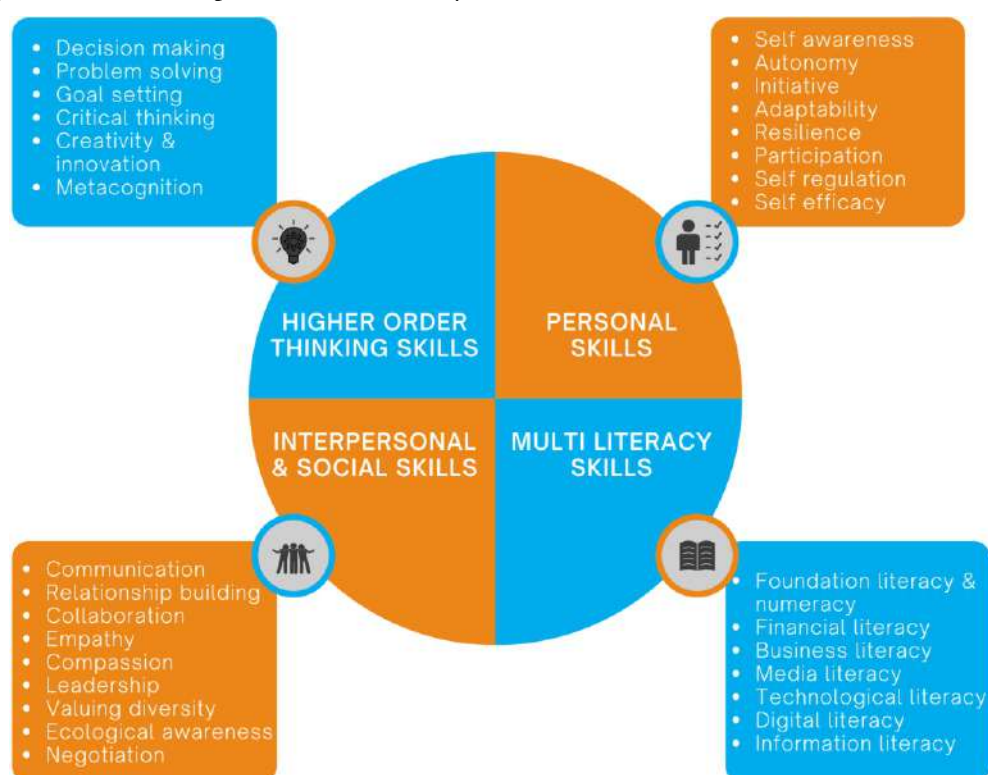
I

Understanding the State of Knowledge, Research and Policy on 21st Century Skills

Part A : 21st Century Skill Frameworks and Definitions : National and International

A (1) International Frameworks

Several well-known international 21st Century skill frameworks have been formulated in recent years. On examining these frameworks, one finds a set of common or oft-repeated competencies. However, each framework also has some unique elements. Communication, creativity and critical thinking can be seen as features of all the frameworks presented below. Collaboration is seen in all the frameworks (except one); the same applies to digital skills. This shows the prominence of the well-known '4Cs' of communication, collaboration, critical thinking and creativity (which may be considered the core thinking-related and interpersonal 21st century skills).



Source : Based on the framework described in UNICEF, 2020.

Figure A (1) : YuWaah/GenU 21st century skills framework of UNICEF

The **YuWaah/GenU 21st century skills Framework of UNICEF** understands 21st century skills as knowledge, capabilities and attitudes that “equip youth to transition into a fast-changing world of opportunities and create success for themselves”. It lays down the following components of 21st century skills (UNICEF, 2020) (see Figure A (1)) :

The **P-21 (Partnership for 21st Century Learning) framework** has laid down the skills, knowledge, expertise, and support systems that students need to succeed in work, life, and citizenship in the 21st Century. It includes the well-known 4Cs and digital skills, and adds some additional elements under 21st century skills such as :

- a) Knowledge of core subjects including 21st Century themes in the same,
- b) Literacies such as global awareness, civic literacy and health literacy,
- c) Additional life and career skills such as productivity, accountability and flexibility



Source : Recreation of the chart provided in the P21 Website (Battele for Kids, 2019)

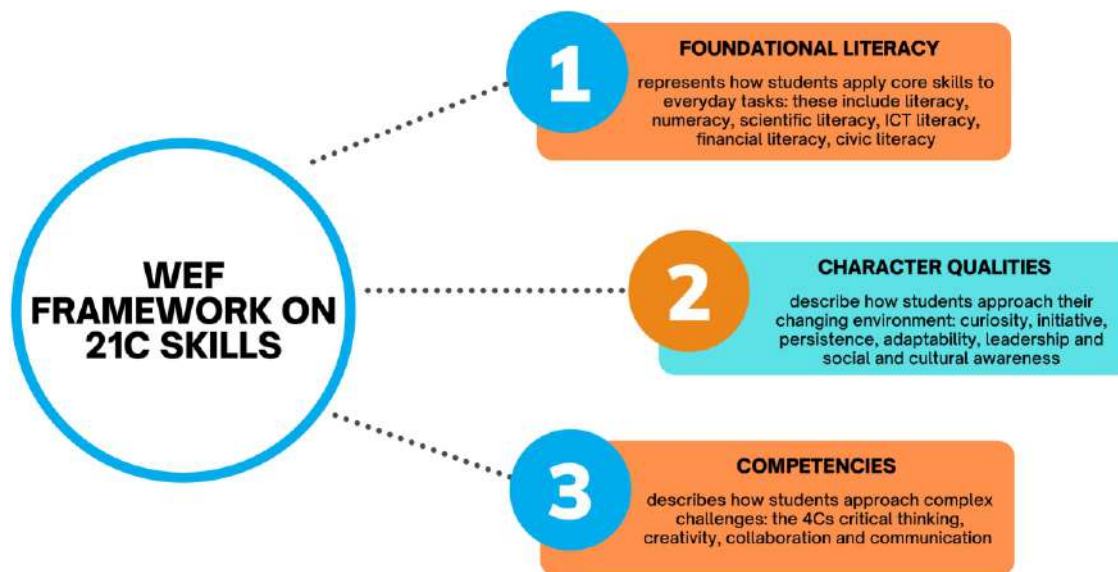
Figure A (2) : The P21 Framework on 21st century skills

The **enGauge framework** puts out the skill set needed for success in the digital age. The core components of the framework are given below (Lemke, 2002) :

- Digital age literacy
- Inventive thinking⁶⁷
- Effective communication
- High productivity

The **World Economic Forum (WEF)** framework has three components–foundation literacy, competencies and character qualities - in its suggested set of competencies for the 21st century (Soffel, 2016).

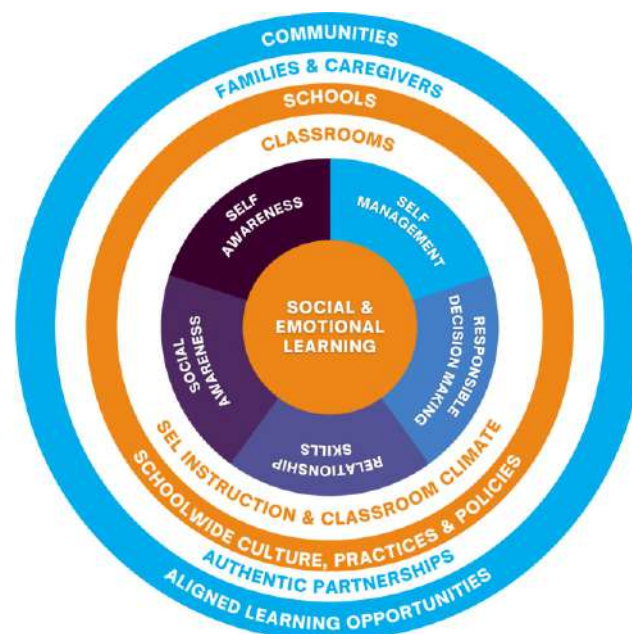
⁶⁷ Inventive thinking is almost equivalent to creativity.



Source : Based on insights in Soffel (2016)

Figure A (3). WEF framework on 21st century skills

The **CASEL-5 framework for SEL (Socio-emotional learning)** is not specifically a 21st century skills framework, but contains components that fit closely with the personal and interpersonal components mentioned in 21st century skills frameworks. CASEL understands SEL as the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions, feel and show empathy for others and maintain supportive relationships. The CASEL-5 framework encompasses five interrelated components - self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (details in figure A (4)).



Source : Recreation of the chart provided in the CASEL website (CASEL, n.d.)

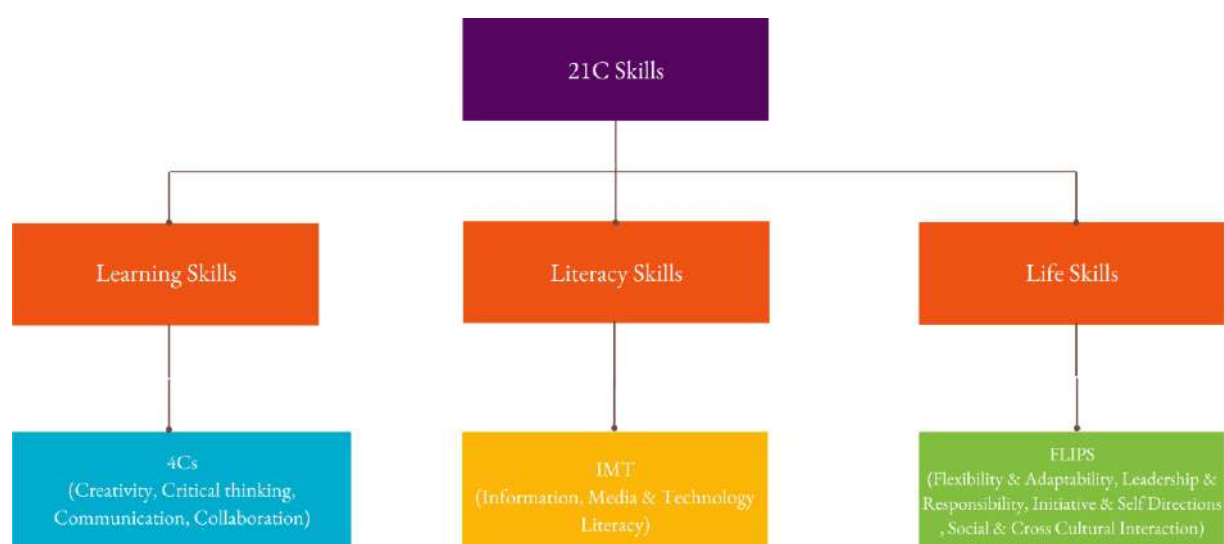
Figure A (4) CASEL-5 SEL framework

A (2) Indian Frameworks on 21st Century Skills

The development of India-specific frameworks for 21st century skills is at a nascent stage. While the National Education Policy 2020 mentions 21st century skills (NEP, 2020), these skills have not yet been elaborated by NEP. The General Education Council (GEC) of NEP has been entrusted with the task of defining the competencies which students need to inculcate; these competencies are expected to prominently include 21st century skills.

The only known national level framework for 21st century skills is embodied in the CBSE Handbook for 21st century skills (CBSE, 2020). The CBSE handbook defines 21st century skills as the skills “that are required to enable an individual to face the challenges of the 21st Century world that is globally-active, digitally transforming, collaboratively moving forward, creatively progressing, seeking competent human-resource and quick in adopting changes” (CBSE, 2020).

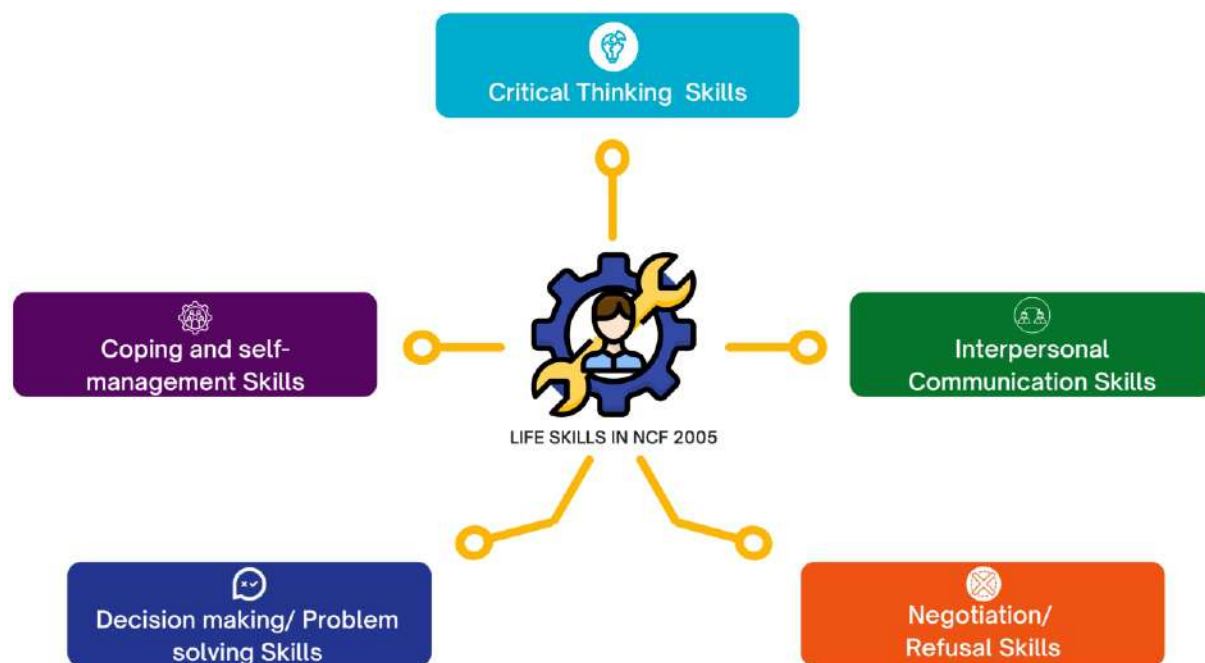
In the CBSE Handbook, 21st century skills are classified as learning skills (4Cs), literacy skills (IMT) and life skills (FLIPS). As the figure below shows, there is plenty of commonality of the component skills with the specific 21st century skills included in the international frameworks.



Source : Based on information provided in the CBSE Handbook for 21st century skills (CBSE, 2020)

Figure A (5) : CBSE Handbook's classification of 21st century skills

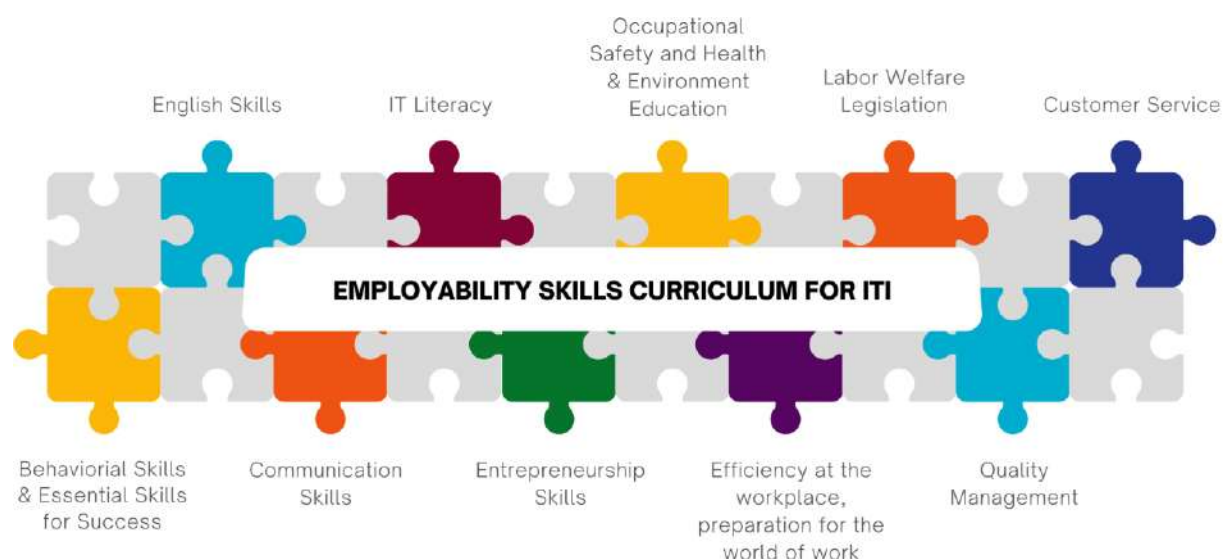
The CBSE framework only applies to children and young people in the 3-18 age group. As mentioned in Chapter 1, some available national frameworks are not specifically for 21st century skills, but are for closely related competencies (such as Employability Skills and Life Skills). These include the National Curriculum Framework (NCF) developed by NCERT in 2005, which had mentioned the need for linking school education to life skills. NCF 2005 mentioned the following life skills (NCERT, 2005) (see Figure A (6)).



Source : Based on information provided in the NCF document (NCERT, 2005)

Figure A (6) : Life skills identified in the National Curriculum Framework 2005

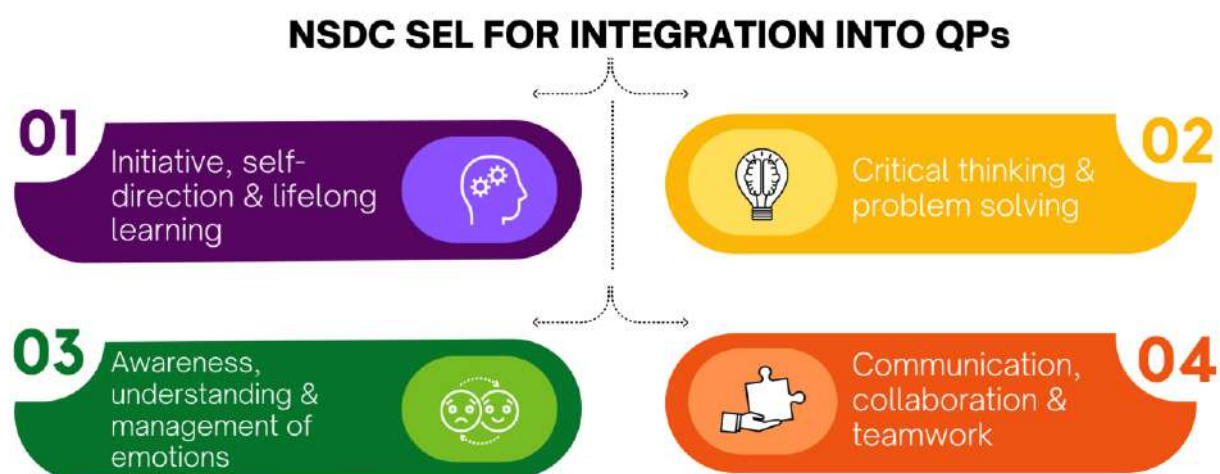
The Employability Skills Curriculum for ITIs (developed by DGT in 2012 and amended in 2019) (MSDE, 2019) includes 21st century skills, which are listed in Figure A (7). These skills include 21st century skills such as communication skills and digital (IT) literacy, in addition to other competencies such as quality management, customer service and occupational health and safety.



Source : Based on information provided in the Employability Skills Curriculum (MSDE, 2019)

Figure A (7) : Skill components of the Employability Skills Curriculum of DGT, MSDE

In January 2020, NSDC, in partnership with the Centre for Social Emotional Learning, came up with the Social-Emotional Learning Framework for Integration into Qualification Packs of vocational skill courses (NSDC and Centre for Social Emotional Learning, 2020). This framework mentions 4 main sets of social-emotional skills, seen in Figure A (8) :



Source : Based on information provided in NSDC & Centre for Social Emotional Learning (2020)

Figure A (8) : NSDC's Social-Emotional Learning (SEL) Framework for Integration into QPs of Vocational Skill Courses

While NSDC has drafted certain 21st Century skill standards for inclusion in vocational skill QPs, MEPSC has drafted separate QPs for such skills. The MEPSC has prepared Qualification Packs on 'Generic Skills', which include certain 21st century skills such as digital literacy, financial literacy, communication skills, self-management and working with others, apart from additional skills such as dealing with customers and seeking jobs (MEPSC, n.d.).



Source : Based on information provided in MEPSC's QP on Generic Skills (MEPSC, n.d.)

Figure A (9) : MEPSC's Generic Skills for Employability

Part B - State of Policy on 21st Century Skills

Chapter 1 provided a brief overview of the most noteworthy policy initiatives related to 21st century skills. This section provides more details on national policies and programmes related to 21st century skills. State government level initiatives are also mentioned. Additionally, known insights on the operationalization of the major recent policy initiatives (such as the NEP's provisions on 21st century skills and the CBSE handbook) are provided.

B (1) 21st Century Skills Policies and Programmes of Different Departments of Government of India

The National Education Policy 2020 has given a boost to the significance of 21st century skills in the policy domain. NEP 2020's scope is, however, limited to the integration of 21st century skills in school and higher education. While the Ministry of Education and the MSDE have adopted the most noteworthy initiatives for 21st century skills, other ministries have also taken up initiatives (specifically on the life skills components of 21st century skills) (see Figure A (10)). A later section will shed light on the noteworthy initiatives taken by state governments.



Source : Information from different government websites

Figure A (10) : 21st century skills policies and programmes of different ministries of Government of India

Ministry of Education

Chapter 1 has already described the nature of mentions of 21st century skills in NEP 2020. The intent of the government to implement NEP recommendations in a time-bound manner is evident from its formulation of SARTHAQ, which is the implementation plan for NEP (Ministry of Education, 2020). SARTHAQ envisages a number of tasks for inculcating 21st century skills in students, such as restructuring the school curriculum through a new NCF, giving students flexibility in course choices and transforming assessments :

- Between 2022-25, the proposed National Assessment Centre known as PARAKH is expected to prepare national guidelines on assessment standards, which would facilitate the attainment of 21st century skills.
- Within 2022-23, the pedagogy in the school education system has to incorporate a focus on 21st Century learning skills such as critical thinking, communication, collaboration and creativity. Educators are advised by the SARTHAQ document to use the CBSE Handbook on 21st century skills as a guide for incorporating the same in teaching activities.
- Between 2023-30, NCERT and SCERTs have to move towards developing MOOCs for each module of the entire syllabus; such availability of MOOCs is expected to allow teachers more time to focus on 21st century skills (Dept of School Education and Literacy, 2020).

NEP has brought 21st century skills to the mainstream educational discourse. Nevertheless, *attempts to actually integrate such skills in the educational curriculum will only be successful with the required teacher training efforts*. According to academic visionary Dr Radhakrishnan Nair, the existing teacher training curriculum needs to be reformed, to ensure that teachers are made competent in teaching such skills and integrating them in the teaching of mainstream subjects.

A recent paper indicates that the present Bachelor of Education (B.Ed) curriculum for pre-service training of school teachers does not adequately cover 21st century skills or prepare teachers to transact such skills. Critical thinking and Information, Media and Technology (IMT) skills are especially poorly integrated. The emphasis on rote learning in B.Ed instruction also leaves little time for teacher-trainees to indulge in reflective learning or critical inquiry (Kundu, Dey and Bej, 2021). Thus, *there is a need for NEP's implementation plans to take up a comprehensive review and transformation of the B.Ed course*.

As mentioned in SARTHAQ and announced by the Government (News18, 2021), the B.Ed. programme will be reformed into a four-year integrated programme. SARTHAQ proposes all B.Ed. programmes to include training in recent pedagogy techniques, multi-level teaching and evaluation, use of educational technology, and learner-centered and collaborative learning (Ministry of Education, 2020). However, there is not much clarity yet, as to how the B.Ed curriculum would be reformed to inculcate 21st century skills and competencies to transact such skills among trainee-teachers.

NEP and its Expected Role and Impact with respect to 21st Century Skills

Personal and social components of 21st century skills are supposed to be addressed by school education. Higher education is supposed to take care of higher order thinking skills through the promotion of liberal arts or integrated education. There is thus more focus on analytical skills and critical thinking skills in higher education.

MK Sridhar, Member, NEP Draft Committee

From NEP, the great thing is that, now, all the states will start prioritizing holistic assessment and experiential learning, which are the ways in which people can develop life skills.

Geeta Goel, Country Director, Michael and Susan Dell Foundation

Even before the adoption of NEP, 2020, educational bodies such as UGC and CBSE had taken efforts for the promotion of life skills amongst students. Life skills were introduced in the school curricula through NCF (National Curriculum Framework), 2005. CBSE introduced such skills in 2012 as part of the Continuous and Comprehensive Evaluation (CCE) for adolescents. However, the Founder of the Indian Association for Life Skills Education, Dr Radhakrishnan Nair, recounts that the life skills module of CBSE was not implemented seriously. It was not implemented as a credit programme and there were no dedicated hours or dedicated teachers or assessments for the same. Teachers were also not trained to take the sessions.⁶⁸

The preparation of the CBSE Handbook of 21st century skills is a significant development that can potentially guide the integration of 21st century skills in the teaching of mainstream subjects in schools. This is because the handbook provides specific guidelines such as lists of activities that can be used to transact 21st century skills. However, an academic visionary interviewed for this study opined that the CBSE Handbook is not adequately contextualized to the needs of Indian students, and it is also not clear whether it is a handbook for teachers or students; such factors may constrain its utility.

Recent instructions of CBSE are attempting to operationalize the NEP and the CBSE Handbook. CBSE has recently instructed schools to take up the Creative and Critical Thinking CCT Weekly Practice. Under this practice, CBSE shares a set of 5 questions every week to stimulate reflection and critical thinking among teachers and students. These questions are not necessarily related to the syllabus, but are connected to the overall learning of students in classes 7th to 10th (CBSE, 2020, January 8). CBSE has also adopted a recent emphasis on employability skills by partnering with the UNICEF-YuWaah and Udhya Learning Foundation to launch the #YoungWarriorNXT,⁶⁸ with an aim to empower 10 million young people aged

⁶⁸ Before NEP, there have also been attempts to incorporate life skills in Higher Education. UGC's Jeevan Kaushal Curriculum : In 2019, UGC has introduced life skills or Jeevan Kaushal as part of the curriculum in all the undergraduate programmes in India. The UGC Jeevan Kaushal syllabus covers Communication Skills, Professional Skills, Leadership Skills and Universal Human Values. There are no known details on the extent and quality of implementation of these guidelines.

⁶⁸ Vide CBSE Notification no. 99/2021 dated 26th October 2021.

14-24 years with essential life and employability skills within the next one year. Though the past efforts of CBSE to introduce life skills have not been very successful, one can be hopeful about the future seriousness of the implementation of 21st century skills in the CBSE curriculum because of the impetus lent by NEP.

Ministry of Skill Development and Entrepreneurship

DGT initiatives : Under its DGT, MSDE had adopted the Employability Skills curriculum for ITIs in 2012. To make employability skills content readily available to young people studying in ITIs, DGT has made such content available online on the Bharat Skills portal.

NSDC initiatives :

- As described earlier, NSDC came up with the 'Social-Emotional Learning Framework for Integration into Qualification Packs of vocational skill courses' in 2020, in partnership with the Centre for Social Emotional Learning (NSDC and Centre for Social Emotional Learning, 2020). Specific indicators have been derived for each skill, which in turn have been mapped to NSQF levels. For each indicator, a life situation is represented through a story, for better comprehension of the indicators and the overall framework. In spite of such efforts to encourage integration, the share of such skills in vocational skills training programmes remains restricted to only about 30% of the time.
- Like the DGT, NSDC has also taken the initiative to disseminate 21st century skills content through an online platform. The eskillIndia platform of NSDC, in partnership with American India Foundation, has initiated an online training programme for skilling one lakh persons in 21st century skills such as soft skills and digital skills, to enhance their employability (eskillindia.org, n.d.).

MEPSC initiatives : The newly created MEPSC under the MSDE/NSDC umbrella has focused on creating dedicated standards and content for 21st century skills in a job context (which MEPSC terms 'generic' skills). MEPSC has already drafted 2 Qualification Packs on generic skills - one on basic English for employability and one on generic skills for employability. These are awaiting clearance by the NSDC and consequent formal promulgation as National Occupational Standards (NSDC, n.d.).

Ministry of Youth Affairs and Sports

The Nehru Yuva Kendras are an initiative of the Ministry of Youth Affairs and Sports. Nehru Yuva Kendras were originally set up in 1972. The Nehru Yuva Kendra Sangathan, an autonomous organization under the Ministry of Youth Affairs and Sports, came into being in 1987 to oversee the Nehru Yuva Kendras (Nehru Yuva Kendra Sangathan, n.d.). One of the functions of the Nehru Yuva Kendras is to run 7-day Non-Residential Life Skills Education Camps. The camps cater to participants in the 10-19 age group. They cover the 10 life skills of the WHO framework, awareness of sexual and reproductive health, nutrition, substance abuse, and norms for a 'healthy moral life', according to the operational guidelines for these camps. There is thus a special focus on the development of sexual and reproductive health competence, especially among hard-to-reach youth. One of the merits of these camps is that they incorporate a workshop for parents, who are a much-neglected targeted group for life skill interventions.

Ministry of Women and Child Development

The Ministry of Women and Child Development implements the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG) or “SABLA”. One of the important objectives of the program is to upgrade adolescent girls' home-based skills and life skills, along with vocational skills. Broad topics covered in the life skills training of SABLA include the following (Ministry of Women and Child Development, 2010):

- confidence building
- self-awareness and self esteem
- decision making
- critical thinking
- communication skill
- rights and entitlements
- coping with stress
- responding to peer pressure
- functional literacy

Ministry of Health and Family Welfare

The MoHFW adopted the Rashtriya Kishor Swasthya Karyakram in 2014. The programme envisions enabling all adolescents in India to realize their full potential by making informed and responsible decisions related to their health and well-being. The Rashtriya Kishor Swasthya Karyakram has introduced community-based interventions through peer educators. The Peer Education (PE) programme aims to ensure that young people between the ages of 10-19 years benefit from regular and sustained peer education. Such peer education is supposed to cover nutrition, sexual and reproductive health, conditions for non-communicable diseases, substance misuse, injuries and violence, and mental health (MoHFW, 2016).

B(2) 21st Century Skills Initiatives of State Governments

Chapter 2 and 4 had revealed the *involvement of state governments to be an important driver of enhanced reach and scale of 21st Century skills programmes*. The following state governments are amongst those who have adopted major initiatives to promote 21st Century skill programmes among young people. The stated programmes are being taken up in partnership with NGOs and other private entities.

- **Himachal Pradesh** : Satya Bharti Quality Support Program is being implemented in 50 government schools, through a partnership between the Government of Himachal Pradesh and Bharti Foundation. The programme is meant to enable students to acquire leadership, communication, collaboration, and other 21st Century skills for their holistic development (Bharati Foundation, n.d.).
- **Madhya Pradesh** : The Umang Life Skills Education programme of the Government of Madhya Pradesh is concerned with inculcating a variety of life skills. The objective is to enable school students to make informed choices, develop positive relationships, gather self-awareness, develop effective communication and plan for their future. The programme has been implemented since

2017 by the Bhartiya Grameen Mahila Sangh (BGMS) in collaboration with United Nations Population Fund (UNFPA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA). It is reaching around 2.5 million students of grades 9-12, in all 9228 government high and higher secondary schools of the state (BGMS, 2017).

- **Delhi** : The Happiness Curriculum has been implemented in all the Govt schools of Delhi, through partnership between the Delhi state government and Dream a Dream (details in Chapters 2 and 4 of this report).
- **Karnataka** : The Government of Karnataka has partnered with NIMHANS to deliver the Life Skills Training and Counselling Services programme. This programme is intended to take life skills to youth in different corners of the state. The programme trains 3000 Master Trainers (NSS officers and program coordinators) on 10 Life skills.⁷⁰ The Master Trainers, in turn, are expected to reach five lakh youth at the grassroots. The programme is implemented by the Department of Youth Empowerment, Government of Karnataka with technical support from NIMHANS.⁷¹
- **Manipur and Sikkim** : State governments of Manipur and Sikkim have launched the 'Birds and Bees', a life skills programme for adolescents (with a focus on sexuality education) in partnership with the 'Dettol Banega Swasth' initiative of Reckitt Benckiser (onlineandyou.com, 2020; educationworld.in, 2020).
- **Punjab** : Breakthrough's Taaron ki Toli life skills programme has been implemented in all middle schools of Punjab in partnership with the state government of Punjab (details in Chapter 2).
- **Tamil Nadu, Gujarat and 19 other states** : Tamil Nadu and Gujarat are amongst the 22 state governments that have partnered with the MyQuest programme of Quest Alliance for delivering 21st century skills or employability skills to ITI students (details in Chapter 2 of this report).
- **Odisha** : The Youth Development module prepared by Tata Strive has been introduced into the Employability Skills curriculum for providing more intense and immersive life skills training to ITI students (details in Chapters 3 and 4 of this report).

Additionally, the state governments of Rajasthan, Uttarakhand, Maharashtra and Mizoram have partnered with the Life Skills Collaborative for the furtherance of life skills (ANI, 2021a).

⁷⁰ 10 life skills as per the WHO framework : Self Awareness, empathy, critical thinking, creative thinking, decision making, problem-solving, effective communication, interpersonal relationships, coping with stress, coping with emotions.

⁷¹ Details obtained from Dr BS Pradeep of NIMHANS, academic and intervention visionary interviewed for this study.

Part C - Main Topics covered in the Literature on 21st Century Skills

The findings from the literature have been woven into the various thematic sections of this report. A study of the literature on 21st century skills in India reveals the coverage of the following major topics :

- a) Significance of life skills education and need of youth for life skills education
- b) Prevalent models of Life Skills Education in India
- c) Evidence on the impact of 21st century skills (see text box)
- d) Policy development for life skills and 21C skills
- e) Challenges in implementing 21st century skills
- f) Description of Assessment Scale and assessment challenges
- g) Status of research on 21C skills and life skills
- h) Recommendations for strengthening life skills and 21C skills education

Evidence on the Positive Outcomes and Impacts of 21st Century Skills Interventions (Life skills, Digital Literacy and Financial Literacy)

There is growing interdisciplinary research evidence in India that life skills are associated with positive outcomes (Talreja & Krishnamurthy, 2018). Studies reviewed in Talreja & Krishnamurthy (2018) and by the authors of this report reveal the following evidence on the impact of 21st century skills interventions :

Improvement in self-esteem and confidence : Life skills training programs go beyond mitigating negative behaviours and lead to significant improvement in self-esteem, emotional adjustment, and empathy (Yadav & Iqbal, 2009; Rani & Singh, 2015). A digital literacy and life skills programme by SM Sehgal Foundation for rural school children in Mewat, Haryana brought about significant change in their confidence (Saxena, Vaish, & Jain, 2017)

Motivation of students towards higher education : Impact assessment of the Akshaya Life Skills programme showed significant changes in goal setting skills of students. 98% of students were found to be motivated for higher education programmes (Akshaya Patra & Edumedia, 2012)

Impact on academic learning outcomes : life skills based teaching content improve academic learning outcomes in high school students in India between the ages of 13 and 15 years (Subasree, 2015).

Transition to adulthood : Students equipped with 21st century skills transition from childhood to adulthood in a healthy manner and are empowered to meet the demands and stresses of a fast-changing environment (Vranda & Rao, 2011; Rust, 2013; Kumar & Chhabra, 2014)

Empowerment of girls : Studies find that life skills education helps girls to improve their coping skills, enhance their problem-solving abilities, take positive actions like speaking up about gender violence, and seek help from the appropriate channels. An RCT on mentoring and life skills training for girls in Rajasthan showed that girls develop life skills of being able to express interests to a limited extent, accomplish goals related to the home environment and negotiate decisions within the family (with exception of marriage decisions) (Edmunds, Feigenberg and Leight, 2016). Another study found that a prevalent life skills programme for girls in Rajasthan, Delhi and Uttarakhand fosters goal-setting and individualistic decision making amongst the girls, but fails to address the oppressive social conditions that hinder the agency of the Dalitbahujan girls (Arur & DeJaeghere, 2019).

Positive impacts on vulnerable youth : A life skills intervention programme for tribal, economically backward adolescent boys and girls in Bharuch, Gujarat provided greater awareness of sexual and reproductive health (Chaudhary and Mehta, 2012). A customized life skills programme for rescued Devadasi girls in Karnataka led to increased confidence, emotional stability, social responsibility and empathy among the recipients. (Joseph & Thomas, 2017)

Enhancement of digital literacy depends on the background of trainees : One study evaluated the success of a computer literacy intervention with tribal girls who had previously dropped out of the education system. The study found that the impact of such programmes was differentiated by the background of the girls. The tribal girl dropouts who came from families where financial issues and alcoholism were less predominant, and whose mothers were less likely to be manual labourers and more likely to be housewives, did better on the computer literacy concepts (Mohan et al., 2017)

Social impacts of financial literacy programme : The evaluation of Aflatoun International Social and Financial Literacy Programme in Himachal Pradesh showed that : a) Students who had undertaken the life skills and financial education programme had greater empathy and closeness to family, and were found to explore and were more aware of rights and responsibilities. b) There were only two competencies related to financial literacy which were found in children who underwent the training programme, viz. the concept of loan and saving. Other concepts like budgeting, banking, investment, etc were not identified (Sambodhi, 2021).

Part D - State of Research on 21st Century Skills and Gaps in Research

The literature on 21st century skills is fragmented, which is somewhat attributable to the use of multiple terminologies like 'life skills' '21st century skills' and 'employability skills.' The Indian Association of Life Skills Education (IALSE) is trying to consolidate and curate life skills literature in India. IALSE publishes a journal called the International Journal of Life Skills Education, and hosts international conferences on life skills education to bring together researchers and practitioners working on life skills into dialogue (Talreja & Krishnamurthy, 2018). While there are strengths in the available literature such as the multiplicity of experimental or quasi-experimental impact studies available, there are also notable whitespaces in the literature (see text box)

Status and Gaps of Research on Life Skills : Insights from a Review of Research (Mallik and Pai, 2017)

- ♦ In India, the research interest in the school-based life skills interventions to assess the impact of life skills on adolescents' behaviour actually picked pace only from 2009. This was despite life skills being recommended to be an integral part of curriculum by NCF 2005 and the CBSE's subsequent introduction of it in their curriculum
- ♦ While studies on urban students dominate, the studies on rural, out of school and tribal students are negligible.
- ♦ A majority of the researchers have used quasi-experimental/intervention design to assess the effectiveness of the life skills in modifying the behaviour of adolescents and enabling them to cope with different kinds of pressures
- ♦ Most researchers have not attempted a gender-based analysis of the impact of Life Skills training.
- ♦ Very few studies have done longitudinal studies to examine the continuation or sustainability of the impact of life skill interventions even after a time gap.
- ♦ While a majority of the researchers have examined only one or two aspects of life skills and how these are shaped by interventions, very few studies have attempted holistic assessment or analysis of life skills.

Interviewed visionaries perceived that research and knowledge on 21st century skills are not very well developed for India. While there are many life skills related works available, it appears that the shortage of studies that are of practical relevance for shaping interventions and assessments on the ground leads to such perception among visionaries. The head of the Indian Association for Life Skills Education, Dr Radhakrishnan Nair pointed out that a lot of research on life skills in our country is happening in Postgraduate and PhD dissertations, but there is a lack of research on the wider construct of 21st century skills.

I don't see very deep-rooted (and) cutting edge work that is happening in universities. Even if there is work that is being done, it may be at a much more miniscule scale in India.⁷² But the type of research that needs to happen in this space is large-scale research

Vjayanthi Sankar, Head, CSSL

It is noteworthy that intervention actors such as Dream a Dream, ICRW, Teacher Foundation, CSSL, Life Skills Collaborative and UNICEF, or dedicated life skills research organizations (but not universities) were identified by visionaries as doing significant research on 21st century skills. As described in earlier chapters, LSC has developed the glossary of life skills relevant for the Indian context. The research done by LSC has provided ground level and actionable insights through its conceptualizations of life skills grounded in the perspectives of stakeholders such as students, parents and teachers.

Another noteworthy research endeavour in the field is the study being done by the Centre for Science of Student Learning (CSSL). CSSL has been involved in a large-scale research study on life skills over the last 5-6 years. This study, called the “Cognitive and Affective Skills Study” covers 3 states - Jharkhand, Andhra Pradesh and Rajasthan - and five metro cities, and is funded by Porticus.

The study by CSSL is significant because of its scale, diversity and depth. It is expected that it would provide a significant and comprehensive baseline assessment with respect to the state of life skills among in-school children and young people. Insights are also expected to be generated on the contextual readiness of schools and communities for inculcating life skills.

This multi-context study by CSSL covers government schools and top private schools in 5 metro cities. It also covers multiple grade levels. It has a large sample of around 40,000 students. The depth of the study is evident from the fact that each student has been surveyed for six days on a whole range of variables. Data is also being collected from parents and teachers. The study focuses on whether children and the other stakeholders are attaining concept attainment about emotions (i.e. able to understand emotions). Data is also being collected on attitudes and academic learning outcomes. School climate is also being assessed in this study.

⁷² This fits with the observation of Dr Radhakrishnan Nair mentioned earlier.

II

International Best Practice

The Singapore Journey of Innovating School Education to Prepare Students for the 21st Century (Tan et al., 2017)

System-wide school education change for Singapore was by no means an overnight affair. Singapore adopted an ecological approach for bringing about such transformation. The tripartite partnership between schools, universities and the government (i.e. between practice, research and policy) has been a key enabling mechanism for successful education innovation towards the teaching and learning of 21st Century Competencies (21CC) in Singapore.

The formulation and formalization of 21CC related school education policies were based on extensive engagements and consultations among political leaders, Ministry of Education officers, and school stakeholders on the ground, including school leaders and teachers, students, parents, and community leaders.

Singapore has invested focused effort in developing a framework for teacher competencies for teaching 21st Century skills. In 2009, its National Institute of Education (NIE) conducted a systematic review of its teacher education programs in partnership with the Ministry of Education (MOE) and schools. The review resulted in the Teacher Education Model for the 21st Century (TE21), which defines a clear set of competencies for preservice teachers. It also laid down the V3SK framework (see figure below) that outlined three key attributes necessary for the 21st Century teacher—Values, Skills, and Knowledge.

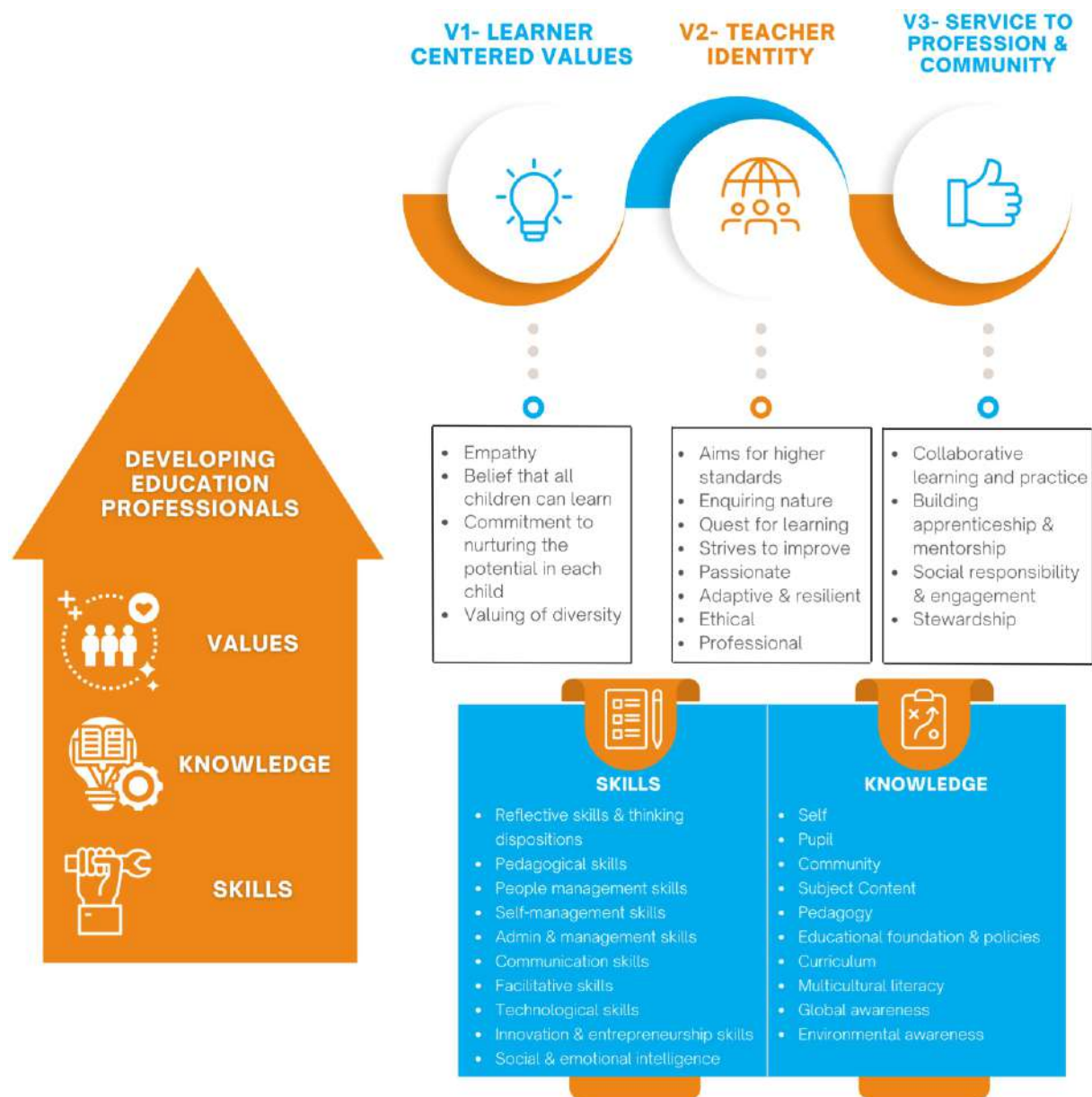


Figure Source : Recreation of the visualized framework provided in NIE (n.d.)

The TE21 model was operationalized in some of the following ways :

- The preservice teacher training programmes were mapped to find out their degree of alignment with the V3SK components. Such a mapping exercise resulted in changes in the teacher training curriculum.
- Individual teachers were given the freedom to chart out their personal learning journey and goals.
- The 'Focused Conversations' component was introduced, wherein trainee-teachers had the opportunity to carry out a regular dialogue with their designated mentors.

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I

Details of Methodology

A. Research Questions

Policy Level

1. What is the level and kind of mention of 21st century skills in policy or programme documents? Have such provisions in policy documents been implemented? If yes, how and to what extent?
2. Which government agencies and departments have adopted 21st Century skill initiatives?
3. What are the available national frameworks addressing concept, curriculum, pedagogy and learning outcomes of 21st century skills?
4. What role has the government played in creating an enabling environment for 21st century skills?

Intervention Level

5. What do major interventions cater to in terms of theme/component of 21st century skills, geography, age group and educational categories?
6. What are the implementation challenges and issues in executing 21C skill programmes? What are the specific challenges faced with respect to the a) ease/difficulty of coordination with or convincing stakeholders b) Customization to different social and geographical contexts d) the effects of the Covid pandemic e) Capacity building of teachers and trainers f) presence of funding?
7. What are the challenges, gaps and best practices with respect to the inclusiveness of coverage of 21C skill programmes?
8. What are the challenges, gaps and best practices with respect to the a) use of technology and blended approaches b) existence of defined syllabus/curriculum and content/study materials c) Use of appropriate teaching-learning methods or pedagogies and use of technology and blended approaches d) assessment e) the presence of pathways and approaches-formal and informal f) the presence/absence and appropriateness of standalone and curriculum-integrated approaches and integration into core subjects?
9. What are the challenges, gaps and best practices with respect to the scale and scalability of 21st Century skill interventions?
10. What impact have 21st Century skill interventions had? What is the available evidence of such impact?
11. What is the nature of innovations in prevalent 21st Century skill interventions in India?

Stakeholder Level

12. Are parents, principals and youth aware of 21st century skills?
13. Do employers, parents, principals and youth see 21st century skills as important? Why/why not?
14. What kind of 21C skills do employers expect in young people?
15. What challenges and enablers do youth face in inculcating 21st century skills?
16. What kind of 21st century skills do youth need to inculcate?
17. What are the various stakeholder suggestions for strengthening 21st century skills?

Research/knowledge level

18. What are the different kinds of academic/research studies available on 21st century skills in India? What are the major themes covered in the literature and the major methodologies used?
19. What are the gaps in the available literature on 21st century skills in India?

B. SECONDARY DATA COLLECTION : Literature Review or Desk Review

Selection Criteria for Included Literature :

- Type of intervention : 21st century skills/life skills/soft skills/transferable skills
- Type of participants : young people (children, adolescents and youth till age 24).
- Type of sources and publications :
- Peer reviewed literature including journal articles and e-books,
 - Grey literature including government,
 - UNICEF, NGO and other reports,
 - White papers and conference abstracts/papers,
 - Policy documents and strategic plans, guidelines,
 - Syllabi/curricula, training manuals,
 - Blog posts, websites and media sources/articles.
- The reliance was mainly on online resources.
- Methodological rigour was not a criterion for academic papers' inclusion.
- Publication date : From 2010 till date
- Language : Only works in English were included.
- Location : Works/literature concerned with India
- Exclusion : All video, audio and film content were excluded from the review.

Literature Search Strategy

- Online search was the main method. Google, Google Scholar, Jstor, NCBI/PubMed and Research Gate were the main databases used for the search.
- 35 search phrases/term combinations were used for the online search.
- In view of time limitations, only the first 5 pages of results for each search were considered.
- Snowballing/reference of works cited in other referred literatures was used as a supplementary track to identify literature.

Data Extraction and Analysis

The research questions and key variables/codes were defined, and information pertaining to the concerned research questions/codes were extracted from the paper/source and duly summarized to the extent possible without losing the essence/important details. Thematic coding and condensing of the extracted data through the identification of patterns was subsequently conducted.

C. PRIMARY DATA COLLECTION : Visionary Interview

Prioritization Process for Visionary Sampling

Even though a larger pool of visionaries was compiled, certain prioritization criteria were initially defined with respect to more preferred visionaries. The actual visionaries interviewed however depended on the visionaries' availability and their response to the study team's invitation for visionary interviews. The table below gives details of the intended and actual sampling for visionary interviews and the sampling criteria followed :

Subject category	Number intended be done	Numbers actually done	Sampling Strategy and Criteria
Visionaries from businesses/corporate houses	5	9	Major players to represent different sectors, industry consortiums and HR consultancies/recruitment companies
Visionaries from NGOs/civil society organizations/ intervention organizations	6	16	Visionaries associated with organizations who contributed to YuWaah 21 st century skills framework, along with snowball sampling (visionaries recommended by other visionaries). Also, visionaries representing large scale organizations identified through landscape analysis.

Academician and researcher visionaries	4	3	Selected through initial online search of research/journal databases and subsequent identification of authors of quality papers, along with snowball sampling. Also, representatives from notable organizations working in the space of research and measurement/assessment in 21C skills domain.
Policy Makers/Representatives from Central and Select State Governments / Skill Missions	5	5	Concerned Ministry of Education functionary (school education department) - substituted with PSSCIVE representative on the recommendation of the office of the School Education Secretary Concerned representative involved with NEP implementation Representative from MSDE Representatives from few states with 21 st century skills policy/programme and also from state skill missions doing relevant work in 21C space
TOTAL	20	33	

D. PRIMARY DATA COLLECTION : Focused Group Discussions

Eight FGDs. i.e. five of youth, one of parents and two of principals were conducted, of which seven were in the online mode. All FGD participants were selected through purposive and convenience sampling.

Focused Group Discussions : Youth

5 youth FGDs were conducted to bring in age, educational category and geographical diversity, for which details are below :

Age and educational Category	No of FGDs	Gender bifurcation /details	State	Date on which done
15-18 (school or junior college going)	1	Girls	Karnataka	6.12.21
18-21 (polytechnic/ITI/college going)	1	Boys	Gujarat	11.12.21
21-24 (those who are college graduates or employed in the organized sector)	1	Mixed	Punjab	30.11.21
15-24 (school dropouts including those employed in the unorganized sector)	2	1 girls and 1 boys	Jharkhand & Assam	4.12.21 and 11.12.21

Focused Group Discussions : Parents and Principals

One FGD of parents of 15-24 year olds, and two of school and college principals were conducted. In the principals and parents FGD, participants belonged to multiple states such as Karnataka, Tamil Nadu, Odisha and Delhi. The parents covered in the FGD were from professional and English-speaking backgrounds. The principals covered represented different institution types such as government schools, high end private schools, ITIs and degree colleges.

E. PRIMARY DATA COLLECTION : UReport Poll

The UReport poll, broadcasted on UNICEF's UReport platform, provided the advantage of reaching several thousands of young people from different regions of the country through a single platform. The UReport poll was posted on the UReport platform of UNICEF in December 2021. The poll was broadcasted in multiple languages to UReporters who are registered on the UReport platform.

The respondent numbers exceeded manifold the numbers needed for a statistically significant sample size.⁷³ A slight majority of the 12,099 UReport respondents were male, the single largest share of respondents was from the 15-19 age group, and the response rate of the poll was 94%.

F. Landscape Analysis

Landscape analysis was done through the identification of large-scale interventions (i.e. interventions having more than one lakh beneficiaries) in the 21st century skills space. The following process has been used for preparing the landscape analysis :

1. Compilation of a database of 145, 21st Century Skill interventions and their corresponding organizations from internet searches and snowball sampling
2. Analysis/coding of the organizational details in the database.
3. Shortlisting of 30 organizations/interventions which meet the defined scale criterion of one lakh plus beneficiaries.⁷⁴

The 30 identified projects and organizations were described and categorized using criteria such as

- Number of states covered
- Regions of the country covered
- 21st Century skill components/clusters covered
- Age brackets addressed
- Educational categories addressed
- Scalability markers fulfilled (i.e. methods applied to scale)

Out of the 30 selected large-scale interventions, six major interventions of interest were further selected for a deep dive analysis, and they were shortlisted based on what interviewed visionaries identified as the major interventions and organizations in the 21st century skills space. A detailed analysis of these six interventions has been presented in this report.

⁷³ There are 1490681 UReporters in India. Considering 95% Confidence level and 3% Margin of Error, the required sample size comes to 1067. The achieved sample size was 12,099.

⁷⁴ Initially 10,000 beneficiaries was taken as the marker of scale, but that led to a large number of interventions. The aim was to obtain a pool of around 25-30 large scale interventions. Progressively enhancing the number of beneficiaries finally led to 30 interventions being shortlisted, once one lakh beneficiaries was decided as the marker of scale.

G. Qualitative Data Analysis

The following steps have been followed in the process of qualitative data analysis or coding (i.e. analysis of data extracts from the literature, visionary interviews and FGD responses) :

- 1) Open coding : coding corresponding to the first level of codes (i.e. research questions and sub-questions)
- 2) Deductive coding based on literature-derived codes
- 3) Discovery of new data driven codes (inductive coding)
- 4) Axial coding : Grouping of more specific codes under broader codes
- 5) Writing of brief narrative synthesis based on each broad code and specific codes under it, drawing the quotations/excerpts under each code
- 6) Triangulation of findings from the multiple data sources i.e. identification of insights common to more than one data source⁷⁵
- 7) Validation of factual information obtained through FGDs or visionary interviews by cross checking with web resources and the literature
- 8) Where appropriate, visualization of qualitative findings based on connections observed between themes/codes through axial codes.
- 9) Presentation of key quotations and findings in text boxes/highlighted form in the report

⁷⁵ Triangulation has been done wherever possible. However, some observations from sources such as visionary interviews were not found to be covered in other data sources. These have still been used in the report.

APPENDIX

II

List of Interviewed Visionaries

Name	Designation	Organization	Date of interview
Mr Deenadayalan	Founder	Centre for Excellence in Organization	Oct 31st 2021
Mr Madan Padaki	Co-Founder	Global Alliance for Mass Entrepreneurship	Nov 1st 2021
Mr Syed Sultan Ahmed	MD and Chief Learner	LXL Ideas	Nov 20th 2021
Ms Meera Shenoy	Founder	Youth4Jobs	Nov 22nd 2021
Ms Anita Rajan	CEO	Tata Strive	Nov 23rd 2021
Ms Suchetha Bhat	CEO	Dream a Dream	Nov 24th 2021
Mr Pranav Choudhary	Director (Operations)	Dr Reddy's Foundation	Nov 25th 2021
Ms Geeta Goel	Country Director(India)	Michael and Susan Dell Foundation	Nov 25th 2021
Mr Arjun Bahadur	Lead	Life Skills Collaborative	Nov 26th 2021
Mr Akash Sethi	CEO	Quest Alliance	Nov 29th 2021
Mr Gaurav Singh	Co-Founder	Slam Out Loud	Dec 1st 2021
Mr Anuj Alphonson	Director - Livelihoods and Partnerships	Magic Bus India Foundation	Dec 14th & 15th 2021
Mr Ajay Kela	President and CEO	Wadhvani Foundation	Dec 16th 2021
Mr Bappaditya Mukherjee	Managing Director	Prantakatha	Jan 27th 2022
Mr Souvik Saha	Founder	People for Change	Jan 27th 2022
Ms Mom Banerjee	Founder and Managing Trustee	Samriddhi	Jan 28th 2022
Dr B S Nandakumar	Head - Research and IPR / Associate Professor	M S Ramaiah Medical College and Hospital	Nov 12th 2021

Name	Designation	Organization	Date of interview
Ms Kirti Seth	CEO, IT-ITES Sector Skills Council	NASSCOM	Nov 19th 2021
Ms Bhavna Chopra Srikrishna	GM & Head - Skill Development	CII	Nov 24th 2021
Mr E S Chakravarthy	Vice President and Global Resource Management Group Head	Tata Consultancy Services	Nov 29th 2021
Ms K Dhanya	Lead - Talent Management & Leadership Development	Titan Company Ltd	Dec 8th 2021
Mr P K Jain	CEO, TCI Global, and Group H R Head, TCIL	Transport Corporation of India Ltd	Dec 9th 2021
Mr Vishwesh Kulkarni	Owner (Yashaswi Education Society) and National President (NIPM)	Yashaswi Education Society and National Institute of Personnel Management	Dec 11th 2021
Mr Ravi Tennety	CEO - Training and Skilling Division	Quess Corp	Dec 16th 2021
Mr C Sunil	Head - Specialized Staffing	TeamLease Digital	Dec 23rd 2021
Mr Subroto Bagchi	Chairman	Odisha Skill Development Authority	Nov 19th 2021
Prof M K Sridhar	Member	NEP Draft Committee, Central Advisory Board of Education (MHRD), All India Board of Management Studies, AICTE	Dec 7th 2021
Prof R P Khambayat	Joint Director	PSS Central Institute of Vocational Education (PSSCIVE)	Dec 8th 2021
Mr Shrikant Sinha	CEO	Telangana Academy for Skill and Knowledge	Dec 9th 2021
Mr Rajesh Aggarwal	Secretary	Ministry of Skills Development and Entrepreneurship	Dec 14th 2021
Dr B S Pradeep	Professor and Head	Centre for Public Health, NIMHANS	Nov 11th 2021
Dr Radhakrishnan Nair	Founder President	Indian Association of Life Skills Education	Nov 16th 2021

APPENDIX

III

Extracts of Visionary Interviews for Identifying Key Interventions

Mr Madan Padaki, Co-Founder, GAME

Akshay Patra is a life skills programme which reached 10 lakh students, through an in class and trainer led model for school kids. Sultan (Syed Sultan Ahmed) used to run it on behalf of them. School cinema is also great. Udhyam's programme for Delhi government is a high impact high scale. Head Held High Foundation is a high impact low scale programme. Youth Leadership camps under Art of Living is a large-scale intervention, where 20000 - 30000 volunteers are deployed to run youth leadership programmes. In Pravah and Jagrik, constitutional skills are taught through a game and active citizenship is taught as a skill. Ashoka Foundation (Ashoka Changemakers), Wadhvani Foundation, Pratham, Magic Bus, and EduSports are other major players.

Mr Arjun Bahadur, Lead, Life Skills Collaborative

An organization like Dream a Dream for example, I think is one of the most active players in this field, and from all angles - from creating visibility, from creating awareness, from creating programs, from implementing programs to now creating assessments. So Dream a Dream is one of our partners that is creating assessments for us, and they also came up with frameworks.

But then there are other aspects where different organizations are taking the lead on different kinds of things. So for example, we've got organizations like Magic Bus and Kaivalya Education Foundation, who are implementation partners with us, and they are also taking a strong lead with respect to life skills, but more from an implementation perspective, not necessarily from a design of assessment or curriculum etc. But more from, 'I'm going to take somebody's framework', I recognize the importance of life skills, and I'm going to do something with the students on the ground. So I think they're also doing a significant amount of work. Kaivalya of course is heavily focused in Rajasthan so a lot of the work is focused around the work they are doing in Rajasthan. But again, I think they're doing some fairly good amount of work. Then there are organizations like ICRW and Room to Read with a very strong gender focus. So they are looking at it from a very gender specific lens, but they are still focusing on life skills. So there are organizations who are picking up different facets of it and different aspects of it and are delving deeper into it. And there are also organizations like for example CSSL, Centre for Science of Student Learning. They're very strong in assessments. So they don't do interventions. They are only creating assessments, which can help in the measurement and impact of life skills. I've taken names of a few organizations, there are all partners with us. There are other partners also. For example Pratham now is taking a very active lead with us in setting up this tool for collecting voices of people on the ground with respect to life skills. So I think that that contribution there is going to be significant, even though they're not creating an assessment tool, or implementing a program around life skill, but for them to be able to create this tool which is, given their ASER experience, is a very powerful tool coming from Pratham, to help us collect life skills data from the ground up.

Coming down to schools and parents, we're just in the process of initiating what I think could possibly be

one of the first large scale life skills related data gathering initiative that we are kicking off, possibly by the end of this month, early next month. We've got three organizations Pratham, Breakthrough and Quest, who are working with us.

Gaurav Singh, Co-founder, Slam Out Loud

Dream a dream. I'm sure people have already told you. So that's an organization that has done decently good work in 21st century skills. Again, not a lot of organizations, focus on 21st century skills but can check out Manzil Mystics, an organization that uses music. You can look at The Apprentice Project which is TAP. I was thinking of Nudge Foundation's Gurushala program but they build employability skills not. I mean, but if you use the terms interchangeably, then that's also something that you can think about.

Geeta Goel, Country Head, Michael and Susan Dell Foundation

I guess I would think of Dream a Dream would be one of those organizations and Magic Bus is also at scale and deep impact. I think Kaivalya now because they're working with state governments, so the scale is there and the curriculum is actually really good, it has been developed by Emory college, and they are now developing their own assessment tools as well and it's a 2-year period intervention programme, so Kaivalya also qualifies for high scale – high impact. Pratham might also fall under this quadrant.

Sucheta Bhat, CEO, Dream a Dream

In the lifeskills space, my sense is that some of the really good work is happening with the new non-profits. I definitely feel that in terms of impact, maybe not scale but in terms of depth of impact, I think Apni Shala is doing some great work. I think Slam Out Loud is doing some great work. I'm trying to think of other non-profits. Protsahan, they do child protection but they also do life skills, Learning Curve Foundation. So, I think there are some of these smaller or more younger organizations which are doing much better work because they are just focusing on this. It's not life skills, along with vocational training or it's not life skills for getting a job, it's not life skills so that you do numeracy, literacy. And that for me is the key about how we approach life skills and 21st Century that it is in and of itself the most important thing that we focus on and it's not a means to something else. So that I see that younger nonprofits are doing really well, but other than that, at scale I do definitely think Pratham is doing a great job, ICRW is doing a great job, Breakthrough, through gender is doing a good job, Magic bus, so they are all doing that in terms of scale. The only thing there is that typically is something else and then life skills is in addition, so like Breakthrough is doing gender and then life skills along with that, or Magic bus is looking specifically at employability and then life skills kind of sits on top of that. So that way Pratham is focused on numeracy, literacy and life skills is kind of on top of that, so that way. I personally, at my individual level, don't subscribe to that.

Rajesh Aggarwal, Secretary, MSDE

See the soft skills, employability skills, we are embedding in all the courses, and a bit of entrepreneurship. Now, I have maximum students in ITIs directly from the Ministry. And there employability skill course would be 120 hours. So, we have increased it to I think 180 or 200 hours 120 hours and 80 hours or 120 hrs + 60 hrs, I'm not really sure. And we have brought these elements and we have brought players like Quest Alliance and Tata Strive to make the course more dynamic, so they are giving teachers also in NSTIs, they are training ITI teachers also in these courses.

IV

Additional Insights from Stakeholder FGDs and UReport Polls

FGD Insights - Youth, Parents and Principals

Eight FGDs were conducted in this study, of which five were youth FGDs, two were for principals and one was for parents. The participants of the youth FGDs represented a mix of states (Karnataka, Gujarat, Assam, Punjab and Jharkhand), educational categories (out of school, in school, and college graduates) and age groups (15-18, 18-21, 21-24). The parents' FGD covered parents of 15-24 year olds from different states of India. The principal FGDs covered heads of government schools, high-end private schools and ITIs from different states of India. The parents covered in the FGD were from professional and English-speaking backgrounds.

Awareness of 21st Century Skills

Young people, parents and principals are critical stakeholders in the 21st century skills space. Therefore, the success of 21st century skills interventions is shaped by the awareness of these key stakeholders. *Findings from the UReport poll conducted for this study and the youth FGD reveal that overall youth awareness of the term '21st century skills' was low.* The findings from the UReport poll reveal that a majority of polled youth had not heard of the term '21st century skills'

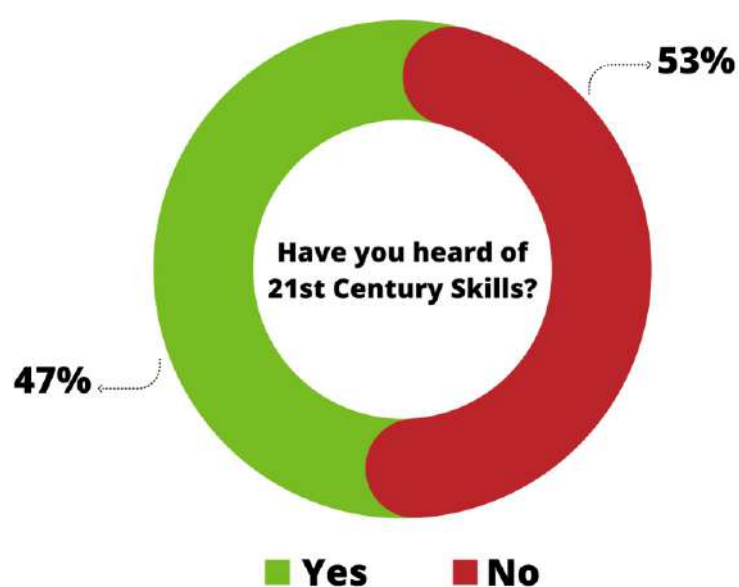


Figure IV-A : Youth awareness of 21st century skills (UReport poll responses)

Most youth FGD participants from different states and educational levels had not heard of 21st century skills. Volunteering experience seems to be linked with awareness of 21st century skills as a term or concept, since a few college graduates from Punjab with past volunteering experience were aware of the concept.

In contrast to 21st century skills, more young people were aware of the term 'life skills'. For instance, girls in the 15-18 age group from Karnataka (studying in high school or junior college) who had received life skills sessions in school demonstrated awareness of the term 'life skills'.⁷⁶ This shows that *some young people are aware of some of the components of 21st century skills, though they may not be aware of the term '21st century skills.'*

Even though some young people may not have heard the terms 'life skills' or '21st century skills', it is apparent that they have some awareness of the components of such skills. For instance, in the following question asked in the UReport poll, 75% of the respondents were able to correctly identify what constitutes a 21st century skill and what doesn't.

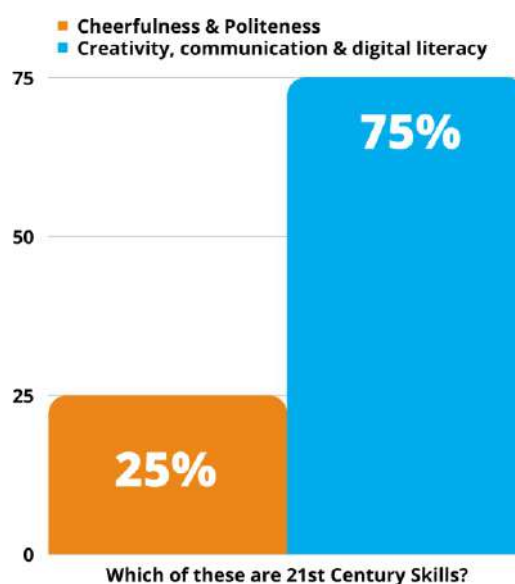


Figure IV-B : Youth ability to identify 21st century skills (UReport poll responses)

All parents of young people in the 15-24 age group and principals of educational institutions who participated in the FGDs demonstrated awareness of the concept of 21st century skills and its major components.

Whether and Why Youth see 21st Century Skills as Important

On being explained the concept of 21st century skills, youth FGD participants across different geographical contexts and educational backgrounds (ranging from school dropouts from Assam to college graduates from Punjab) spoke about similar and basic reasons why 21st century skills are important - to build confidence and achieve personal and professional growth. Additionally, college graduates from Punjab spoke of the relevance of these skills for particular life situations, such as for sportsmen to lead and motivate teams, and for youth to confidently apply for the benefits of government schemes that support entrepreneurship. High school and junior college girls from Karnataka articulated that the importance of these skills lies in increasing the knowledge of new technologies.

⁷⁶ The girls had received life skills training organized by GRAAM under its Sugamya Shiksha programme. The skills are an adapted version of NIMHANS life skills curriculum, which in turn is based on the 10 life skills identified by World Health Organization.

Sports helped me to develop patience, tolerance to pain and self-motivation, and also leadership and the ability to motivate and guide others. Sports helps to overcome frustration, and channelize pain and hurt into positive directions.

Youth FGD participant from Punjab

Specific 21st Century Skills that Stakeholders Consider Important

Youth from diverse educational backgrounds identified certain common 21st century skills as being the most important. Communication skills and confidence were among the most frequently mentioned skills that are considered important by youth. There were also unique elements identified by specific groups; for example, school drop out girls from Jharkhand mentioned their desire to cultivate the abilities of 'new ways of thinking' (creativity), of distinguishing right and wrong, and of basic digital skills.

21st century skills considered important by youth from different contexts

State	Educational Category	Gender	Skills considered important that they would like to develop further
Assam	School drop outs	Male	Communication and other interpersonal skills
Jharkhand	School drop outs	Female	Basic digital skills (use computers and mobile phones), Confidence and resilience. Communication, Management of emotions, New ways of thinking (creativity), Discrimination (differentiate between right and wrong)
Punjab	College Graduates	Mixed	Confidence, Communication, Self awareness, Entrepreneurial skills especially taking calculated risks, Digital skills, Information literacy
Karnataka	High School and Junior College1	Girls	Computer training, Spoken English
Gujarat	8-21 (polytechnic/ ITI/college going)	Boys	Leadership skill and financial management education

How 21st Century Skills are being Inculcated by Youth

FGDs with youth, parents and principals revealed that youth are informally imbibing a certain amount of 21st century skills even without structured training, through means such as life experiences, parent interactions, work and volunteering experiences, and participation in extracurricular activities including sports. School and junior college girls in Karnataka mentioned being guided by their fathers with respect to financial management

skills. While this is a positive insight with respect to the proliferation of certain 21st century skills, the need for a planned and structured curriculum or content cannot be denied.

Some youth FGD participants from Punjab volunteering under the Young Warrior Programme of UNICEF notably mentioned the mentorship being received under the programme and the successful completion of mental health and peer counseling related tasks as being valuable in their development of 21st century skills. Such initiatives combine incidental benefits from volunteering with the merits of an intervention consciously planned for inculcating 21st century skills.

Stakeholder Suggestions to Improve the Content and Delivery of 21st Century Skills

Principals and youth made suggestions with respect to the skills or topics that must be included in 21st century skills interventions, which are not included or emphasized sufficiently in interventions that they are aware of. These suggestions substantiate the argument that 21st century skills should not only focus on enhancing employability of youth but also on life skills that would enable youth to cope with the difficulties of life. The suggested competencies include a problem solving attitude so that students can more rationally face problems in life, and the ability to deal with competition, both of which are important to protect their mental health. Interestingly, school girls from Karnataka spoke about the need for 'political skills', skills to oppose social injustice and the need to equip youth with resilience specifically to overcome social media addiction. Principals, parents and youth also gave suggestions with respect to the appropriate methods and approach for delivery for 21st century skills, which are summed up in the table below.

Suggested methods and approaches for delivering 21st century skills

Stakeholder	Suggested methods and approaches for delivering/strengthening 21 st century skills
Principals	<ul style="list-style-type: none"> ● Entrepreneurship development programmes from Class 7 onwards ● Giving youth more opportunities for public speaking ● Encouraging National Cadet Corps participation for inculcation of leadership skills ● Use of literature as a medium to learn more about life skills ● Create situations/simulations for youth to inculcate 21st century skills, going beyond lecture based learning ● Start training for 21st century skills earlier in childhood ● (for ITIs) industry-institute interaction, engaging ITIs in solving problems for ITIs
Parents	<ul style="list-style-type: none"> ● School counselors' involvement for building life skills ● Holistic and interdisciplinary teaching of subjects
Youth	<ul style="list-style-type: none"> ● Online mode of delivery recommended by some youth while offline mode recommended by others, on the grounds that it enables greater focus and teacher interaction. ● Youth also recommended project based and activity-based learning along with participation in NCC and NSS as preferred means for inculcating 21st century skills

APPENDIX

V

Description of Available Assessment Scales

Following are some of the assessment scales customized for the Indian context.

- a) DLSAS (Dream a Dream's Life Skills Assessment Scale) : The DLSAS is a simple impact assessment scale that was developed using observational data of 1,135 disadvantaged children aged 8 to 16 years (Kennedy et al, 2014). Authors argue that it is a simple tool that can be used for assessing life skills programmes for disadvantaged children and young people in developing countries. LSAS consists of items to assess 5 life skills - interacting with others, overcoming problems and finding solutions, taking initiative, managing conflict, and understanding and following instructions. It is scored by observer rating. Individual scores can be compared to normative score.

Dream a Dream's LSAS assessment scale is one of the best that I have come across for two reasons. One is that the scale understands the idea of how life skills are interconnected what it actually tells you is a more holistic understanding of the child.... We know of at least 19 other organizations that are using it.

Sucheta Bhat, Dream a Dream

- b) NIMHANS Life Skills Scale is based on the 10 life skills defined by WHO, and the efficiency and utility of the scale with respect to diverse groups has been accepted by various researchers (Vranda and Rao, 2011)
- c) Transferable Skills Scale used in the Young Lives School Surveys 2016-17 in India and Vietnam- is found to provide fairly reliable assessments of problem solving and critical thinking. The scales for both critical thinking and problem solving consist mostly of cross-country items but also of a few individual country/customized items (Iyer and Azubaik, 2017)
- d) Vignette Based Assessment of CSSL : Moving away from self-reports, CSSL has developed scenario or vignette based assessment tools, in which scenarios or situations are presented, and respondents' reactions to such scenarios are gauged. This is a noteworthy innovation in the assessment space. Every item in the vignettes was created from scratch by CSSL.

We (CSSL) have built our tool that really immerses the test taker in different settings. It's extremely diagnostic, and can reveal how the test taker is responding to those settings. The first impact we have seen is that the test takers get extremely excited. They feel that they have got a voice

Vjayanthi Sankar, CSSL



YuWaah is a multi-stakeholder public, private and youth partnership platform that aims to prepare young people to transition from education and learning to productive work and active citizenship. It was formed by UNICEF, together with public and private sector partners, UN Agencies, civil society organisations, foundations and young people as the Generation Unlimited (GenU) partnership in India.

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UNICEF works in the world's toughest places to reach the most disadvantaged children and adolescents – and to protect the rights of every child, everywhere. Across more than more than 190 countries and territories, we do whatever it takes to help children survive, thrive and fulfill their potential, from early childhood through adolescence. And we never give up.



Grassroots Research and Advocacy Movement (GRAAM), is a public policy research and advocacy initiative. GRAAM's extensive expertise spans over policy research, program evaluation, community consultation, policy engagement, strategic consultation and academic programmes. GRAAM is fuelled with a vision to create and nurture an evaluation space that embodies community 'voice' based on empiricism, democratic principles and a progressive interaction in the development sector including government, citizenry, private sector, civil society and academia. GRAAM is an unique organisation where the outcome of research would lead to advocating for policy change driven by the philosophy of partnership. GRAAM's work for the past nine years has reinforced this conviction where one can combine research and advocacy to bring out constructive change in the development landscape of India.

