

# Towards Achieving the Aims of NEP 2020: Enablers for Effective Learning in an Online Teacher Professional Development Programme on Experiential Learning Pedagogy

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## Abstract

This research article presents the findings from a year-long evaluation research study conducted for the online certificate course on “Experiential Learning for 21st Century” for Eklavya Model Residential School teachers across ten states of India designed to advance the aims of NEP 2020. The course design was built upon four cornerstones — course content presenting pedagogy-in-action, active and collaborative learning opportunities for teachers during the course, technology integration for seamless course delivery and feedback-based reflective scaffolding. The study used a mixed research method, and data was collected through interviews with stakeholders, survey forms, focus group discussions, class observations, school visits, reflection reports and lesson plan-qualitative evaluation. The findings revealed that the design of a Teacher Professional Development (TPD) Programme should address the questions about what is the nature of teachers’ knowledge and how teachers learn. During the online certificate course, teachers embraced the principles of experiential learning pedagogy and created engaging learning experiences for their students. The research study identified the features that positively influenced teachers’ learning of a new pedagogy during the course. The paper presents the study findings as recommendations for educators/educationists and government officials interested in facilitating and enhancing teachers’ learning from a TPD Programme.

**Keywords:** Teacher Professional Development, Pedagogy Training, Experiential Learning

## Introduction

### 1.1 Teacher Professional Development

Teacher education is vital in creating a pool of school teachers to shape future generations. It forms the backbone of education quality improvement efforts and thus is recognised as a critical aspect by various policy documents and reports of various educational commissions and committees. The National Education Policy (NEP) 2020, too, envisages teachers at the core of the fundamental reforms in education (NEP 2020). Consequently, an increased

importance has been placed on the necessity for the professional development of teachers to bring reforms in the education system.

The professional development of teachers is a lifelong learning process, which starts with the pre-service education of teachers and continues until teachers retire from their service. A teacher generally acquires the knowledge and skills required to perform different teaching and organizational functions through a structured initial teacher education program or teacher professional development that goes beyond their initial training, qualification, and induction. The training areas may focus on domain



knowledge, pedagogy training, organisational skills, technology literacy and allied areas. Irrespective of the training type and focus, teachers who have undergone professional development programs are expected to bring the three primary changes: i) a change in classroom practices, ii) a change in teachers' attitudes and beliefs, and iii) a change in students' learning outcomes (Guskey, 2002). Thus, to understand how teachers act as agents to these changes, it is always crucial to explore how teachers learn from a particular TPD and how a teacher's learning process informs the design and implementation plan of a TPD program.

### 1.2 TPD and Teachers' Learnings from a TPD Programme

At a broader level, education reform aims to improve student performance through changes in teaching practices, and a TPD programme is instrumental in bringing the required change in teachers' practices. Thus, a high-quality professional development programme is needed for sustained and meaningful change in teachers' teaching practices.

The nature and philosophy of TPD have evolved over the decades. Until the turn of the century, the dominant conception of TPD was dictated through 'one-shot' training workshops. The reason for promoting the one-shot training workshops was a particular understating of teachers' knowledge, which was that of a codified script enlisting what teachers must know and do. In this tradition,

the knowledge was considered fixed, and possession was lying with the trainer (Craig, 2011). However, post-2000, the research picked up on the teachers' knowledge as a meaning-making variety, whereby it is now expansive, continuous and contextualized in the relationships among teachers, with students and with administrators (Desimone, 2023). Therefore, in this latest tradition, the Teacher Professional Development is considered a 'process' to be sustained over time (Harwell, 2003). Sustained, systematic professional development programmes that unfold as processes over time are generally superior to individual workshops and seminars, which are one-time events.

The teacher is now not a receiver but an 'active' participant involved in the construction, reconstruction and practice of knowledge followed by reflection, making it a part of their own being. The professional development programmes, thus, need to be mindful that changes in teaching practices are likely to result only from high-quality professional development (Darling-Hammond, Hyler & Gardner, 2017). The key characteristics of high-quality professional development emanate from recent research on the nature of teachers' knowledge and teachers' being (Holland, 2005). As depicted in Figure 1, re-positioning teacher as an 'active learner' the TPD should provide ample opportunities to interact with the content of training. The content should be engaging, interactive and relevant to the teachers' immediate practice



Figure 1: Characteristics of High Quality TPD, as derived from recent literature

Similarly, as practitioners situated in a context (both inside and outside the classroom) the TPD ensure teacher – teacher collaboration through communities of practices. Communities of Practice act as safe spaces (Craig, 1995; Abrol, 2015) for teachers to discuss their raw and unfinished ventures inside the classroom with their colleagues in a non-threatening environment. Finally, the recent literature also lays significant importance on the completing the loop of learn – practice – reflect – re-learn, termed as practice-based pedagogy (Darling-Hammond, 2012). Therefore, the TPD program must ensure that teachers get feedback on their practice and also scope to improve upon the feedback through facilitative reflection.

### 1.3 The TPD on “Experiential Learning for the 21st Century”

The Teacher Professional Development program on the “Experiential Learning for 21st Century” was conceptualised as an online certificate course for teachers, school heads and principals of Eklavya Model Residential Schools (EMRSs) to help them adapt classroom learning to real-life experiences. The course was a Multi-stakeholder Teacher Professional Development project for EMRS Teachers by the Central Board of Secondary Education (CBSE), Ministry of Tribal Affairs (MoTA) and National Education Society for Tribal Students (NESTS- an autonomous organization established under MoTA) in collaboration with Tata Trusts, Tata Institute of Social Sciences (TISS) and Mahatma Gandhi International School (MGIS).

The course aimed to empower teachers with ideas and strategies that make the learning process more meaningful, add challenges, allow linkages with real life and hone creativity, communication, and collaboration skills among their students. One of the goals of the course was to advance the cause of NEP 2020. NEP 2020 aims to bring change in the curriculum and pedagogy to make learning holistic, integrated, enjoyable, and engaging. Thus, the overall thrust of curriculum and pedagogy

reform, as proposed in NEP 2020, is to move the education system towards fundamental understanding and learning how to learn and away from the culture of rote learning as is present mainly today. The policy document also proposes recommendations to ensure the holistic and well-rounded development of individuals equipped with the 21st century skills.

### 1.4 Organization of the paper

This paper presents the overview of the online course on “Experiential Learning for the 21st Century”, its implementation details, a case study and details of the evaluation research study conducted. The broad theme of this paper is – “Under what circumstances do teachers learn effectively in a TPD program?” The paper presents findings about what features and design aspects of the TPD enable teachers to use the newly learnt pedagogical knowledge in their classrooms. The authors detail how teachers received the pedagogy training through the online course and started implementing the Experiential Learning Pedagogy to initiate a change in their teaching philosophy and practices. The findings presented in the paper offer recommendations for teacher educators to facilitate and enhance teachers’ learning from Teacher Professional Development Programs.

## II. Program Details: “Experiential Learning for the 21st Century”

### 2.1 Experiential Learning Pedagogy

The Experiential Learning Pedagogy (ELP) aims to make children learn through joyful experiences from their surroundings. It is the process whereby knowledge is created through the transformation of experience (Kolb, 1984). It is the strategic, active engagement of students in opportunities to learn through doing and reflecting on those activities which empower them to apply their theoretical knowledge to practical endeavours in a multitude of settings inside and outside



the classroom (Bhatia, 2022). This pedagogy believes that learning is everywhere and occurs in various settings and situations in an interdisciplinary manner.

Experiential Learning (EL) is a joyful and multi-sensorial pedagogy. In an EL-based classroom, students learn by doing and reflecting on their experiences. They experiment, create, reflect, design, critique, collaborate, and communicate during learning. Some of the critical elements of the EL classroom are- real-life context of the child, involvement of multiple senses, use of space (inside /outside), use of the body as a teaching aid, use of varied and easily affordable resources, democratic and active participation of every learner, trans-disciplinarity, interactive and challenging class environment, students creating resources/products/events. As a result of these elements, the ELP classroom inculcates various skills and attitudes among children, such as, analysis, inquiry, research, presentation, problem-solving, process learning, creativity, critical thinking, communication, reflection and collaboration. To summarise, the following features can be considered as hallmark features of Experiential Learning Pedagogy.

- Multi-sensorial learning-by-doing creative, analytical and imaginative activities
- Real-world contextualization
- Collaborative and peer learning environment
- Best use of space, human body and surrounding material as learning resources
- Opportunities for students to reflect on their learning
- Well-designed assessment 'for' and 'of' learning

The NEP 2020 promotes experiential learning within each subject and explorations of relations among different subjects despite introducing more specialized subjects and subject teachers. The ELP implementation, as suggested in the NEP 2020, includes hands-on learning, art-integrated and sports-integrated education, and story-

telling-based pedagogy with explorations of relations among different subjects.

The Experiential Learning Pedagogy was seen as the best fit for EMRSs and tribal children. Despite being first-generation learners, tribal children are full of creativity and inherently learn through their surroundings, through hands-on, physical and living context and real-life experiences. Thus, Experiential Learning Pedagogy was considered the best fit to unleash tribal children's potential and help to prepare them for different spheres of life.

## 2.2 Course Team

The "Experiential Learning for 21st Century" course was a multi-party collaborative endeavour by CBSE, MoTA, Tata Trusts, TISS and MGIS. NESTS was omnipresent at each stage, assuming the role of facilitator, exemplifying smooth coordination among all ten states. A team of experts was drawn from these institutions, who collaborated in developing and implementing the course. While the Tata Trusts anchored and led the course, the faculty from TISS designed the course with research and technical inputs. The pedagogues from MGIS provided practitioner-level contributions in the Webinars and Community of Practice of Educators. Together, Tata Trusts, TISS and MGIS institutions ran the course hosted on the TISSx platform.

## 2.3 Eklavya Model Residential Schools

The Eklavya Model Residential School (EMRS) is a Government of India scheme to establish model residential schools for children of Indian tribal communities (ST, Scheduled Tribes). It is one of the flagship interventions of the Ministry of Tribal Affairs, Government of India. It was introduced in 1997-98 to ensure students get access to quality education in remote tribal areas. Eklavya Model Residential Schools are being developed to impart quality education to tribal students, emphasising academic education and the overall development of

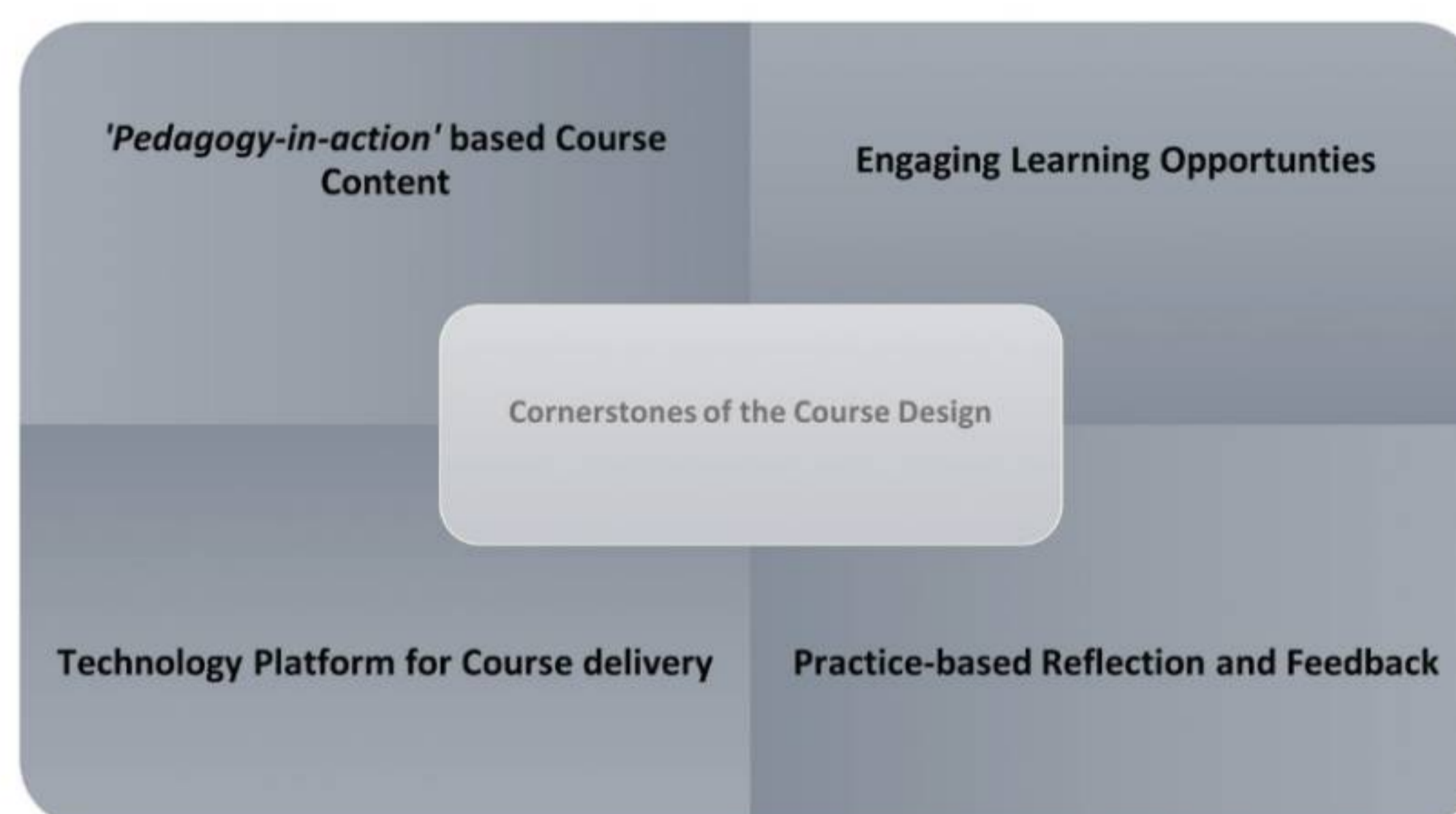
tribal students. The schools cater to students from Class VI to Class XII, having a capacity of 480 students in each school. Currently, there are 401 functional schools across the country. The said course was designed to train EMRS teachers in the philosophy and practices of Experiential Learning Pedagogy.

## 2.4 Course Design, Content and Structure

**Course Design:** The unique feature of the online course design approach was to start EMRS teachers' learning journey by observing videos about what an Experiential Learning classroom looks like; unlike a conventional course that starts with theoretical knowledge about the new pedagogy to be learnt. The pedagogy-in-action videos and course content kindled teachers' eagerness to know

more about ELP and strengthened EMRS teachers' desire to create a joyful learning environment in their classrooms.

While the course design process followed an iterative approach, the Design team covered different facets of teacher training and embedded them thoughtfully in the course design. The course design was built upon four cornerstones (Figure 2): i) Course content showcasing pedagogy-in-action, ii) Active and Collaborative Learning opportunities for EMRS teachers during the course, iii) Technology Integration for seamless course delivery and iv) practice-based reflection and feedback.

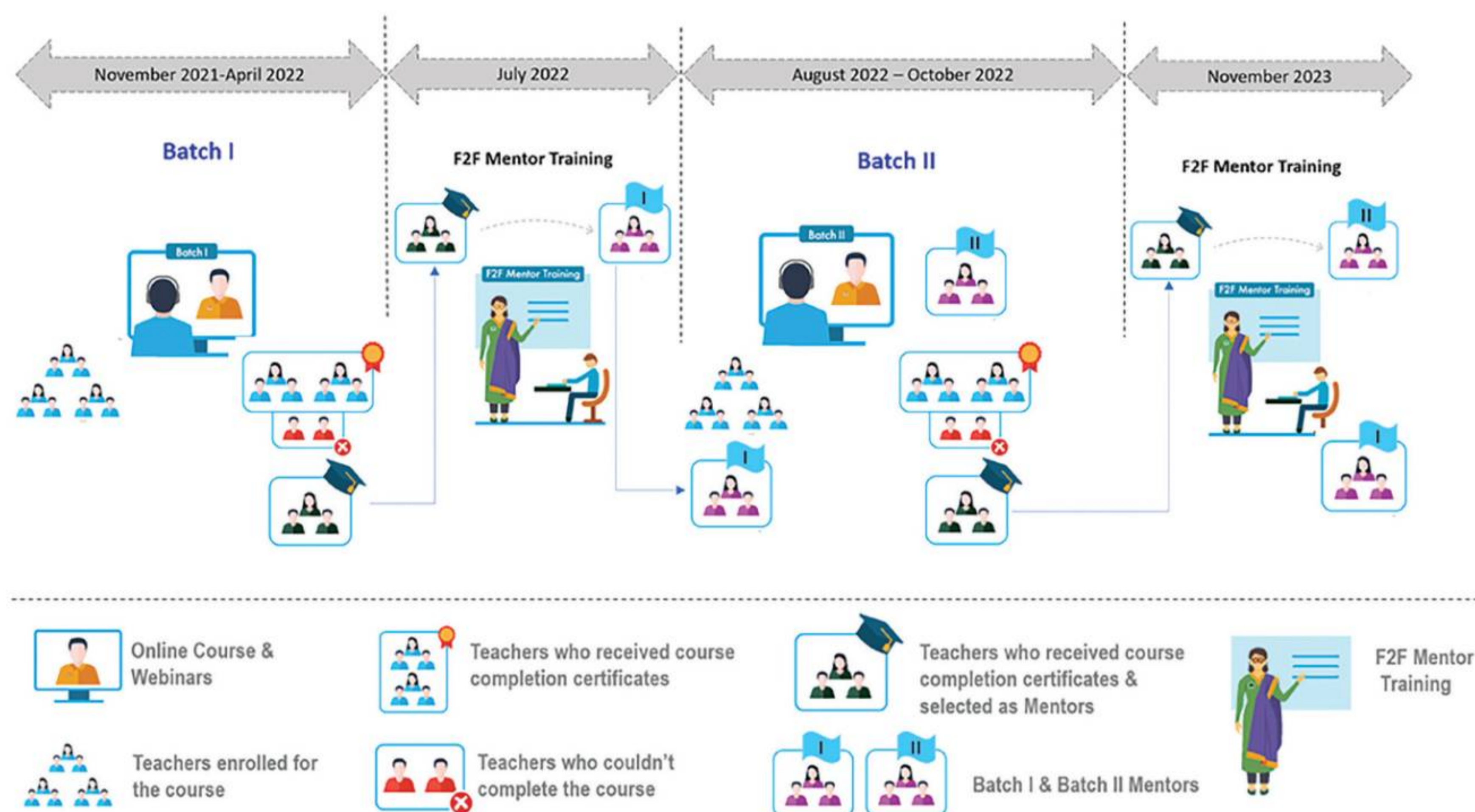


**Course Content:** The online course on “Experiential Learning for the 21st Century” had three units and each of the units had duration of two-three weeks.

- *Unit 1:* What does Experiential Learning look like in the classroom? through real classroom videos, teachers learn to identify nuances of the EL pedagogy in a classroom.
- *Unit 2:* What is Experiential Learning? connects practice to theory. Teachers as Learners explore if their vision and formulated hypotheses about this kind of learning process match with the thinkers' vision.

- *Unit 3:* Why Use Experiential Learning? focuses on assessment and reflection and posits ways one could map learning outcomes and competencies to learning processes.

**Course Structure:** Every unit (comprised of a series of videos, text and reflective questions) release was followed by a webinar focussing on the discussion about the core content of the unit released. The webinars were scheduled to interact with teachers after they had gone through the unit content. This course structure offered the participating teachers an opportunity to solve their doubts about the particular unit during the webinars. The webinars also provided a platform for



the course instructors/ team to discuss in detail the forthcoming assignment of the unit and expected deliverables. Submitting the course assignments was mandatory for the successful completion of the course

## 2.5 Course Modality

The course was offered in a hybrid mode that included asynchronous self-learning on the Platform supported by synchronous webinars over Zoom. While the course content was made available online on the TISSx platform (based on the Open edX Platform), the face-to-face interactive webinars were conducted using Zoom sessions. The participants would first study the online unit, followed by a webinar and assignment. The idea was to encourage teachers to undergo experiential learning activities with a full methodology in practice so that their learning is not just theoretical. Batch-I of the Course (November 2021-April 2022) had 259 teachers, and Batch-II (August 2022 – October 2022) had 240 EMRS teachers covering 10 states all together.

Figure 3 depicts the course modality- the unique approach followed in the course run of identifying high-achiever teachers and

training them in a face-to-face setting to be mentors for the next course run. The teachers exhibiting excellent performance in Batch-I were selected as mentor teachers for further face-to-face training. The course instructors and facilitators conducted this face-to-face training, and the trained mentor teachers were enrolled for the next batch, offering to provide mentorship to 8-10 teachers from the next batch.

## 2.6 Course Evaluation Research Study Details

Tata Trusts conducted a year-long research study to understand the teachers' learnings and the course's overall impact. The study aimed to observe the teachers' learning trajectories and to develop an insight into the design and implementation of the online course, enabling factors for the growth and usage/application of teachers' content pedagogical knowledge and challenges experienced during its adoption and dissemination of these learnings with the education sector per se. To the best of our knowledge, it is one of the fewest research studies in the Indian context that attempts

to understand how teachers learn in an online professional development course.

As part of the research study, using a mixed research method approach, data was collected through interviews with stakeholders, survey forms, focus group discussions, class observations, school visits, reflection reports and lesson plan qualitative evaluation. The data include 68 interviews with teachers, seven interviews with the course team, five reflection reports from the course team, two focus group discussions, four class observations and school visits and hundreds of survey forms. The teachers for semi-structured interviews were selected using purposive sampling. For the sample to be representative of the population, the sampling criteria considered were: subjects taught, gender, and state-wise distribution. The collected data were critically analysed to evaluate various aspects of the course offering and learning experiences of participating teachers.

**Semi-structured Interviews:** The study emphasised qualitative data to get insights into course running, course delivery, teachers' learning, and mentor teachers' experiences from the course and overall course organisational aspects. The interviewees included teachers, course designers, course organizers and other stakeholders. The Research Team briefed all the interviewees about the interview procedure and its objective. The interviewees gave their consent by filling up the consent forms to record their interviews and use the data for research. Interviews were conducted virtually using the Zoom platform. Additionally, some interviews and group interactions were video recorded during the school visits. The average interview duration for teachers was 00:28:42. All the interviews were transcribed for qualitative analysis. The interview data were transcribed, and a hybrid method was adopted (Deductive + Inductive) for developing open codes. As the subsequent step of thematic analysis, broader code categories were created. The

open codes were categorised based on Guskey's Evaluation Framework (Table 1).

**Survey Data:** Additionally, data was collected from the pre-course survey, post-course survey, grade report generated from the TISSx platform, and lesson plan feedback given by the MGIS course team. The pre-course survey collected data regarding participating teachers' profiles and their expectations from the course. The post-course survey collected data related to various aspects of the course, such as, webinar learning and technology experience, course learning experience about the use of technology/ platform, content and content delivery, course content organisation, and perception about the usefulness of experiential learning. The form also had open-ended questions about key takeaways, improvement areas, and further training needs.

**Focus Group Discussion (FGD):** The primary objective of the Focus Group Discussion was to understand how teachers further intend to use Experiential Learning pedagogy in their schools and what challenges they perceive while adopting Experiential Learning pedagogy. The FGD set-up aimed at making mentor-teachers discuss among themselves the Focus question - "How can you make your school a Model Experiential Learning School?" The rationale behind this focus question was to offer a think-aloud platform for teachers to express their thoughts, ideas, and problems about adopting EL pedagogy in their classrooms.

**Class Observations:** The Research Team observed the EL pedagogy classes conducted by mentor teachers. The objective of the class observation was to collect data about the extent to which the course training could enable mentor teachers to apply EL pedagogy in class. The observations were made based on the following parameters— Use of Space, Group Dynamics, Resources Used, Pedagogy, Type of Activity, Nature of interaction between teacher and students, and Response of students.

### Feedback on the Lesson Plans:

As a part of the course assignment, all participants were asked to submit a lesson plan for teaching a topic in their classrooms using experiential learning. The lesson plans submitted by teachers were reviewed by MGIS faculty. They gave feedback on every lesson plan, and based on the quality of the lesson plan, the lesson plans were graded as Beginner, Intermediate and Advanced levels. The researcher reviewed the feedback given by MGIS faculty to analyse the differentiating factors in the quality of lesson plans falling into the three categories mentioned above. The criteria for assessing the differentiating factors were: Understanding the essence of EL, Suitability of the topic to EL pedagogy, Aptness of Activities, Interdisciplinarity/competencies across subjects, Assessment, and Lesson plan elements.

**Theoretical Framework used for the Evaluation Study:** Teacher Professional Development programs are systematic efforts to change teachers' classroom practices, their attitudes and beliefs, and the learning outcomes of students (Guskey, 2002). While the professional development programs for teachers may vary widely in their content and format, most share a common purpose to

alter teachers' professional practices, beliefs, and understanding. What change teachers can bring into their classroom practices and, thus, influence students' learning outcomes is a critical aspect of assessing the efficacy of teacher professional development programs.

This evaluation study used Guskey's Five Critical Levels of Professional Development Evaluation framework to assess the program's efficacy on various parameters (Guskey, 2016). Guskey's evaluation framework has five evaluation levels:

- Participants' reactions
- Participants' Learning
- Organization support and change
- Participants' use of new knowledge or skills
- Student Learning Outcomes

Table 1 summarises the evaluation levels, what is assessed in the level and how the data collected for evaluation is used. This evaluation study focussed on the first four levels of evaluation. Considering the limited duration of the study and the online setting of the course, assessing students' learning outcome attainment was not possible in the current scope of the evaluation research study.

**Table 1: Guskey's evaluation level framework**

Evaluation Level	What is measured or assessed?	How will information be used?
1. Participants' Reactions	Initial satisfaction with experience	- To improve program delivery and design
2. Participants' Learning	New knowledge and/or skills of participants	- To improve program content, format, and organisation
3. Organisation support and change	The organisation's advocacy, support, accommodations, facilitation and recognition	- To document and improve organisational support - To improve future change efforts
4. Participants' use of new knowledge or skills	Degree and quality of Information	- To document and improve the implementation of program content
5. Student Learning Outcomes	Student learning outcomes: (Cognitive, Affective and Psychomotor)	- To focus and improve all aspects of program design, implementation, and follow-up - To demonstrate the overall impact of professional development



### III. Teachers' use of Experiential Learning Pedagogy (ELP)

The research questions for the evaluation study focussed on reflecting on the design and implementation aspects of the course and understanding participants' learning experiences. Another critical objective of the evaluation study was to assess participants' learning from the course and preparedness to apply the course content to their teaching practices.

#### 3.1 Teacher's Understanding and the Use of 'Experiential Learning Pedagogy (ELP)':

To understand how much teachers could grasp about the ELP during the course and their level of preparedness to apply the ELP in their classrooms, first, it was necessary to know from teachers what ELP meant to them.

**What ELP meant for the teachers? —** While describing what ELP was, teachers used various phrases to express the features they captured of ELP through the course material and videos. Some of the ways used by teachers to describe ELP were, "learning by doing, real-world examples, activities to transform the learning process, involving students, students learning themselves, students being active and attentive, learning through activity (and not just through theory), teacher taking up a role of mentor (and students involved in learning), Group discussion with students, Taking students outside the classroom, Roleplay, activities, Joyful teaching-learning, Integrated lesson plan, Collaboration with other subjects".

The above description of ELP by teachers suggested that teachers could understand that ELP was different from the traditional classroom teaching they usually do. It also highlighted how teachers captured the essence of ELP by recognizing the need to move from the teacher-led classroom to the student-led/involved activities.

**How did the teachers adopt ELP? —** The course team designed an assignment for

teachers to give them the opportunity to use the ELP in their classroom teaching. This affordance was created in steps. At the end of Unit 2 of the course, teachers were asked to design and submit a lesson plan based on ELP. Teachers were asked to give the following details in the lesson plan they submitted.

- Grade level(s) teacher will teach
- Number of Students that the teacher would facilitate
- Total Duration of Activity, e.g., two lectures / 2 weeks - every day 2 weeks - every alternate day
- What does the teacher plan to do, i.e., the chronology of the learning process for the students?
- What materials/resources/support would the teachers need?
- Would the teacher conduct this by themselves or with other teachers?
- Interdisciplinarity of the lesson plan: What subjects would the teacher connect?
- What learning outcomes and competencies would be covered in the plan (can be both subject-specific and holistic learning outcomes)?
- How would the teacher measure/observe the learning outcomes?

Additionally, teachers were given a rubric and were asked to peer-review the lesson plans created by other teachers. Further, the teachers were asked to implement at least one activity from the lesson plan submitted and were asked to record their observations and reflections on implementing the activity using the rubric provided. The rubric and reflection covered various aspects, such as, the role of a teacher, resources used in the activity, nature of interaction with students, inclusive practices followed by teachers while implementing the activity, class organization, peer interaction among students, participation of students, use and organization of the learning space, students' learning and assessment of the learning.

It was interesting to note how teachers used ELP to teach/ plan to teach a particular topic from their subjects. Here are some examples (Table 2).



**Table 2: Some topics for ELP Lesson Plans**

Science/ Mathematics	Languages	Social Science	Computer Technology
<ul style="list-style-type: none"> <li>• Teaching parts of flower/ plants</li> <li>• Math- circle- triangles</li> <li>• Godavari River</li> <li>• Respiratory system</li> <li>• Solar system</li> <li>• Probability with coins and dice</li> <li>• Visit to animal husbandry</li> <li>• Coordinate Geometry</li> </ul>	<ul style="list-style-type: none"> <li>• A chapter on Nelson Mandela</li> <li>• A lesson on Sathi Haath Badhana</li> </ul>	<ul style="list-style-type: none"> <li>• Soil</li> <li>• Gram Sabha</li> <li>• Types of rocks</li> <li>• Dynasty</li> <li>• Election and its manifesto</li> </ul>	<ul style="list-style-type: none"> <li>• What is a software?</li> </ul>

### 3.2 Evidence and Key Observations regarding teachers' progress while adopting the ELP

It was evident from the lesson plans submitted that the course training initiated a change in teachers' practices. The majority of the teachers thought innovatively and collaboratively to select the topic suitable for implementing ELP and designing appropriate activities to create engaging learning experiences for students.

Teachers embraced the principles of EL to create learning experiences that actively engage students in hands-on activities, real-world problem-solving, and critical thinking. They could understand the crucial need for students to stay involved with the content and used their learning to design engaging activities. The teachers created opportunities for students to explore, experiment, and reflect on their experiences, allowing for a deeper understanding of the subject. For example, asking students to observe and create a list of plants in their surroundings to understand a topic related to biodiversity, making students create a deck of cards to use as a resource to engage them in the topic of probability, asking students to draw the course of Godavari River with rangoli. Following points summarize the broader strategies that teachers adopted to use ELP.

#### 1. Incorporating real-world contexts:

EL emphasises the connection between classroom learning and real-world

contexts. Teachers brought in real-world examples, scenarios, and case studies to make the learning more relevant and meaningful for students. This helped students see the practical applications of their learning and enhanced their motivation and interest.

A visit to animal husbandry, linking the trajectory of football on the ground with the learning of hyperbola, using the context of the use of candles during load shading from a Hindi Language lesson to introduce combustible and non-combustible materials have been some examples that showed how the teachers tried connecting the real-world context with classroom learning.

#### 2. Facilitating active and collaborative learning:

EL encourages active participation and collaboration among students. Teachers facilitated group work, discussions, and projects that promoted peer interaction, teamwork, and communication skills. They created a supportive learning environment where students could learn from each other's experiences and perspectives.

The lesson plans designed to teach a topic of mensuration by creating models of 3-d objects in a group or by asking students to conduct the morning assembly in the school collaboratively to imbibe the lesson on 'Sathi hath badhana' demonstrated how teachers made students collaborate to enhance

their learning process. Figures 4 and 5 show photographs of some of the activities



Figure 4-A Students perform the starter activity outside the classroom

that students did in collaboration while learning the topic of mensuration.



Figure 4-B Students make a 3-D model using clay

### 3. Providing opportunities for reflection:

Reflection is a crucial component of EL. Teachers created structured opportunities for students to reflect on their experiences, analyse their learning process, and connect to prior knowledge. They encouraged students to think critically about their experiences, identify challenges, and develop strategies for improvement.

E.g., while teaching a topic from political science, the teacher made students experience the process of conducting the election, which further made students think and reflect on fair and unfair means of conducting elections. The following section of this paper presents the details of this lesson plan as the case study.

### 4. Assessing learning through multiple methods:

EL recognises the importance of assessing learning through various

methods beyond traditional tests and exams. Some teachers have tried adopting different assessment strategies, such as presentations, group discussions, and essay writing.

Overall, by embracing ELP, teachers could create immersive learning experiences for students to promote their active engagement, critical thinking, and the application of knowledge in real-world contexts. The way teachers implemented ELP-based lesson plans; was representative of the change the course training initiated on teachers' belief systems. The submitted lesson plans reflected teachers' perception of the need to move beyond traditional teaching practices and the readiness to accept change in their belief systems. Further, teachers' thought processes while implementing Experiential Learning Pedagogy resonated with the hallmark features of ELP, as discussed in

Section 2.1 of this paper. The interactions with teachers revealed that they could progress satisfactorily in their EL learning journey with a focus on what EL was and how to design ELP-based lesson plans. However, the Course team realised that teachers needed more guidance and handholding to explore more comprehensive and diverse ways of assessing students' learning.

Also, it was observed that designing ELP-based lesson plans was comparatively easier for math and science teachers. The language and allied teachers struggled to create ELP-based lesson plans. As presented in Table 2, most of the lesson plans submitted were related to Science and Math. Teachers also faced challenges and were overwhelmed while mapping the new pedagogy to the curriculum, collaborating with other teachers to design an integrated lesson plan across subjects and fulfilling additional time requirements for an ELP-based class.

#### IV. Case Study

Here is a case study culled from the interactions with one of the teachers. After completing the course, along with other EMRS teachers, and incorporating it into his classroom teaching methods, Gajanan was selected as a mentor for the course. After completing his certification and face-to-face training, he mentored around ten teachers from the second batch.

What is the best way to engage Class students in a lesson on political science? Make them simulate a real-life election, complete with students and staff acting as party leaders, party functionaries, polling officials, and as ordinary citizens voting in the whole democratic process.

Earlier, during the normal course of classroom teaching, Gajanan Dhangar (a teacher at Eklavya Model Residential School (EMRS), Khairi Parsoda, Ramtek, Nagpur, Maharashtra) would have delivered a lecture on Political Science to his students, followed by a discussion on the key concepts, and students taking down notes on the same. But attending a training course on

experiential learning in December 2021 exposed Gajanan to a different and perhaps more effective approach to teaching, which incorporates the Nai-Taleem! philosophy.

“Using key takeaways from the course, I asked students to conduct a real election during which process, a voting list, election manifesto, ballot paper, party symbol, and agenda were discussed with the students. Senior teachers were requested to act as members of the Election Commission of India,” said Gajanan.

“One student became a leader, and others were followers... I asked some students to act as representatives in a polling booth, and students voted as per the attendance register, following which we dotted their fingers using permanent markers. We created an election scenario and then asked questions based on the subject matter.” adds Gajanan.

This case study has been a brilliant example of how the teacher designed engaging learning experiences and activities for his students, connected the curriculum with real-world contexts and facilitated active and collaborative learning to make learning joyful, engaging and effective

#### V. Demystifying what makes teachers learn effectively in a TPD program

Designers of the Teacher Professional Development programs incorporate various design features to support and enhance teachers' use of newly learnt pedagogical knowledge. Such design features are aimed explicitly at helping teachers effectively integrate new knowledge into their teaching practices. The year-long research study helped identify the factors that influenced teachers' learning from TPD. These factors looked at the TPD design process holistically, not just a single-course offering event.

Here are the features that facilitated and enhanced teachers' learning in the TPD program.

**1. Aligning training content with teachers' teaching needs:** It is well-

documented in the literature that teachers look for learning new teaching practices that directly help them improve their students' learning. Teachers get involved and invest in those training ideas that solve their day-to-day classroom problems. For a dedicated teacher, a TPD is much more than a 'course-completion certificate' collection mechanism.

In the Experiential Learning Course for EMRS teachers, the course design and content were designed to make the learning experience relevant and contextualized for EMRS teachers. The course acknowledged participants' diverse backgrounds, needs, and teaching contexts and tailored the content and strategies to meet their specific requirements.

The EL pedagogy was the best fit for EMRS teachers and students. Teachers could develop buy-in in the training content as they felt that:

- EL pedagogy could help them make their students more engaged in the classrooms.
- EL pedagogy could help them connect the remote environment of tribal living with the school curriculum.
- EL pedagogy would help them reorient their students in school environments when they return to school after a long gap due to the COVID pandemic.

Thus, aligning TPD program content with teachers' teaching needs increased the likelihood of successful implementation, adaptation and sustenance of the new pedagogy knowledge in the school environment.

### **2. Review and regular feedback to teachers on their learning journey:**

The timely review of teachers' work, lesson plans and assignments by the course instructors and pedagogy experts was at the heart of the learning process for teachers. The 'practice with feedback' often makes teachers' better grasp the new pedagogy's core elements.

The course team did a thorough examination of the teachers' work. This

course design had built-in opportunities to think, practice, receive feedback, make changes, and discuss with their peers. This peer and expert review process offered numerous learning opportunities to teachers to master the training content and help address their misconceptions about the new pedagogy. The course design extensively used 'formative assessment' compared to 'summative assessment' to make an 'assessment for learning' rather than an 'assessment of learning'.

### **3. Rapport with the Course Team:**

Large-scale TPD often prefers a blended online and face-to-face training model. Irrespective of the model format, what really pushes teachers to scale new heights in training is how well the course team can build rapport with them and the ease of access for teachers with the course team.

Building rapport was the key to leveraging the potential of collaborative learning and team building. The course orchestration used technology platforms like WhatsApp and Telegram to make this rapport-building super easy and effective and to stay connected with the course instructors and peers. TPD programs recognize that sustainable change takes time and requires continuous support. Thus, the course team made all the possible efforts to maintain rapport with the promising teachers, even beyond the course duration, to reinforce and deepen the understanding of new knowledge.

**4. Multiple modes of delivery:** TPD programs generally use apt technology and formats for content delivery. The Course team used a variety of delivery modes to accommodate all the participating teachers. The delivery modes included online content on the TiSSX platform, F2F webinars and training, doubt-solving webinars, and discussion groups on WhatsApp/ Telegram.

Multiple delivery modes ensured that teachers could access and engage with the new knowledge in ways that suited their learning preferences and availability.



They were always provided with the support to advance their learning and adaptation to the new pedagogy.

**5. Immersive and Active learning pedagogy of the Course:** Any TPD program designed for particular pedagogy training can become effective when the pedagogy of the TPD itself is aligned with the pedagogy in which teachers are getting trained.

The TPD program design promoted activities that gave teachers an immersive experience of what it meant to be a student in the ELP-based classroom. The F2F webinars and other interactions were designed so that teachers could self-experience the ELP pedagogy before implementing it for their students. Instead of passively listening to the course videos or reading the course reference material, teachers engaged in activities that allowed them to experience and apply the new knowledge directly. This active learning approach helped teachers internalize and better understand the concepts and strategies they were learning.

**6. Collaborative learning communities:**

TPD programs are expected to foster collaborative learning communities where teachers could interact, share experiences, and learn from each other.

The collaborative learning platform and nudges provided during the course helped teachers overcome their boundaries across schools, regions, districts, states and languages. By engaging in discussions, collaborative assignments, peer feedback, and discussion with mentors, teachers could collectively make sense of new knowledge and explore its implications for their classrooms.

In the design phase of the course, the course design was initiated around the four cornerstones, as mentioned in Section 2.4 of this paper. These four cornerstones represent the generic framework followed for TPD design. However, the research study helped the course team identify deeper, micro-level factors that helped teachers learn better during the course. Although

the six features mentioned above are related to the four overarching cornerstones that initiated the course design process, looking for the finer nuances and contextualisation of these factors has been crucial for improving teachers' learning from the course. In a nutshell, the strategy adopted in this year-long TPD intervention comprising of 'contextualization of design features', 'continuous research and evaluation', and 'iterative course-design approach' could help the course team develop insight about the teachers' learning process and their learning trajectory.

## VI. Conclusion

The Multi-stakeholder Teacher Professional Development initiative to train Eklavya Model Residential School teachers to adopt the Experiential Learning Pedagogy in EMRSs has been a unique experience. Experiential learning pedagogy has all the more significance for EMRSs and tribal children. Despite being first-generation learners, tribal children are full of creativity and inherently learn through their surroundings, context and real-life experiences. The Teacher Professional Development initiative on Experiential Learning Pedagogy has been a step forward in unleashing tribal children's potential and harnesses their 21st century skills.

This paper has put forward recommendations to improve the efficacy of a TPD programs. Apart from the design features embedded in the course, the sustained and systematic professional development approach that unfolded as processes rather than one-time training events helped teachers learn effectively. While any TPD design process focuses on course content, course pedagogy, course-delivery technology and course assessment; TPD success lies in teachers adapting the TPD learnings in their regular teaching practices. The most significant learning from this evaluation research has been the need to contextualize the broader design features for teachers, students, and curriculum and school

environment to help teachers implement, adapt and sustain the pedagogical reforms in their schools.

## Acknowledgements

We are grateful to Asit Gopal, Commissioner, and Indira Mudgal, Deputy Commissioner, at National Education Society for Tribal Students (NESTS), an autonomous body under the Ministry of Tribal Affairs, for their continuous support in the implementation of the Experiential Learning Course for their teachers. Back in 2019, Tata Trusts in collaboration with Anusha Ramanathan from Tata Institute of Social Sciences (TISS), Mumbai and Anju Chazot and Pascal Chazot from Mahatma Gandhi International School

(MGIS), Ahmedabad, developed a superior interactive online course. A shorter (4-6 hours) introductory course runs on the DIKSHA application is accessible to teachers across India and an advanced hybrid two-month long cohort-based certificate course is developed for the teachers under the Ministry of Tribal Affairs. We also extend our sincere gratitude to Anita Karwal, former Secretary, Ministry of Education, India who entrusted Tata Trusts with this responsibility. Special mention to Amrita Patwardhan, Head-Education, Tata Trusts, Biswajit Saha, Director, Central Board of Secondary Education (CBSE), Bindu Thirumalai and Ruchi from TISS and Ashu Kapoor from NESTS for their valuable support since inception.

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