

# 21st Century Skills, Evolving Definitions and Barriers in Integration in the school ecosystem and the way forward





As economies shift from the age of industry to that of information, our education systems need to address this change too. As automation takes over manual jobs, more youth entering the workforce will need to take up abstract jobs which demand a new set of skills. To address these changes, the National Education Policy (NEP) 2020 directs schools to equip students with 21st Century Skills.

This summary note presents research findings to build a consolidated understanding of 21st Century skills, the current gaps in understanding these skills, barriers to integration and the way forward.

# What are 21st Century Skills?



21st Century skills are not new skills. Skills like Critical Thinking and Problem Solving have been relevant throughout civilization. However, our economies have shifted with the emergence of new information technologies making these skills more relevant than ever.

There are several frameworks of 21st Century Skills available and used widely. All frameworks are beneficial and key to representing diversity and builds scope for contextualization. However, key points to keep in mind are



All definitions must be locally adapted

These skills are subject agnostic

They must be integrated and built through the school day of the child

The skills are highly interconnected and interdependent and compartmentalization of these skills are ineffective

We present below how several of these skills need to be understood as interdependent. For instance, skills like Critical Thinking involves the skill of Creativity, Resilience, Problem Solving. It is essential to understand these skills in such interdependent and interconnected ways.

Skill	Interdependent Skills
Critical Thinking	Creativity, Resilience, Problem Solving, Open mindedness
Creativity	Curiosity, Empathy, Critical Thinking, Communication, Innovation
Leadership and Responsibility	Initiative and Self Direction, Critical Thinking, Communication
Problem Solving	Seeing Problems as Challenges, Team work, Decision Making
Communication	Abstract to Simple, Negotiation, Empathy
Collaboration	Delegation, Team Work, Flexibility and Adaptability, Social and Cross Cultural Interaction
Resilience	Joy, Resistance, Critical Thinking, Flexibility and Adaptability, Self confidence
Digital Skills	Digital Communication, Data Orientation, Technology Literacy, Media Literacy, Information Literacy

*Fig: Tabular Representation of Skills and Interdependencies*  
*\*This list is adapted from Partnership for 21st Century Skills Framework. The details of several frameworks and evolution of skills can be found in the report. Please download here <https://www.questalliance.net/our-publications>*

# The need for 21st Century Skills

## Consistent with the future of automation:

21st Century Skills will prepare students to take on the new jobs that will displace old jobs.

## Combat increasing disparities:

With holistic education, integrated with 21st Century Skills, the risk of outdated jobs due to automation can be turned into an opportunity.

## Success for individuals and the community:

21st Century Skills are crucial for an individual's success in personal life, civic life, and the workplace. They help students apply their knowledge in the real world.

## Integration in a tech-driven world:

These skills will equip students with knowledge, attitude, and competencies needed to succeed in the new tech-driven, global world, while providing opportunities for applying them in various contexts.



# Effect of Covid-19 pandemic

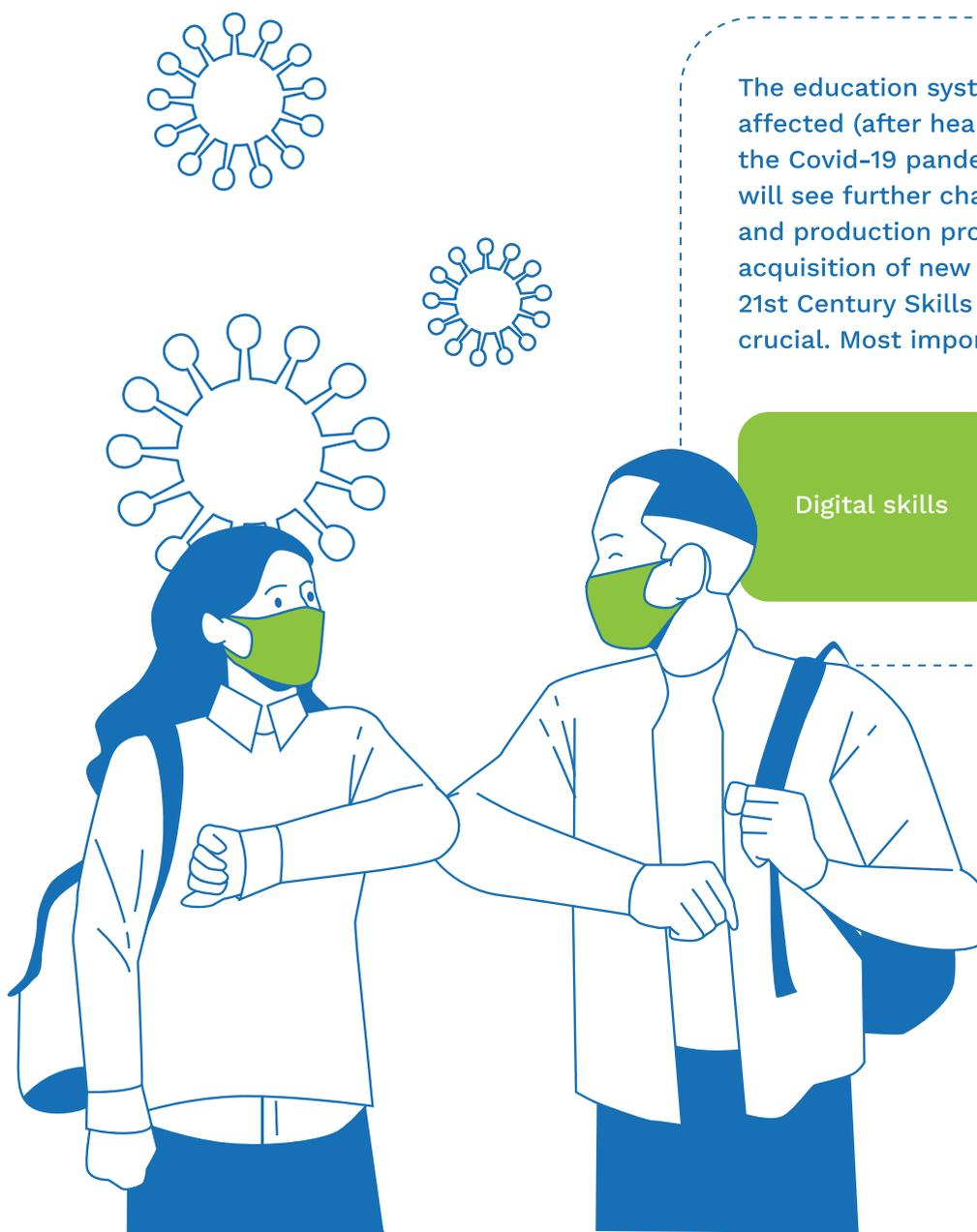
*“Post pandemic, where pressures on adolescents girls and boys both have significantly increased – to work or to get married – children with 21st Century Skills have demonstrated better ability to negotiate the stressors”*

*- Suchetha Bhat, CEO, Dream a Dream*

The education system is one of the worst affected (after health and economy) due to the Covid-19 pandemic. A post-covid world will see further changes in business models and production processes, necessitating the acquisition of new skill sets, including the 21st Century Skills which are emerging as crucial. Most importantly,

Digital skills

Resilience,  
Collaboration,  
and Leadership



## Success of Skills for Learners

Success of these skills must be understood when the child is able to apply these skills in varied contexts. We find that enabling lasting skill activation is based on a number of factors and involves -

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Creating immersive experiences

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Depth of activation of programs

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Designing for failure in the curriculum

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Duration of engagement

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Building skills into the day of the child

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## Where the school system currently stands



Most stakeholders interviewed during the study spoke with an understanding of allied concepts such as life skills, soft skills and personality development.

**Over half of the participants from the education system believed that these skills were alternative to or exclusive of academic intelligence.**

## Teachers

- Schools were described as ‘formal’ spaces that should focus on preparing students for careers rather than focusing on developing skills. 21st Century Skills are seen as lying outside of mainstream education.
- Delayed recruitment of teachers, large class sizes, administrative work adding to workload, poor wages etc. acted as barriers.
- Teachers had not received any gender-based or 21st Century Skill-based training.



## BEO/DEO

- Lack of time and space to practice educational leadership.
- Their roles are seen as being primarily administrative.
- No promotion criteria or incentives were provided for showing proactive leadership.

## Learners

- Inadequate understanding of 21st Century Skills and its relevance.
- No time set aside during school to develop these skills.
- The need for a learner-led education system where students have the space to explore and experiment while being facilitated by teachers.

## Parents

- Parents perceived these skills as being co-curricular skills that were outside of mainstream education and learning.
- Parents and teachers singularly linked a completed school education to income generating opportunities, especially in disadvantaged areas.

# Common understanding of the various skills among the stakeholders

There is a misconception with understanding the need for 21st Century Skills for the youth-



## Creativity

Considered more valuable for academically weak students who may want to pursue an art-related career option.



## Critical Thinking

Associated only with debate competitions or solving mathematical problems.



## Leadership

Described as an innate skill by teachers.



## Problem solving

Some teachers interpreted it in the context of school or local civic problem solving by learners, rather than daily activities.



## Effective communication skills

Regarded as a highly relevant skill for learners and linked to group work, and project activities.



## Digital excellence

While there is interest regarding building digital excellence, there is a lack of access to digital devices and opportunities for skill building.

# Key areas to focus on for successful integration of 21st Century skills

## Mindset-related Challenges and Definitional Barriers

While the significance of 21st century skills is largely understood, they tend to not be perceived as universally relevant. Education system stakeholders present ability-based biases with undue emphasis on 'innate aptitudes and interests' in learners. Additionally, there is an ineffective compartmentalization of skills. The benefits and relevance of 21st Century Skills demands a cultural shift in perceptions among all system stakeholders including parents, educators, BEO/DEOs and NGO partners supporting their work.

## Lack of incentives and Resource Scarce System

Teachers and Education Functionaries' responses reflect the shared burden of system failures: delayed recruitment of teachers, large class sizes, administrative work over and above teaching time, poor wages, age linked promotions, lack of cash incentives for innovation, parent mind-sets towards syllabus completion (therefore, lack of demand for 21st Century Skills ) and the association of 21st Century Skill-building as being resource intensive for the government school system. There is a need to incentivise and advocate for mechanisms in the system which prioritize 21st Century Skills.

## Capacity building

There is an urgent need for training related to gender and 21st Century Skills. Capacity building programs for teachers and education functionaries focused on building definitional clarity and integrating 21st Century Skills across subjects are crucial.

## The Demand Gap

The assessment mechanisms in the system are currently based on academic outcomes, bringing down the demand for these skills. There is low demand among parents which contributes to low prioritization. Efforts should be made to advocate for change so that 21st Century Skills are prioritized in the education system.

## The assessment gap

Measuring the transaction and development of 21st Century Skills is complex due to their tacit and contextual nature. Reflective and contextualized assessment is crucial. These need to be contextualized at two levels:

- Community/geographical and cultural context, depending on what each of the skills mean in a given context.
- Customisation according to the learner, considering their starting points and individual growth trajectories.



# Implications for the girl child



- Interventions should account for power structures prevalent in our society and provide space and support for girl children to navigate the inhibitions towards successful manifestation of these skills.
- Access to content that is specific to gender-related training for both boys and girls should be made available publicly to fight discrimination. This would ensure fair access to resources for women in gaining 21st Century Skills.
- Negotiation, resilience and leadership are becoming more relevant for girls. They need to be understood against the social context that the girls live in. In addition to skill building, girls need to be assisted with building their voice and developing leadership skills.
- Access to role-models, mentors, a network of supporters to imagine and prepare for an adulthood radically different from their mothers is critical today.



*Please download the full report at:  
<https://www.questalliance.net/our-publications>*