



Delivering 21st Century Skills In The Indian Classroom

In last month's introductory article in this series, 21st Century Skills were identified as the set of qualities students need in order to be successful in the 21st century workplace. This article addresses the key question: as educators, how shall we prepare our teachers, processes and infrastructure to deliver 21st Century Skills effectively?

Go beyond traditional patterns of teaching

To lay the ground for delivering 21st Century Skills to students, schools must first go beyond simply teaching students to “reproduce” what they are taught. Some might ask: how will it be possible to do so while still covering the syllabus? The solution is to re-focus the curriculum by emphasizing a focused set of knowledge and concepts that can then be taught in much greater depth.

Second, consider this: around the world, most students today are still taught using the “Transmission” model of education. Teachers transmit factual knowledge to groups of pupils via lectures, utilizing textbooks and other sources for reference. The problem with this is that while students can memorize information, they don't get much – or often any – scope to apply the knowledge. To be impressed into young minds, knowledge must be applied to new contexts, communicated in complex ways and used to solve problems.

“Learning 21st Century Skills gives students a platform to develop creativity”, says Mr. Vamshi, Correspondent of Sri Lakshmi School in Kurnool, Andhra Pradesh. “Besides, the ocean of information available around is increasing exponentially, and access to it is at every student's fingertips via the internet. Teaching students what to do with the information is now a valuable commodity”. Mr. Vamshi has observed students in their school's 21st Century Skills program (implemented in partnership with Creya Learning), and tracked the visible manifestations in the creativity and analytical skills of their students.

Skills in focus

Employer surveys# suggest that the most important 21st century skills to be taught are:

- The ability to solve new problems and think critically;
- Strong interpersonal skills for communication and collaboration;
- Creativity and intellectual flexibility; and
- Self-sufficiency, including the ability to learn new things when necessary.



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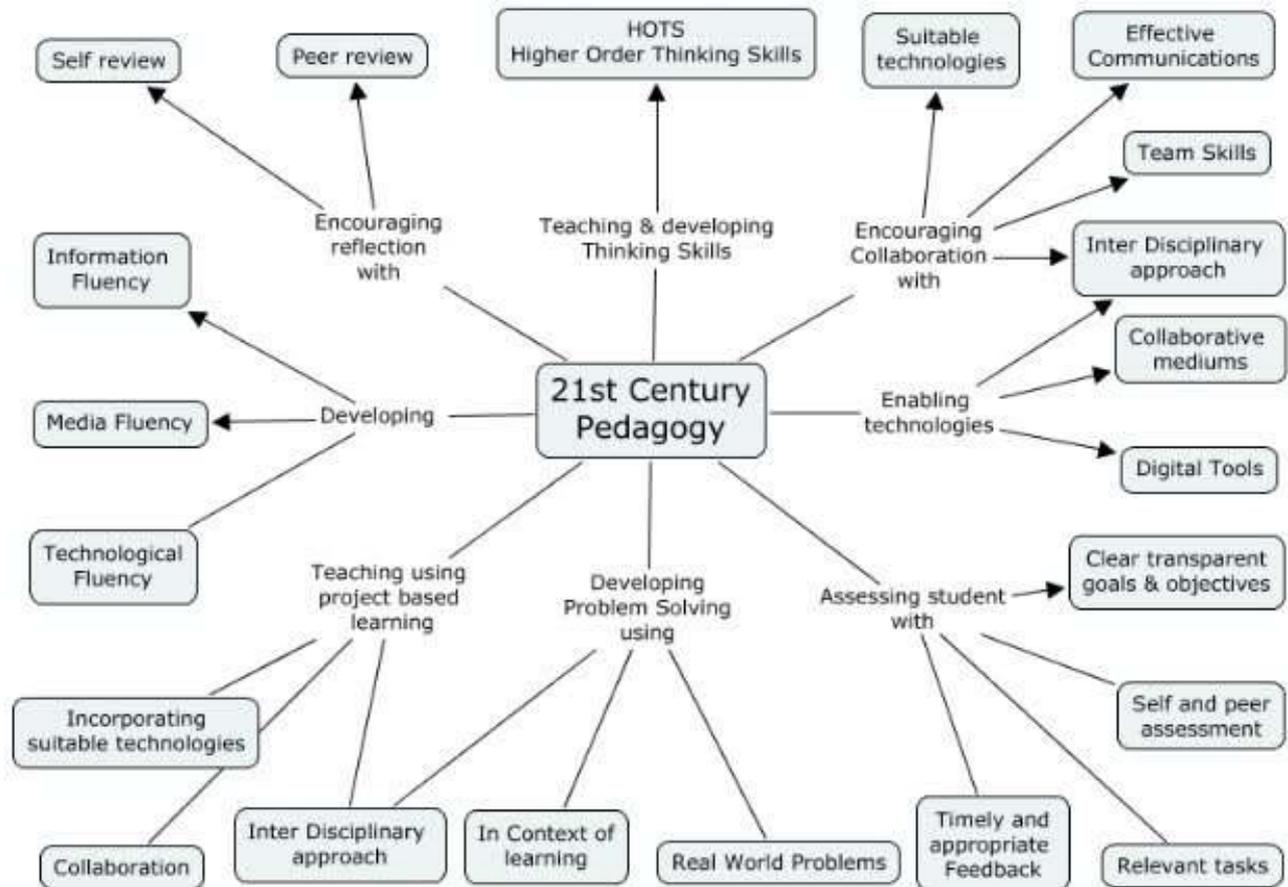


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Graphic: 21st Century Pedagogy

In surveys #, employers thought it much more important that new hires come from a pool that is comfortable facing a problem with “no right answer,” than facing problems with one right answer, which suggests that schools must find more ways to give students more complex and unstructured problems and fewer multiple choice questions.

More than knowledge, students need application literacy—

the ability to apply their learning to meet real-world challenges. This crucial skill applies to all subjects. The key issue is how to meet the challenges of delivering content and skills in a rich way that genuinely improves outcomes for students.



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Teachers First

When a school decides to undertake delivering 21st century skills to its students, the paramount criterion towards success is teacher training.

Teachers should possess 21st century skills before delivering them to students. In order to teach, teachers must be trained to learn, to do. There must be a structured plan by which teachers can succeed.

Here are the questions to consider when designing teacher-training programs for 21st Century Skills delivery:

- **All or Some?** Will all teachers at the school who teach students be required to deliver 21st century skills? This would include the Computer Science teacher, Art teacher, Hindi (or other language) teacher, Physical Education teacher, etc. 21st century skills teaching and learning need to be part of all aspects of a student's course of study; they are not taught as stand-alone subjects. If all the teachers will not deliver the skills, careful consideration must be given to which teachers will be part of the initiative.
- **Timing:** 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 to learn the methods for incorporating 21st century skills into their existing teaching; it must be done specific to course and grade.
- **Who will train the teachers?** Locating experienced trainers could be a challenge since 21st century skills-teaching is a new concept.
- **Specificity:** Training should include development of specific lesson plans that deal with the high cognitive demands and potential classroom management problems.
- **Administrators Too:** This individualized training would also involve administrators, since they would be overseeing and assessing the teachers' delivery.
- **Digital Tools Training:** All 21st Century Skills teachers must be comfortable in using and delivering instruction through digital tools like computers, tablets and use of internet.



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Assessing Learning Outcomes

Assessing students of 21st century skills also requires teacher training in new methods of determining the depth, breadth, application and transfer of learning. 21st century skills must be assessed through observation methods, rather than through pencil and paper tests.

On the part of the program administrators, assessing students for 21st century skills competency requires additional training in digital tools to track and monitor program success.

PBL in 21st C

Project Based Learning (PBL) is demonstrably the most effective method of delivering 21st Century Skills to students. This involves incorporating activities in which students must solve problems, think creatively, and communicate their work to others using multiple types of mediums.

Incorporating such activities requires significant changes in the way teachers are trained. For instance, teachers would play a very different role in the PBL classroom to what they have been in traditional classrooms: they would guide the process of knowledge construction.

Component	Comments
Classroom Layout	Must accommodate clusters of students working co-operatively
Classroom Layout	Classrooms of 24-32 students work best. If the classroom size is beyond 40, it should be broken into two groups.
Teacher as a facilitator	The teacher is not an expert in PBL classrooms, but a mentor, facilitator and co-learner.
Failure is an option!	Learning occurs through success as well as failure
The Digital Component	Learning occurs through success as well as failure Digital literacy, through the use of a variety of digital tools. These tools must be used within classrooms during regular instruction, not just in a computer lab overseen by the Computer Science teacher.

Table: Components that make up an effective 21st Century Skills Program



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Future Perfect?

Progressing from the “transmission” model to the "21st century" model will involve entire educational systems. As educational purposes change, curriculum frameworks, instructional methods and assessments must change as well. This will require teachers, administrators and policymakers to utilize and practice precisely the skills that we deem critical for students. Perhaps most important, we need the political will to ensure that educators directly involved in transitioning to the 21st century model have the time, support and resources they need to make it a success.

One of the ways for schools to kick-start the process for preparing their teachers on 21st century skills is to partner with Creya Learning. Creya Learning offers amply researched, well-designed programs supported by professional development programs and aids for teachers. Creya programs can be seamlessly integrated into the academic schedule and curriculum of K-12 schools from CBSE, ICSE, State Boards and even international boards like the IB and IGCSE.

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For more on how to integrate 21st Century Skills into your school environment, visit <http://www.creyalearning.com/21stcentury>

Next in the series:

What kind of programs do schools need for delivering 21st century skills?

Defining a 21st century education By Craig D. Jerald for the Center for Public Education July 2009