

CHAPTER 11

Integrated and Interactive Lesson Plan

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INTRODUCTION

Lesson planning is an essential component of effective content delivery. Effective lesson planning is needed in order to make the lesson delivery more concise and structured. It helps the teacher to specifically list down the content to be covered along with the activities that are to be carried out by her during the lesson delivery. Lesson Plan can also be called as a step-by-step guide for effective lesson delivery. The traditional lesson plan model consists of a sequence of 4 steps i.e., a) Specify Objectives, B) Select Learning activities, c) Organise Learning Activities, d) Identify Evaluation Procedure. The traditional format of lesson planning was cumbersome and detrimental in the willingness and effectiveness of teacher's lesson planning. The skill of creating a lesson plan involves the creative and critical skills of the teacher. Each lesson which is planned is very different. In fact, the lesson planned by two different teachers for the same class and for same sets of students is also different.

Based on the recent developments in the field of education, the need was felt to revamp the traditional format of the lesson plan and propose an "Integrated and Interactive Lesson Plan" which is based on Presentation, Controlled Practice, and Free Practice (3Ps) approach and emphasizes the integration of innovative pedagogies and ICT into the lesson plan. The Integrated and Interactive Lesson Plan follows the learner centred way and builds on the foundational concept of Multiple Intelligence Theory, inculcate analytical, critical, and creative learning for the students.

The present chapter deals with the pedagogical tool viz. "**Integrated and Interactive Lesson Plan**" (IILP), which was conceived with an objective of enhancing critical, creative and analytical skills of the Pre-service and In-service teachers owing to the ongoing fourth industrial revolution. This tool promotes

constructivist approach to learning, provides a stage for the pre-service and in-service teachers to design different classroom experiences for students and above all shift the focus from regular teaching to student-centred teaching.

THEORETICAL BACKGROUND

With the altering requirements of classrooms arises a need for the change in lesson plans. The landscape of education has changed drastically. Consequently, it is imperative to move past the traditional practices and devise unique methodologies for edification.

Hence Integrated and Interactive Lesson Plan was formulated to give flexibility to the teacher to experiment with the content being delivered and engage the learners keeping 3Ps approach at the centre. The 3 P's approach in integrated and interactive lesson plan has been adapted from the 3 P approach of language Learning. The 3 Ps's approach of language learning are Presentation, Practice and Production.

Presentation stage: the content to be taught to the students are presented to the students to know their entry level of the content. This is done using various strategies like eliciting and cueing. This stage is dominated by high teacher talk time which may be as high as 65- 90% and consumes about 20-40% of the lesson time.

Practice stage: At this stage the activities are framed for the students so as to make the students practice the concept being taught. It focusses on high student talk time and less of written activities. The student talk time ranges from 60-80%. It takes about 30-50% of the lesson time.

Production stage: At this stage the students demonstrate the content acquired by performing some tasks. The student talk time at this stage is 90% and this stage takes about 20-30% of the lesson time.

The adoption of 3P approach from language learning to lesson plan was done in order to cater to 21st century skills and provide opportunities to the students to become independent and reflective learners who gain meaningful learning experiences through engaging activities designed for them.

This change in the format of the lesson plan was much needed keeping in mind the transformations happening in the field of education.

LITERATURE REVIEW

In order to prepare the students for the 21st century, it remains substantial to train in-service and pre-service teachers with respect to how they plan their lessons. Sias, (2017) in her study titled, "The Best Laid Plans: Educational Innovation in Elementary Teacher Generated Integrated STEM Lesson Plans" re-

ported that project based, and student centred learning should be a part of the lesson plan. In another study titled, “Finding the Balance between Process and Product through Perceptual Lesson Planning” conducted by Uhrmacher, Conrad & Moroye, (2013) concluded that the lesson plan should be such which helps in engaging the teachers and students. It should develop the creative side of the learner and make their learning journey joyful and meaningful. The environment that is created by the teacher in the class should have element of surprise and innovation and lesson planning should be given due attention while training pre-service and in-service teachers. Furthermore, the research on “Development of Lesson Plans by the Lesson Study Approach for the 6th Grade Students in Social Study Subject based on Open Approach Innovation” deals with the need of creating improved lesson plans for gaining optimal efficiency vis-à-vis teaching. Another study which was conducted by Panasuk, Regina, Stone, Walter, Todd & Jeffrey, (2002) titled, “Lesson Planning Strategy for Effective Mathematics Teaching” established the significance of planning meaningful experiences for the students to ensure successful teaching. Well planned lesson plans help in making better connections between various concepts and also play a major role in the way information is presented to the students and how the new knowledge is created by them, thus honing their critical, creative and analytical skills.

The works of Wiyanarti & Holilah (2020) titled, “The Innovation of Online-Based Social Studies Lesson Plan Models to Face the Industrial Revolution 4.0” brought about the online-based social studies lesson plan model as a part of the innovations in learning keeping in mind the industrial revolution 4.0. Through this lesson plan, they focussed on the needs of the future learning systems. Zhu, Chen, Du & Li, (2015) in their study titled, “Research on Model of Collaborative Lesson Planning for Primary Teachers Based on Online Environment” asserted that collaborative lesson planning can help widen the horizon of teachers’ ideas and can aid in improving teaching by combining technology and resources.

From the studies quoted above the need was felt to design and develop a lesson plan which caters to all the essentials listed above related to a lesson plan. A lesson plan which focusses on student centred learning, engages the students and teachers, caters to the future learning system, is innovative and helps to foster analytical, critical, and creative side of the students. Thus, Chitkara College of Education developed a lesson plan which caters to the needs of Industry 4.0 and needs of the 21st century skills.

EXPLANATION OF THE TOOL

The IILP is broadly divided into 3 stages viz. Presentation, Controlled Practice and Free Practice, based on the 3 Ps approach, which is a soft approach to Communicative Language Teaching.

Each stage represents a stage of learning process and thus accordingly activities and aids are planned by the teacher. The first stage which is the Presentation Stage entails explanation of the topic by the teacher. The Controlled Practice stage is the stage for the teachers to allow students to practice new content / topic in a controlled environment. The Free Practice is the stage which gives the opportunity to the pre-service / in-service teachers to plan activities which enable students to freely practice the content taught.

A. Aims of the Tool

- To facilitate educators to help students think analytically, critically and creatively;
- To enable teachers to tap into the background knowledge of pupils and build new skills;
- To empower teachers to create a conducive environment which gives everyone a chance of interacting and asking questions.

B. Expected Outcomes

The teacher will be able to

- expand his/her horizon and that of his/her students;
- anchor learning in relevant and real-life ways;
- design suitable learning activities and devise strategies to assess and obtain feedback on student learning;
- inculcate critical thinking, creativity, and multifarious skills in his/her students.

The learner will be able to

- work effectively with his/her peers;
- joyfully learn through various activities;
- enhance his/her critical thinking, creativity, and various other skills.

C. Role of Teachers

The effective execution of IILP requires teachers to divide delivery of lesson in three stages. In the first stage which is Presentation stage, the teacher speaks up to 75% of the time, as they are presenting information and asks “concept check” questions to see if students have understood. The second stage i.e., Controlled Practice, requires teacher to use activities and group work to practice the concept. The teacher facilitates the activities of the class and corrects students when mistakes occur. In the last stage viz. Free

Practice, the teacher monitors but does not correct until the end. The focus in this stage is on fluency and rather than accuracy.

D. Role of Students

The role of the students also varies as per each stage. In the first stage which is Presentation stage, the student is predominantly the listener. The role of the student at Controlled Practice stage is being an active participant of the activities planned by the teacher. The Third stage, which is the Free Practice stage demands students to speak up to 90% of the time and describe/use the content taught in a natural, everyday context, with minimal input from the teacher.

E. Steps to use the Tool

The instructor should follow the steps mentioned hereunder to ensure appropriate usage of the pedagogical tool:

1) Selection of the Pedagogy and Tools/Aids Required (Stage-wise):

Based on each stage, the Pre-service and In-service teacher is required to carefully formulate activities and use teaching aids. Since the first stage, which is called Presentation, forms the base of lesson reception, the teacher should clearly list out Medium of Instruction based on linguistic diversity of the class and catering to Multilingualism as proposed by NEP 2020, Instructional Aid to be used based on the type of content being catered to, Instructional Objectives catering to all the three domains of learning i.e. Cognitive, Affective and Psychomotor, Entry Behaviour - decided on the basis of the resources available, Pedagogy / Andragogy, Model of Teaching, Techniques of Teaching, ICT in Teaching, Activities to be Conducted in Class Catering to Different Types of Intelligence, Digital Media to be used. All the decisions related to this stage is based on the diversity of the students of the class, the demographic diversity, individual differences, and the entry level of the students. The learning theories selected by the pre-service teacher and in-service teacher depends on the difficulty level of the content and also depends on the learning outcomes to be achieved by the pre-service and in-Service Teacher. If the learning outcomes to be achieved belong to lower order thinking skills, then Pre-service and in-service teacher can use Behaviorism learning Theory which focuses on remembering and understanding levels of Bloom's Taxonomy. If the learning outcomes to be achieved belong to higher order thinking skills, then then pre-service and in-service teachers can use Cognitive or Constructivism Learning theory.

The second stage, the Controlled Practice stage, is very closely associated with the Theories of Learning i.e., the activities which are conducted

for the learners focus on the different type of learning theory i.e. Behaviourism Learning Theory, Cognitive Learning Theory and Constructivism Learning Theory. In this stage, the activities are designed by the pre-service and in-service teachers to give practice to the students under the close supervision of the pre-service and in-service teachers. The activities are designed in such a manner that it ensures 60-80% of the student talk time through activities like cooperative learning, collaborative learning etc. Pre-service and In-service teachers ensures that Learning Spaces are used innovatively to enhance the teaching and learning experience of the learners.

For the third stage of the lesson plan, which is about free practice and focus is on enhancing the student talk time to 90%, the students are provided with free hand to come up with creative things by freely practicing the content taught. The teacher is required to make a suggestive list of free practice tasks for their perusal.

- 2) **Deciding the Assessment Type:** The second step for using the tool involves deciding the Assessment type like Peer Assessment, Formal Assessment, Assessment through Activity, Written/Oral Assessment etc. to ensure that the topic has been properly comprehended by the child.
- 3) **Listing the Method of Feedback:** Since feedback plays a major role in ensuring effective teaching, it is imperative for the pre-service and in-service teacher to decide the type of Feedback, he/she will be giving to the students towards the end of the lesson delivery. The feedbacks can range from Peer-feedback, Self-feedback, Just-in-time feedback etc. depending on the requirements of the topic.

F. Assessment


Assessment involves measuring and profiling of various aspects of learning. Owing to be more inclusive than gauging and measurement, assessment enables in chalking the fortes and weak points of a student (Kapoor & Natarajan, 2014). As the current tool intends to polish various skills of the pre-service, in-service teachers and students, it stresses on effective planning of content to result in its exceptional delivery. It is the formal demonstration of the topic by the pre-service, in-service teachers for making sure that learner comprehends and is able to recollect during the examination (Sood & Dutt, 2017).

In light of the foregoing, “Interactive and Integrated Lesson Plan” enables pre-service and in-service teachers to create a road map of what students need to learn and how it will be done effectively during the class time. The assessment of the tool involves Students’ Assessment and Teachers’ Assessment.

Teachers' Assessment

The assessment of pre-service and in-service teachers IILP is done on the basis of the pre-designed rubrics. The Assessment is done using a Mixed Method Approach. The pre-service teacher / in-service teacher is expected to prepare a lesson plan as per the format of the Integrated and Interactive Lesson Plan and then is expected to deliver the same in front of the peer group and an experienced teacher/coordinator. The experienced teacher/coordinator and peer group both provide feedback at the end of the lesson delivery.

Table 1:
Rubrics for the assessment of integrated and interactive lesson plan

					
RUBRICS FOR THE ASSESMENT OF INTERGRATED AND INTERACTIVE LESSON PLAN					
	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
Marks Alloted	1	2	3	4	5
The lesson was developed keeping in mind the multilingual approach					
The Lesson plan followed 3 Ps Approach					
The appropriate teaching aids were used in the lesson plan					
The instructional objectives were framed catering to all three domains of Learning i.e. Cognitive, Conative and Affective					
Entry Behavior was catered to while framing lesson plan					
Due weightage was given to the pedagogy being used in the lesson plan					
Appropriate use of ICT was made in the lesson plan					
Activities catering to different types of Intelligence were framed in the lesson plan					
Lesson plan focused on the activities that were framed keeping in mind the Constructivist Learning Theory					
Lesson plan focused on the activities that were framed keeping in mind the Cognitive Learning Theory					


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Lesson plan focused on making use of infrastructure while content delivery					
Non-verbal communication was given due weightage in the lesson plan					
Due weightage was given to the types of Reinforcement in the class					
Lesson plan focused on providing opportunities to the learners for free practice					
The Integrated and Interactive lesson plan was able to develop the Critical thinking skills among the Pre-service/In-service teachers					
The Integrated and Interactive lesson plan was able to develop the Creative thinking skills among the Pre-service/In-service teachers					
The Integrated and Interactive lesson plan was able to develop the Analytical thinking skills among the Pre-service/In-service teachers					

Table 1 - Sample Rubrics for the Assessment of Integrated and Interactive Lesson Plan
 Source: Chitkara College of Education, Chitkara University, Punjab.

Detailed Quantitative Assessment of Lesson Delivery based on Integrated and Interactive Lesson Plan					
Rubrics	1	2	3	4	5
Description	Below Average (BA)	Average (A)	Good (G)	Very Good (VG)	Excellent (E)

LESSON DELIVERY	Teaching Sub.
	Social Studies
Topic Introduced	3
Smile & Expression	4
Pre-Knowledge Testing	4
Presentation Skills	4
Confidence	4
Methodology	4
Creativity	4
Innovativeness	4
Speech Clarity	3
Communication Skills	4
Blackboard Writing	N/A
Writing Skills	4
Motivation to Students	4
Teacher Talk Time (TTT)	4
Student Talk Time (STT)	4
Error Correction	4
Reinforcement	4
Repetition	5
Level of Interest	4
Questioning	4
Ability to Answer Questions	4
Level of Teaching Aids Prepared	5
Level of Teaching Aids Presented	4
Post-Knowledge Segment	5
Terminal Behaviour	4
Class Control	4

Eliciting	4
Feeding	4
Peer Work	5
Group Work	5
One-to-One Instruction	N/A
Eye contact with the students	N/A
Hand, Eye & Body Co-ordination & Movement	N/A
Computer Skills	5
Controlled Practice	4

Concise Qualitative Assessment of Lesson Delivery based on Integrated and Interactive Lesson Plan	
Name: Roll. No.:	
Teaching Subject- Social Studies	Remarks
Written Lesson Plan	
Presentation	
Teacher Traits	
Teaching Aids	
Overall Remarks	

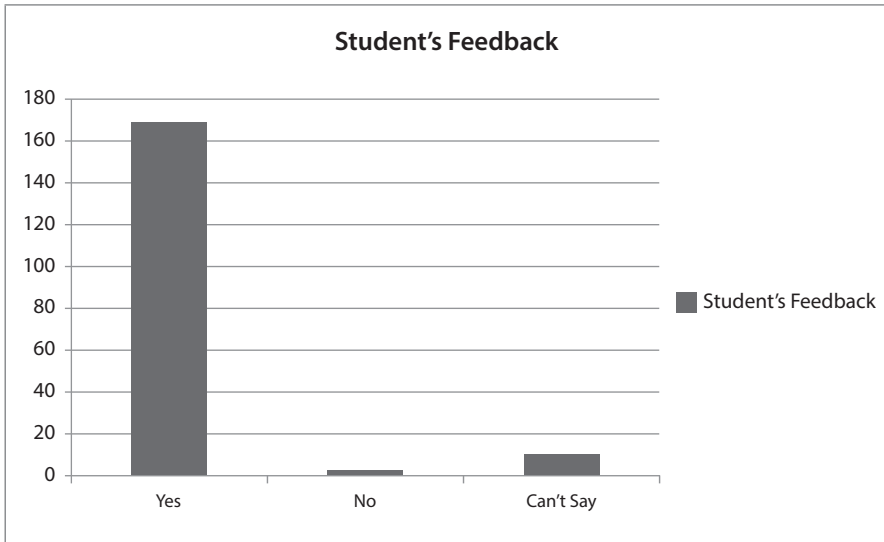
Table 2 - Sample Rubrics (Detailed & Concise) for the Assessment of Teacher's Lesson Delivery based on Integrated and Interactive Lesson Plan

G. Students' Feedback

With the commencement of Industry 4.0, which remains the momentum behind Teaching 4.0., the students' feedback is set to comprise the most advantageous tool for gauging teaching efficiency (Chitkara, 2021). Keeping in view the supreme importance of students' feedback, it is thus vital for the instructor to obtain students' viewpoint to promote the effectiveness of diverse educational activities.

To establish the functionality of the IILP, a sample of 180 students from Class 6 at Chitkara International School, Chandigarh, India was chosen who were taught "Fibre to Fabric" topic through Integrated and Interactive Lesson Plan and the following findings were made as per the students' feedback on the question "Did you enjoy studying "Fibre to Fabric" topic?"

Students' Feedback - Integrated and Interactive Lesson Plan "Did you enjoy studying "Fibre to Fabric" topic?"



Source: Chitkara International School, Chandigarh, India

Graph 1 (Interpretation): Approximately 94% of students enjoyed studying the topic "Fibre to Fabric", taught through IILP, whereas about 1% and 5% didn't enjoy or couldn't say about it, respectively.

H. Visualized Examples

The pedagogical tool of "Interactive and Integrated Lesson Plan" is extremely beneficial in teaching topics. At Chitkara College of Education, Chitkara University, Punjab, India and Chitkara International School, Chandigarh & Panchkula, India, lesson plans for each topic are created keeping in mind the prior knowledge of the students, along with the usage of ICT and related activities. The utilisation of the 3Ps cements the concept in students' minds and ensures a lifelong retention of the same.

DIARY FORM LESSON PLAN FIRST SEMESTER



Date: 19/08/2020 Timings: 01.15 - 21:15 Period: 3rd

Grade: _____ Section: _____ Subject: _____ Topic: Open Bank Postion

PRESENTATION:

Medium of Instruction

Monolingual Bilingual Multilingual

Languages Used

English Hindi Punjabi

Any Other _____



INSTRUCTIONAL AIDS USED:

Audio Aids

Radio  Tape Recorder  Head Phone 

Visual Aids

Display Board  Print Material  Comic Strip 

Flash Cards  Poster  Maps 

Cartoons  Newspaper  Graphic Aids 

Audio- Visual Aids

Television  Films  Digital Content 

3- Dimensional Aid

Objects/ Specimen  Exhibition  Puppets 

Field Trip  Experiment  Muppets 

INSTRUCTIONAL OBJECTIVES: COGNITIVE DOMAIN

Remembering Understanding

Applying Analyzing

Evaluating Creating

AFFECTIVE DOMAIN

Receiving Phenomenon Responds to Phenomenon

Valuing Organization

Internalizes Values

PSYCHOMOTOR DOMAIN

Imitation Manipulation Precision

Articulation Naturalization

DIARY FORM LESSON PLAN FIRST SEMESTER



ENTRY BEHAVIOUR

Use of Examples/ Analogies/ Similarities	<input type="checkbox"/>	Questioning	<input type="checkbox"/>
Lecturing/ Describing/Narrating/ Illustrating	<input checked="" type="checkbox"/>	Story Telling	<input checked="" type="checkbox"/>
Role Playing/ Dramatization	<input type="checkbox"/>	Audio Visual Aids	<input type="checkbox"/>
Experimentation/ Demonstration	<input type="checkbox"/>		

PEDAGOGY / ANDRAGOGY / HEUTAGOGY USED

Open Ended Instruction	<input checked="" type="checkbox"/>	Integrated Learning	<input type="checkbox"/>
Inquiry Learning	<input checked="" type="checkbox"/>	Differentiate Learning	<input type="checkbox"/>
Experiential Learning	<input type="checkbox"/>	Co-operative Learning	<input type="checkbox"/>
Case- Studies	<input type="checkbox"/>	Peer Teaching	<input type="checkbox"/>
CLIL	<input type="checkbox"/>	Dictogloss	<input type="checkbox"/>
Flipped Learning	<input type="checkbox"/>	Blended Learning	<input checked="" type="checkbox"/>
Problem Based Learning	<input checked="" type="checkbox"/>	Collaborative Learning	<input type="checkbox"/>

MODEL OF TEACHING

Inquiry Based Model	<input checked="" type="checkbox"/>	Concept Attainment Model	<input type="checkbox"/>
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Advance Organizer Model	<input type="checkbox"/>
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TECHNIQUES OF TEACHING

Inductive – Deductive Technique	<input type="checkbox"/>	Heuristic Method	<input type="checkbox"/>
Analytic- Synthetic Method	<input checked="" type="checkbox"/>		

ICT IN TEACHING

Tuxpaint	<input type="checkbox"/>	Celestia-win	<input type="checkbox"/>	Veyon	<input type="checkbox"/>
Gcompris	<input type="checkbox"/>	Lenmus	<input type="checkbox"/>	iTest	<input type="checkbox"/>
Typefaster	<input type="checkbox"/>	Wordsworth	<input type="checkbox"/>	Pearson	<input type="checkbox"/>
Educom	<input type="checkbox"/>	Extra Mark	<input checked="" type="checkbox"/>		

Any Other _____

ACTIVITIES CONDUCTED IN CLASS CATERING TO DIFFERENT TYPES OF INTELLIGENCES

Linguistics	<input type="checkbox"/>	Logical- Mathematical	<input checked="" type="checkbox"/>	Spatial	<input type="checkbox"/>
Bodily- Kinesthetic	<input checked="" type="checkbox"/>	Interpersonal	<input type="checkbox"/>	Intrapersonal	<input type="checkbox"/>
Naturalistic Intelligence	<input checked="" type="checkbox"/>				

DIARY FORM LESSON PLAN FIRST SEMESTER



Black Board Usage	<input checked="" type="checkbox"/>	Smart Board Usage	<input type="checkbox"/>	Text	<input type="checkbox"/>
Diagram	<input checked="" type="checkbox"/>	Draw Picture Map	<input type="checkbox"/>	Words	<input type="checkbox"/>
Question Answer	<input type="checkbox"/>	Notice Board Usage	<input type="checkbox"/>	Pin Board Usage	<input type="checkbox"/>

DIGITAL MEDIA

Facebook	<input type="checkbox"/>	Instagram	<input type="checkbox"/>	Twitter	<input type="checkbox"/>
School ERP	<input type="checkbox"/>	Any Other	<input type="checkbox"/>		

CONTROLLED PRACTICE

THEORIES OF LEARNING

Activities conducted based on BEHAVIOURISM LEARNING THEORY

Drill Work	<input type="checkbox"/>	Repetitive Practice	<input type="checkbox"/>
Bonus Points (Providing an incentive to do more)	<input type="checkbox"/>	Establishing Rules	<input type="checkbox"/>
Participation Points (Providing an incentive to participate)	<input checked="" type="checkbox"/>	Verbal Reinforcement (Saying ' Good Job')	<input checked="" type="checkbox"/>

Activities conducted based on COGNITIVE LEARNING THEORIES

Classifying or Chunking Information	<input type="checkbox"/>	Real World	<input type="checkbox"/>
Linking Concepts (Associate New Content with Something Known)	<input type="checkbox"/>	Providing Structure (Organizing your lecture in efficient and meaningful ways)	<input type="checkbox"/>
Examples	<input checked="" type="checkbox"/>	Discussions	<input type="checkbox"/>
Problem Solving	<input type="checkbox"/>	Analogies	<input type="checkbox"/>
Imagery/ Providing Pictures	<input type="checkbox"/>	Mnemonics	<input checked="" type="checkbox"/>

Activities Conducted based on CONSTRUCTIVISM LEARNING THEORY

Case Studies	<input type="checkbox"/>	Research Projects	<input checked="" type="checkbox"/>	Simulations	<input type="checkbox"/>
Brain Storming	<input type="checkbox"/>	Problem Based Learning	<input checked="" type="checkbox"/>		
Collaborative Learning/ Group Work	<input checked="" type="checkbox"/>	Discovery Learning	<input checked="" type="checkbox"/>		

Infrastructure Usage

Phonetic Console	<input type="checkbox"/>	Gaming Station	<input type="checkbox"/>	Hello	<input type="checkbox"/>
Bhasha Translation Zone	<input type="checkbox"/>	Research Zone	<input checked="" type="checkbox"/>	Play Ground	<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		
Non Verbal Communication Sign Language		Musical Express Way			
Any Other _____					

DIARY FORM LESSON PLAN FIRST SEMESTER



TYPE OF REINFORCEMENT

Positive

Negative

SCHEDULE OF REINFORCEMENT

Continuous Reinforcement Schedule

Partial Reinforcement Schedule

Variable- Interval Reinforcement Schedule

Variable Ratio Reinforcement Schedule

FREE PRACTICE

Methods (Tick any)

Home Assignment

Practice Sheets

Project

Question Bank

Field Work

MOOC

Swayam

Edex

Coursera

Any Other

Signature of Subject Teacher (Associate School) _____

Source: Lesson Plan Form in Reflections of Alpha Teachers', Chitkara College of Education, Chitkara University, Punjab, India

CONCLUSION

“Interactive and Integrated Lesson Plan” is a two-way roadmap for ensuring the subject-enrichment of the student along with allowing the teacher to understand what works best for each of their students. The 3Ps make way for each student to flourish in their respective fortes of learning, while giving the teacher a chance to broaden their pedagogical skill set to encompass a wide range of learning styles. This student-centred approach makes it easy for the teacher to simply give an outline of the topic, encouraging rigorous research and active participation by the students, instead. It is the best academic tool for bolstering the creative, critical, and analytical skills of the student, along with inculcating a lifelong hunger for learning.

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