# Impact Evaluation Report on the Project "ANUBHAV"

Transforming School Education

An experiential Learning Project by Nikalas Foundation

Submitted to

**Nikalas Foundation**

**Nagpur**

**Submitted by**

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# Preface

This is an Impact assessment report of Project "**ANUBHAV**" Transforming School Education, an experiential Learning Project by Nikalas Foundation carried out in the state of Maharashtra. This project was conceptualized and implemented to inculcate culture of experiential learning in school education system as many reports from statutory bodies have shown that there is a crisis related to the learning outcome as they are not on expected lines, which ultimately affects intellectual development of the children. Nikalas's foundation has meticulously conducted the project wherein the newly developed teaching methods were used to teach the students of class I to V. The primary aim of the project 'Anubhav' was to inculcate the basic knowledge and skills in the students with focussed intervention. This report briefly covers aspects like the need for such project intervention, its methodology, its objectives, and the outcome of impact assessment study. The assessment is carried out in various schools where the project "Anubhav" was implemented. During this assessment feedback from all the teachers who used the novel teaching material as well as methods was collected. The impact assessment results are derived from quantitative data collected using reliable and valid research instruments and through survey method. The collected data was analysed using SPSS 18.0 software. The conclusions drawn from the results are specific to this intervention.

# Impact Assessment Team

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|---|---|
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# List of Abbreviations

UPE Universal Primary Education

EFA Education For All

NCF National Curriculum Framework

NAS National Achievement Survey

SPSS Statistical Package for Social Sciences

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# Chapter – I

# Introduction

**1.1 Learning Deficiency: Education Crisis in India**

The World Bank has already warned of a 'learning crisis' in global education; underprivileged students in developing countries are attending school, but many fail to learn basic life skills[1]. Consequently, as Pearson PLC (2018)[2] explains, the global problem in education is not simply about provision, but also ensuring quality learning. According to The Economist, India has completely failed to convert going to school into learning; roughly half of the fifth-grade students can't read a book intended for second-graders. Moreover, The Economist (2017C) also emphasizes the poor quality of Indian teachers; since 2011, an estimated 99% of would-be teachers have failed their pre-joining test.

According to a report by the Ministry of Education titled "Educational Statistics" At a glance- states that the Gross Enrolment Ratio at the elementary level (Classes I-VIII) has been consistently high, at around 97%. This indicates that almost every Indian child is going to school. Despite this, students don't seem to be learning anything in school at all. Only 44.2% of all students in government schools in Class V in India are able to read a Class II text, as per ASER report on School Education. The situation is worse for numeracy: only 22.7% of all students in government schools in Class V are able to do division. India has been in the midst of a learning crisis for a long time now.

The goal of achieving universal primary education (UPE) has been on the international agenda since the Universal Declaration of Human Rights affirmed, in 1948, that elementary education has to be made free and compulsory available for all children in all nation. This objective was restated subsequently on many occasions, by international treaties and in United Nations Conference Declaration[3]. Most of these

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1     Sentinel Digital Desk, Learning poverty: Education crisis in India, 24 Dec 2021, 9:05 AM, https://www.sentinelassam.com/editorial/learning-poverty-education-crisis-in-india-569438

2     The Global learning crisis: why every child deserves a quality education, UNESCO Digital Library, 2013, https://unesdoc.unesco.org/ark:/48223/pf0000223826

3     Taku, R and Ahmed, S. (2013). The quality crisis in Indian primary education, The Clarion, 2(2), pp. 85-89.

declarations and commitments were silent about the quality of education to be provided. The two most recent United Nations International Conference Declarations focusing one education gave significant importance on 'quality aspect of primary education'. The Jomtien Declaration in 1990 and more particularly the Dakar Framework for Action 2000 recognized the 'quality of education' as a prime determinant whether education for all achieved or not.

The World Education Forum (2000) agreed on six "education for all" (EFA) goals. The sixth goal concerns with quality of education: improving all aspects of the quality of education and ensuring excellence of also that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills. Moreover, at the sub-regional meeting of South Asian Ministers in Kathmandu in April 2001, 'quality education' was unanimously identified as a priority area from the regional perspective. The World Bank (1997) in one of its reports on elementary education suggested that the best way to improve access is to improve quality which would make coming to school or staying in school a more attractive option from the perspective of parents as well as children.

## 1.2  Importance of Quality Education

The strength and development of a nation depends upon the educational foundation of its people and this foundation is built during school education. To achieve the goals of education, schools should aim at providing children with the knowledge, skills and interpersonal competencies required for their development, adult life and contributions to the economy and society. Schools can offer learning experiences that a child may not obtain at home, particularly if he or she is living in a disadvantaged environment[4] and it starts at the elementary level. Quality elementary education is of utmost significance as it establishes the foundation for learning. It aims to provide fundamental skills in reading, writing and understanding core areas of knowledge and personal development. Children are prepared for further education as well as for life.

Despite the many cultural and political differences among nations, the objectives and curriculum at least of elementary education tend to be similar.

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[4]    Heckman J. (2008). The case of investing in disadvantage young children, In Big ideas for children: Investing in our nation's future, Washington, DC, First Focus.

Education aims to enable learners not just to acquire knowledge but also to become capable and responsible citizens. Therefore, we must prepare learners with more than basic reading and writing skills. Learners need to be able to interpret information, form opinions, be creative, communicate well, collaborate, and be resilient. Nearly all nations are officially committed to mass education, which is viewed as eventually including a full elementary education for all. Thus, Education systems have two important functions: keeping children in school and making sure that they are learning.

## 1.3    Importance of assessing learning outcome

Learning outcomes are important for several reasons, as they provide clear expectations for all the stakeholders, outlining what knowledge, skills, and abilities students they are expected to gain by the end of a specific course or program. Moreover, learning outcomes serve as a basis for assessing student progress and achievement. They help in creating assessments that accurately measure whether students have acquired the intended knowledge and skills. They promote accountability for both educators and students. Educators can use learning outcomes to justify their teaching methods and course content, while students can understand what is required of them to succeed.

Furthermore, clearly defined learning outcomes can motivate teachers by providing them with a clear understanding of what they are working towards and how it will benefit them in their academic and professional lives. They ensure consistency in what is taught and learned across different instructors and institutions, providing a standardized measure of student achievement. Also, they help in identifying gaps in knowledge and skills, allowing for targeted interventions and support to enhance the overall learning experience. Periodic assessment of the teaching methods and learning outcomes can facilitate communication between educators, students, parents, and others about what is being taught and learned, fostering a shared understanding of educational objectives.

## 1.4    About Impact Assessment Agency

*DataSol Consulting* is a consulting firm specializing in statistical consulting, experiment designing, data analysis services, micromanagement, training and guidance for various research activities. *DataSol Consulting* is headquartered in Nagpur, (Maharashtra) and is providing consultancy services primarily in India. Our

mission is to provide superior consultancy services and solutions for data management, statistical data analysis and assist in research activities by providing novel management solutions.

## 1.5    Scope of Work

The scope of the impact assessment project was to determine the overall impact of project '**Anubhav**' on the learning outcome of students of various schools of the study area.

## 1.6    Delimitations

The study was delimited on the following:

- The study was delimited to assess the learning outcome of students belonging to standard I to V only.
- Delimited to specific schools where the intervention trough project "Anubhav" was carried out.

## 1.6    Limitations

- There was no control over psychological condition of the teachers who provided the necessary information
- There was no control on work schedule of teachers
- No incentive was offered to the participants for providing data
- Lack of complete control over environmental factors was limitation.

# Chapter – II
# About Project ANUBHAV

Government of India has brought in a comprehensive framework in the form of National Education Policy 2020. The National Curriculum Framework (NCF) is undergoing radical changes with a view to implement the policy in a holistic way. NIPUN Bharat Mission is a Foundational Learning program that seeks every child in the country achieves desired foundational literacy and numeracy. Moreover, State Governments are undertaking innovative initiatives to achieve universal foundational learning by 2026-27. However, the successful implementation of these policies and schemes particularly for marginalised and underprivileged kids need efforts from are all directions by the agencies of change. To bridge the existing learning gaps, students need extensive help and teachers require access to quality trainings and resources.

In view of the above, Nikalas Foundation has conceived and conducted a technology-independent, easy to implement experiential learning program for schools of underprivileged kids named '**Anubhav**'. The framework has been designed and developed to empower teachers, develop interest and engagement of kids in learning process and to improve the learning outcomes of each session in the class significantly. Project **Anubhav** is an effort towards achievement of development goals set out by NIPUN Bharat mission and the desired learning outcomes prescribed in National Achievement Survey (NAS).

## 2.1 Goal of Project Anubhav

To transform the way children from underprivileged background in rural / urban areas are learning and empower their teachers to develop 21$^{st}$ Century Learning Skills amongst them.

## 2.2 Objectives of the Project Anubhav

- To Improve student's interest in learning
- To improve student's engagements in learning
- To improve student's creativity and visualisation
- To enhance student's applied intelligence
- To make learning process meaningful and purposeful for the students
- To empower teachers through trainings on experiential learning pedagogy

# Chapter – III
# Research Methodology

In the present study, a careful collection of facts was undertaken to ensure the validity of the facts. The detailed description of all the methods used for data collection and processing are presented hereunder.

## 3.1 Objectives of the Study

- To determine the relevance, coherence and effectiveness of methods adopted in project Anubhav for improving learning outcome
- To study the impact of project Anubhav methodology on learning outcomes (basic knowledge, mathematics skills, critical thinking, problem solving, etc.) of school going children
- To assess the status of children's interest and engagement in learning process in view of project Anubhav implementation
- To study the role of project Anubhav in student's ability to apply the concepts learnt in school
- To determine the overall impact of project Anubhav vis-à-vis improvement in learning outcomes
- To assess sustainability of project Anubhav for improving learning outcome

## 3.2 Core Action Points of Project "ANUBHAV" are

- Improving Student's Interest & Engagement in Learning
- Developing 21$^{st}$ century learning skills
- Empowering teachers to improve learning outcomes of each session remarkably

## 3.3    Work Flow of Project "ANUBHAV"
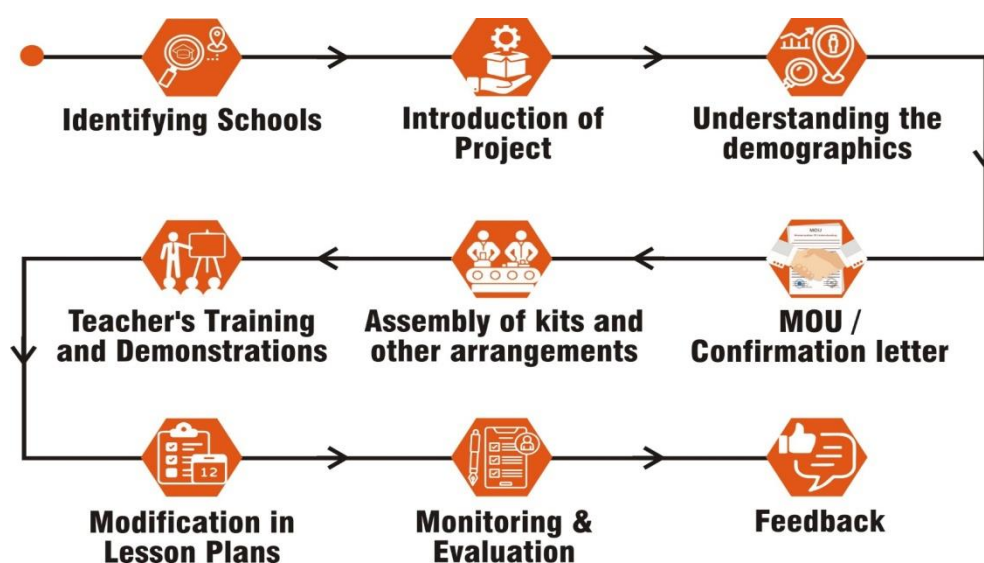


## 3.4    Design of Study and Sample Selection

The study adopted a combination of descriptive and diagnostic research design, where all the teachers engaged in use of the customized teaching kits were considered for the purpose of data collection thereby using the **census sampling** method. Data was obtained from 126 teachers working in various schools of the study region who have used the intervention method (customized teaching kits) that was part of project **Anubhav**.

## 3.5    Collection of Data

In the present study, all the data generation was done by using standard procedures and with the use of a Structured Questionnaire (Research Instrument; Annexure-I) and by following online survey method using **Google Form**.

### 3.5.1    Primary data collection

The process of developing the research instrument was based on generally accepted principles of instrument design, and was carried out according to the standard methodology.

### 3.5.1.1 Selection of measurement scales

In the present study, Fixed Response (Qualitative) Rating scale /Continuum (such as Likert-type scale) was used. The questionnaire used in this study is presented in the Annexure-1 of the report.

**3.5.1.2 Questionnaire development, reliability and validity estimation**

The reliability of the questionnaire was assessed using test-retest method prior to its use for data collection. The Pearson Correlation Coefficient was 0.95, which confirmed acceptable level of reliability. The validity of a measure refers to the extent to which it measures what it intends to measure. Three different types of validity were considered, which are **content validity** (was determined subjectively on the basis of the literature used), **criterion-related validity** (was evaluated by examining the correlation coefficients between the different measures), and **construct validity** (was checked for validation of the construct). Scoring and norms for impact assessment are as follows

The questionnaire is divided in several sections, which are as follows

**Section A**: Demographic Information of the respondents

- Name of the respondent, Name of the School, District, State, Age, and Gender of the respondent

**Section B**: Evaluation of student's learning outcomes with respect to project 'Anubhav'

- **Section B-1**: Relevance (is the intervention doing the right things? Section has 3 statements)
- **Section B-2**: Coherence (how well does the intervention fit? Section has 4 statements)
- **Section B-3**: Effectiveness (is the intervention achieving its objectives? Section has 3 statements)
- **Section B-4**: Efficiency (how well are resources being used? Section has 3 statements)
- **Section B-5**: Impact on Learning Skills (what difference does the intervention make? Section has 12 statements)
- **Section B-6**: Sustainability (will the benefits last? Section has 4 statements)

**Section C**: Assessment of Improvement in learning outcomes

- **Basic Knowledge Assessment** (Section has 6 statements)
- **Mathematics Skills** (Section has 4 statements)
- **Critical Thinking and Problem Solving** (Section has 3 statements)
- **Learning Strategies** (Section has 3 statements)

- **Overall Improvement and Confidence** (Section has 3 statements)

**Section D**: Improvement in interest in the learning process
- **Interactive and Playful Learning** (Section has 3 statements)
- **Visual and Multi-Sensory Engagement** (Section has 3 statements)
- **Peer Interaction and Collaboration** (Section has 2 statements)
- **Choice and Autonomy** (Section has 3 statements)
- **Hands-On Experiences and Exploration** (Section has 3 statements)

**Section E**: Improvement in learning engagements (Section has 6 statements)

**Section F**: Assessment of student's ability to apply the concepts learnt in school (Section has 4 statements)

**Scoring**
- The questionnaire contains total 36+55=91 questions, which assess some aspects related to students while some related to the intervention method and the teaching aid kit. These aspects are as follows
  - Relevance (total score; 3-9), Coherence (total score; 4-12), Effectiveness (total score; 3-9), Efficiency (total score; 3-9), and sustainability (total score; 4-12) of the intervention kit as well as its utility, and
  - Impact of teaching aid on the learning outcome, related to student's
    - Creativity (total score; 12-36)
    - Basic Knowledge (total score; 6-18)
    - Mathematics Skills (total score; 4-12)
    - Critical Thinking & Problem Solving (total score; 3-9)
    - Learning Strategies (total score; 3-9)
    - Overall Improvement and Confidence (total score; 3-9)
  - Impact on student's interest in learning process
    - Interactive and Playful Learning (total score; 3-9)
    - Visual and Multi-Sensory Engagement (total score; 3-9)
    - Peer Interaction and Collaboration (total score; 2-6)
    - Choice and Autonomy (total score; 3-9)
    - Hands-On Experiences and Exploration (total score; 3-9)

- o Impact on student's learning engagements (total score; 6-18)
- o Impact on student's ability to apply the concepts learnt in school (total score; 4-12)
- Each correct/expected response gets 3 points, and the interpretation of the score is performed as follows

**Impact Scale**

| Nature of impact | Weightage/Score |
|---|---|
| High impact | Scores above 75% of the possible score |
| Moderate impact | Score between 50 and 75% of the possible score |
| Low/No impact | Score less than 50% of possible score |

### 3.5.2 Secondary data collection

Secondary data was collected from the general publications, scientific journals, publications of educational organizations, research institutes and books from National and International authors.

### 3.6 Statistical Analysis of Data

Analysis of data was done with the help of suitable statistical tests. The descriptive statistics, such as frequency, percentage, etc. were determined from the collected data using SPSS 18.0 software.

# Chapter – IV

# Results of the Study

## 4.1    Age of the Respondents

**Table 1**: Distribution of respondents with respect to their age

| Age | Nos. | Per |
|---|---|---|
| 18 to 30 | 26 | 20.6 |
| 31 to 45 | 68 | 54.0 |
| More than 45 | 32 | 25.4 |
| **Total** | **126** | **100.0** |

Above Table 1 presents distribution of respondents with respect to their age. 20.6% respondents belong to the age-group 18 to 30 years while 54.0% respondents belong to the age-group 31 to 45 years. Further 25.4% respondents belong to the age-group above 45 years.
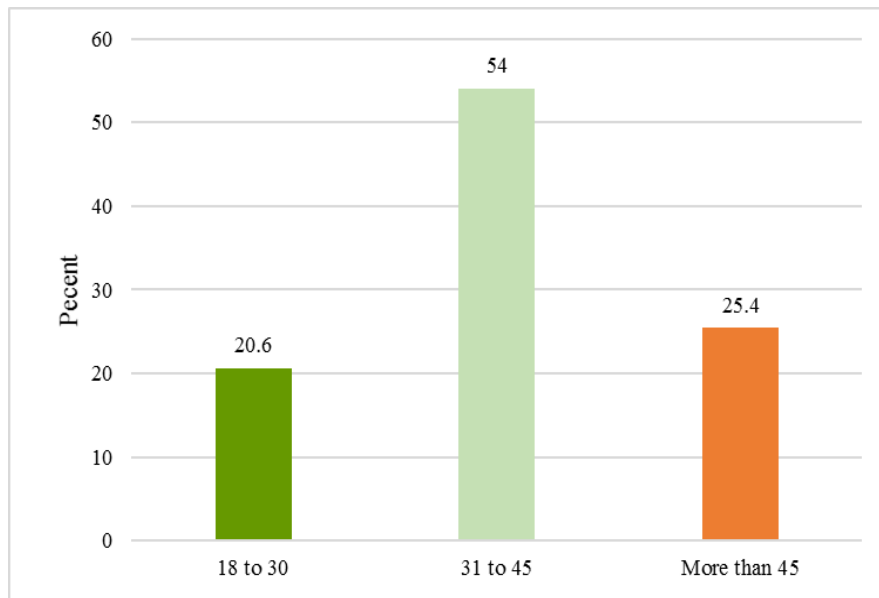


**Fig 1**: Distribution of respondents with respect to their age

### 4.2     Gender of the respondents

**Table 2**: Distribution of respondents with respect to their gender

| Gender | Nos. | Per |
|--------|------|-----|
| Male | 32 | 25.4 |
| Female | 94 | 74.6 |
| **Total** | **126** | **100.0** |

Above Table 2 presents distribution of respondents with respect to their gender. 25.4% respondents are male while 74.6% respondents are female.
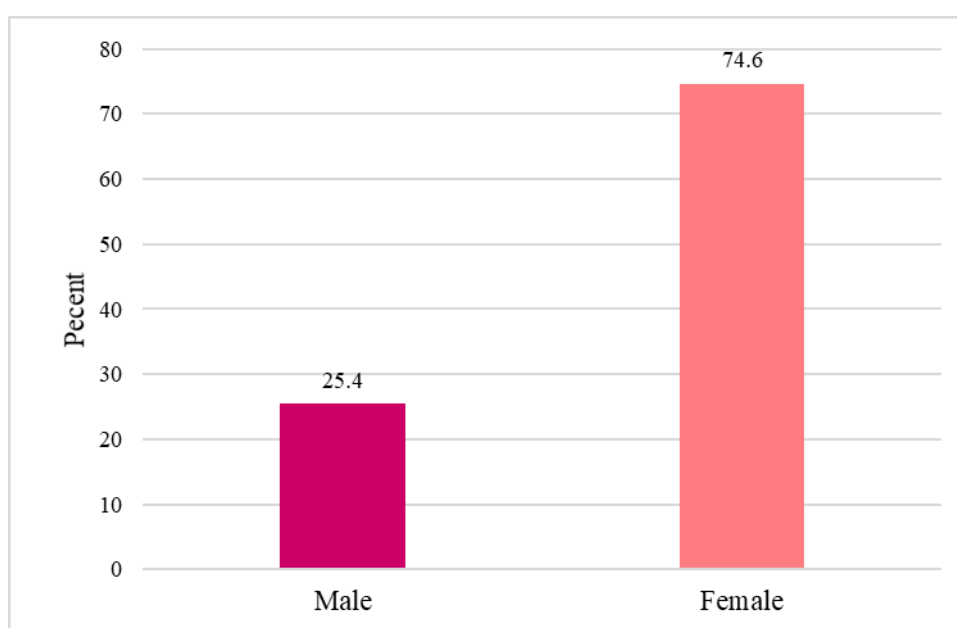


**Fig 2**: Distribution of respondents with respect to their gender

## 4.3    Relevance of the intervention (through project Anubhav)

**Table 3:** Relevance of the intervention (through project Anubhav)

| Response | Frequency | Percent |
|----------|-----------|---------|
| High | 117 | 92.9 |
| Moderate | 4 | 3.2 |
| Low | 5 | 4.0 |
| **Total** | **126** | **100.0** |

Above Table 3 presents opinion of the respondents about project '**Anubhav**' as a relevant aspect in student's existing learning process. According to 92.9% respondent's methodology of project '**Anubhav**' is highly relevant while 3.2% respondents stated that is moderately relevant to project. Furthermore, according to 4.0% respondents methodology of project is low. In view of the study results it is evident that, majority of teachers feel that intervention through project 'Anubhav' is relevant for improving the teaching learning process.
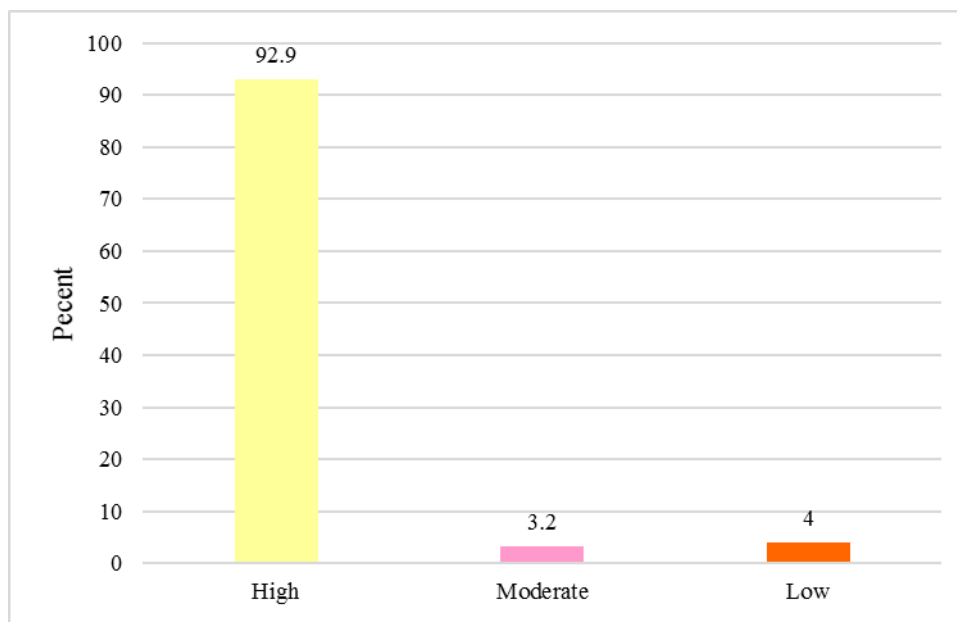


**Fig 3:** Relevance of the intervention (through project Anubhav)

**4.4    Coherence of the intervention (through project Anubhav)**

**Table 4:** Coherence of the intervention (through project Anubhav)

| Response | Frequency | Percent |
|----------|-----------|---------|
| High | 116 | 92.1 |
| Moderate | 5 | 4.0 |
| Low | 5 | 4.0 |
| **Total** | **126** | **100.0** |

Above Table 4 presents opinion of the respondents about coherence of the intervention through project '**Anubhav**' vis-à-vis existing learning process. According to 92.1% respondents this intervention has high coherence while 4.0% respondents stated that it has moderate coherence. Furthermore, 4.0% respondents stated that this intervention has low coherence. From the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has high coherence with respect to existing teaching learning process.
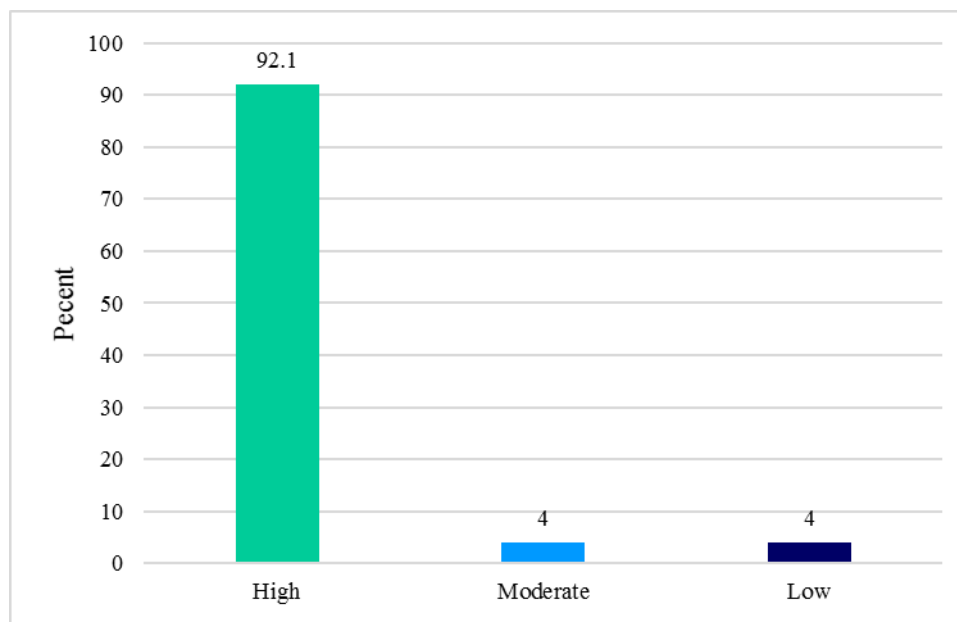


**Fig 4:** Coherence of the intervention (through project Anubhav)

## 4.5 Effectiveness of the intervention (through project Anubhav)

**Table 5:** Effectiveness of the intervention (through project Anubhav)

| Response | Frequency | Percent |
|----------|-----------|---------|
| High | 111 | 88.1 |
| Moderate | 8 | 6.3 |
| Low | 7 | 5.6 |
| **Total** | **126** | **100.0** |

Above Table 5 presents opinion of the respondents about effectiveness of intervention through project '**Anubhav**' in improving existing learning process. According to 88.1% respondents this intervention has high effectiveness while 6.3% respondents feel that it was moderately effective. Furthermore, 5.6% respondents stated that it was less effective. From the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has high effectiveness in improving teaching learning process.
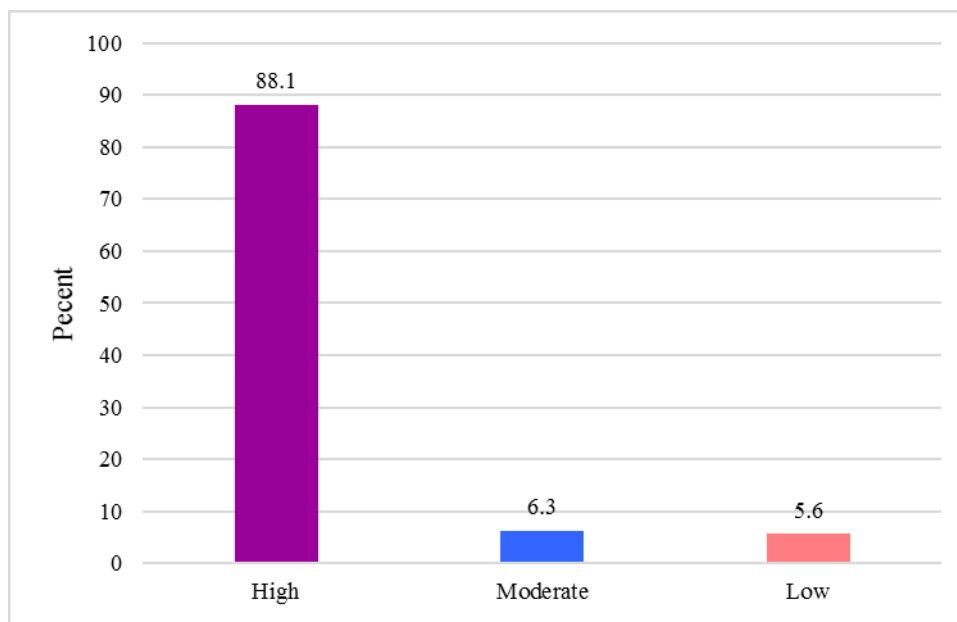


**Fig 5:** Effectiveness of the intervention (through project Anubhav)

## 4.6    Efficiency of the intervention (through project Anubhav)

**Table 6:** Efficiency of the intervention (through project Anubhav)

| Response | Frequency | Percent |
|----------|-----------|---------|
| High | 112 | 88.9 |
| Moderate | 3 | 2.4 |
| Low | 11 | 8.7 |
| **Total** | **126** | **100.0** |

Above Table 6 presents opinion of the respondents about efficiency (how well are resources being used) of intervention through project '**Anubhav**' in student's existing learning process. According to 88.9% respondents this intervention is highly efficient while 2.4% respondents feel that it was moderately effective. Furthermore, 8.7% respondents stated that it was less effective. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has high efficiency with respect to the teaching learning process.
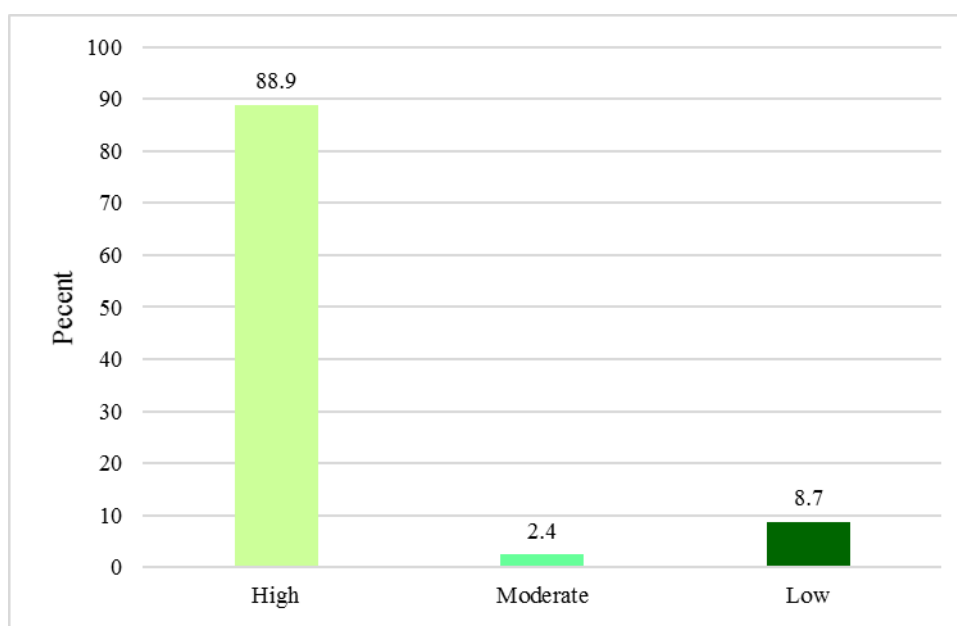


**Fig 6:** Efficiency of the intervention (through project Anubhav)

### 4.7 Impact of project 'Anubhav' on improvement in Learning Skills

**Table 7:** Impact of the intervention (through project Anubhav) on improvement in student's learning skills

| Response | Frequency | Percent |
|----------|-----------|---------|
| High | 112 | 88.9 |
| Moderate | 3 | 2.4 |
| Low | 11 | 8.7 |
| **Total** | **126** | **100.0** |

Above Table 7 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on improvement in students' creativity and other crucial learning skills. According to 88.9% respondents' there was high level of improvement in the learning skills due to this intervention while 2.4% respondents feels that it was moderately effective. Furthermore 8.7% respondents stated that it was less effective. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students' creativity and other crucial learning skills.
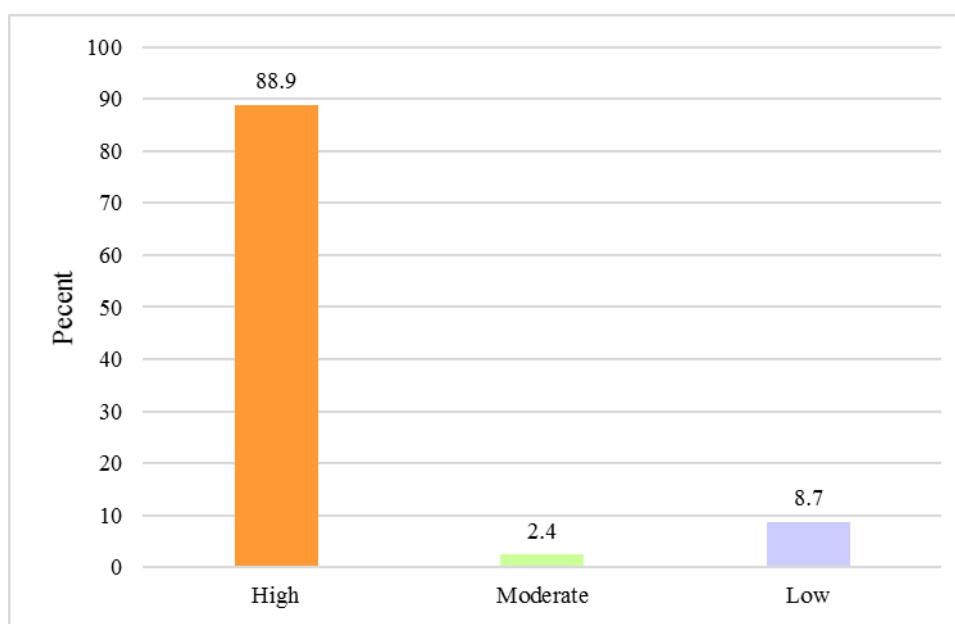


**Fig 7:** Impact of the intervention (through project Anubhav) on improvement in student's learning skills

## 4.8    Sustainability of the intervention (project Anubhav)

**Table 8:** Sustainability of the intervention (through project Anubhav)

| Response | Frequency | Percent |
|----------|-----------|---------|
| High | 97 | 77.0 |
| Moderate | 12 | 9.5 |
| Low | 17 | 13.5 |
| **Total** | **126** | **100.0** |

Above Table 8 presents opinion of the respondents about sustainability of intervention through project '**Anubhav**' with respect to existing learning process. According to 77.0% respondents this intervention is highly sustainable while 9.5% respondents feels that it was moderately sustainable. Furthermore, 13.5% respondents stated that it was less sustainable. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' is highly sustainable with respect to existing teaching learning process.
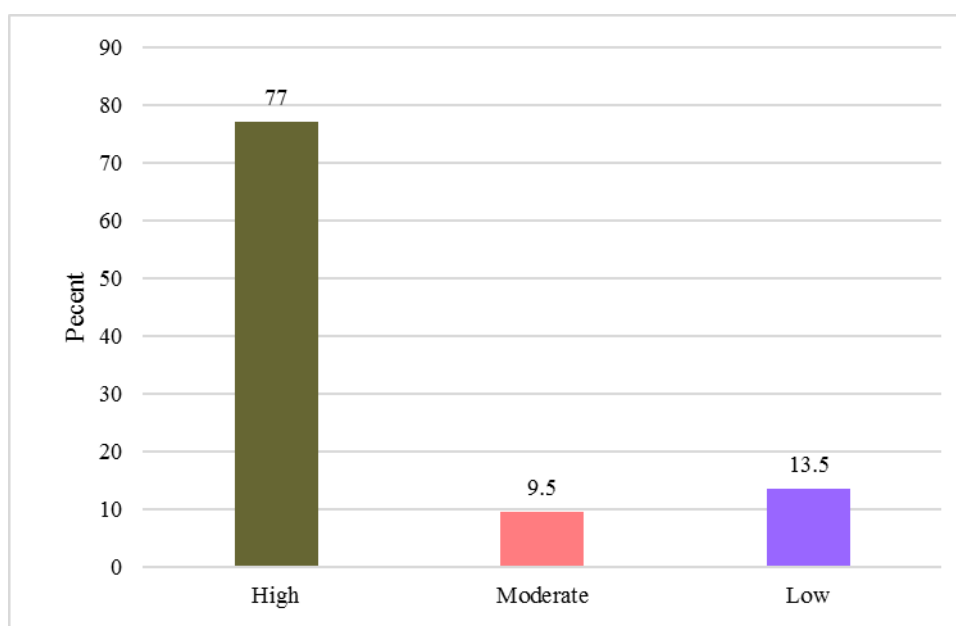


**Fig 8:** Sustainability of the intervention (through project Anubhav)

## 4.9 Impact of project 'Anubhav' on improvement in basic knowledge

**Table 9:** Impact of the intervention (through project Anubhav) on basic knowledge

| Response | Frequency | Percent |
|---|---|---|
| Significant Improvement | 107 | 84.9 |
| Slight Improvement | 11 | 8.7 |
| No change | 8 | 6.3 |
| **Total** | **126** | **100.0** |

Above Table 9 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on improvement in students' basic knowledge. According to 84.9% respondents' basic knowledge of students significantly improved due to this intervention while 8.7% respondents indicated that there was slight improvement (in student's basic knowledge). Furthermore, according to 6.3% respondents there was no change in student's basic knowledge even after this intervention. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students' basic knowledge.
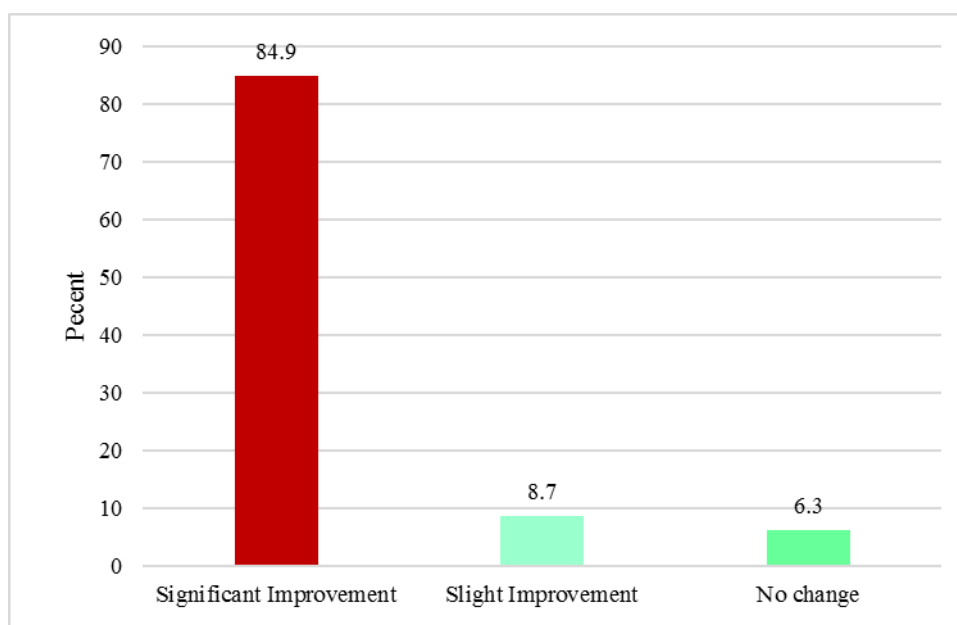


**Fig 9:** Impact of the intervention (through project Anubhav) on basic knowledge

### 4.10    Impact of project 'Anubhav' on improvement in Mathematics Skills

**Table 10:** Impact of the intervention (through project Anubhav) on Mathematics Skills

| Response | Frequency | Percent |
| --- | --- | --- |
| Significant Improvement | 81 | 64.4 |
| Slight Improvement | 38 | 30.2 |
| No change | 7 | 5.6 |
| **Total** | **126** | **100.0** |

Above Table 10 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on improvement in students' mathematics skills. 64.4% respondents indicated that mathematics skills of students showed significant improvement after this intervention while 30.2% respondents feel that it has slightly improved. Furthermore, according to 5.6% respondents this intervention had no impact on mathematics skills of students. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has resulted in significant improvement in students mathematics skills.



**Fig 10:** Impact of the intervention (through project Anubhav) on Mathematics Skills

## 4.11 Impact of project 'Anubhav' on improvement in critical thinking & problem solving

**Table 11:** Impact of the intervention (through project Anubhav) on critical thinking & problem solving

| Response | Frequency | Percent |
|---|---|---|
| Significant Improvement | 85 | 67.5 |
| Slight Improvement | 36 | 28.6 |
| No change | 5 | 4.1 |
| **Total** | **126** | **100.0** |

Above Table 11 presents opinion of the respondents of study area about impact of intervention through project '**Anubhav**' on improvement in students' critical thinking & problem-solving abilities. According to 67.5% respondents there was significant improvement in critical thinking & problem solving of students after this intervention while 28.6% respondents feel that there was slight improvement. Furthermore, according to 4.1% respondents, students did not show any improvement in critical thinking & problem solving after this intervention. In view of the study results it is evident that majority of teachers indicated that intervention through project 'Anubhav' has significantly improved students critical thinking & problem-solving abilities.
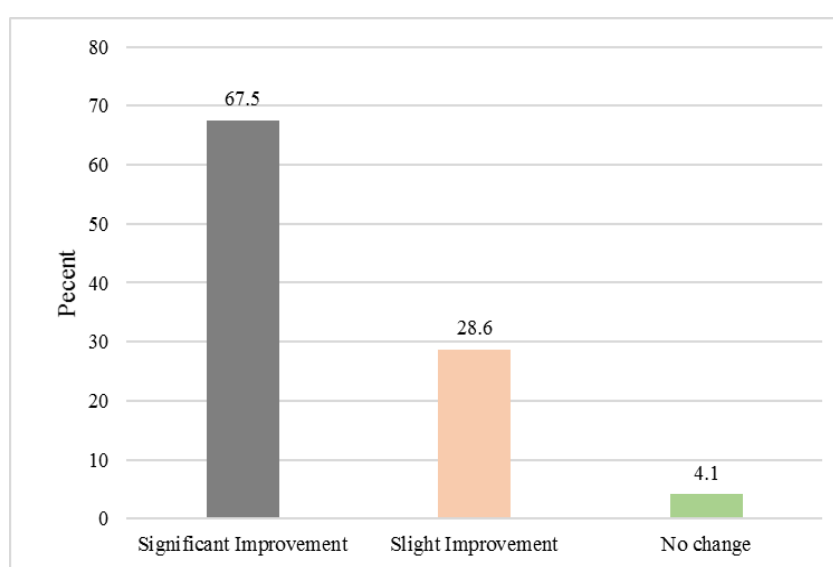


**Fig 11:** Impact of the intervention (through project Anubhav) on critical thinking & problem solving

## 4.12 Impact of project 'Anubhav' on improvement in learning strategies

**Table 12:** Impact of the intervention (through project Anubhav) on learning strategies

| Response | Frequency | Percent |
|---|---|---|
| Significant Improvement | 82 | 65.1 |
| Slight Improvement | 37 | 29.4 |
| No change | 7 | 5.6 |
| **Total** | **126** | **100.0** |

Above Table 12 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on improvement in students learning strategies. According to 65.1% respondents there was significant improvement in learning strategies of students post intervention, while 29.4% respondents feel that there was slight improvement. Furthermore, according to 5.6% respondents there was no improvement in learning strategies of students after this intervention. In view of the study results it is evident that majority of teachers of study area feel that intervention through project 'Anubhav' has resulted in significant improvement in learning strategies of students.
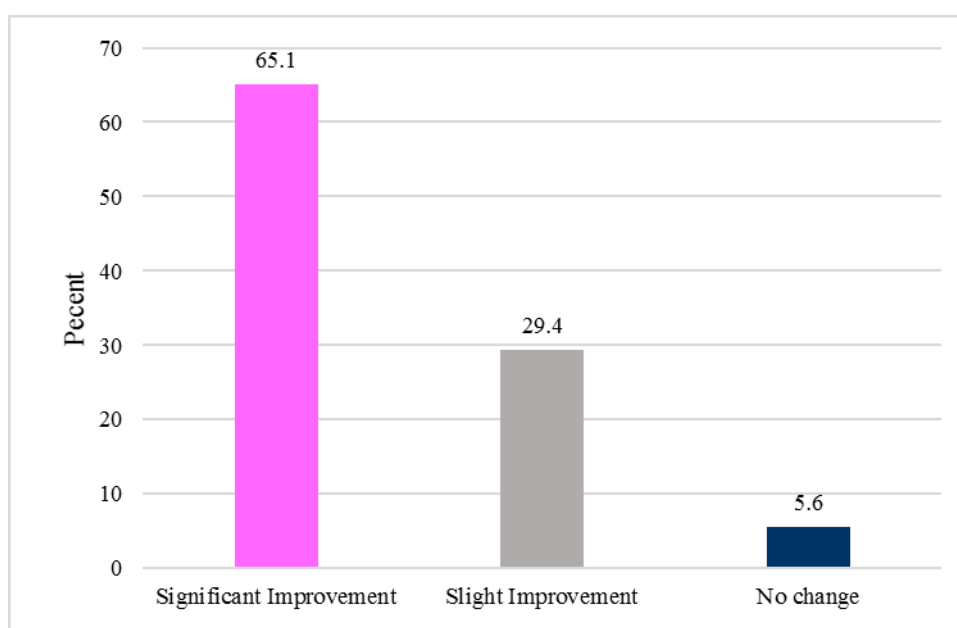


**Fig 12:** Impact of the intervention (through project Anubhav) on learning strategies

### 4.13 Impact of project 'Anubhav' on overall improvement and confidence

**Table 13:** Impact of the intervention (through project Anubhav) on overall improvement and confidence

| Response | Frequency | Percent |
|---|---|---|
| Significant Improvement | 81 | 64.2 |
| Slight Improvement | 39 | 31.0 |
| No change | 6 | 4.8 |
| **Total** | **126** | **100.0** |

Above Table 13 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on overall improvement in confidence of students. According to 64.2% respondents there was significant improvement in confidence of students after this intervention while 31.0% respondents feel that there was slight improvement. Furthermore, according to 4.8% respondents there was no change in the confidence of students after this intervention. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has resulted in significant improvement in students' confidence.



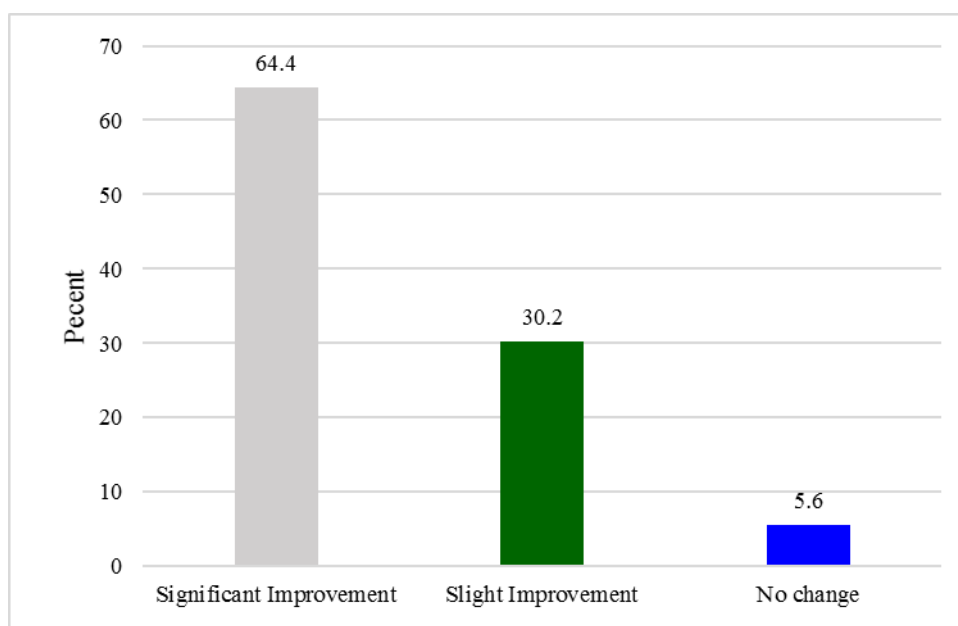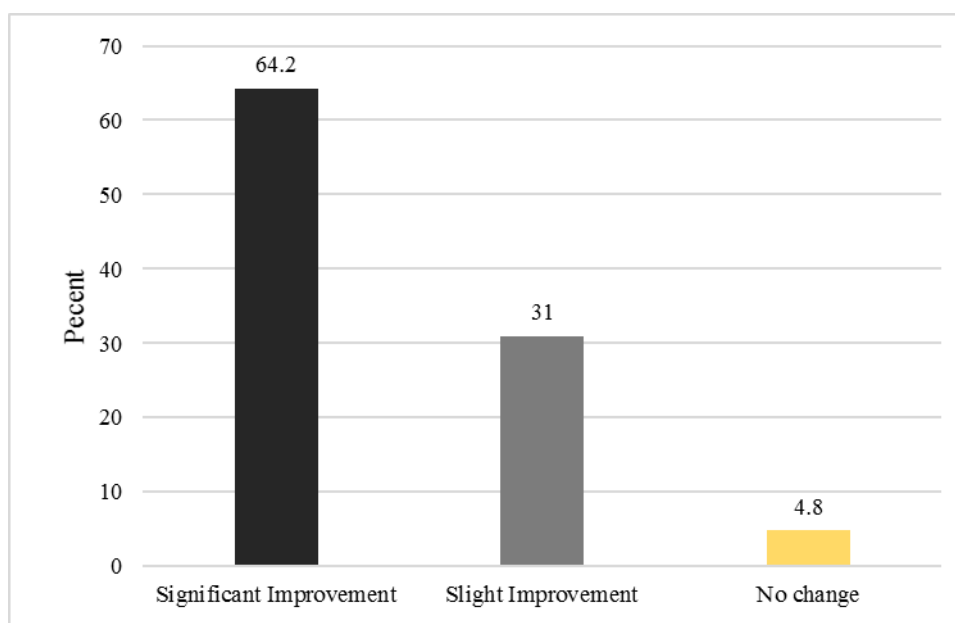**Fig 13:** Impact of the intervention (through project Anubhav) on overall improvement and confidence

**4.14 Impact of project 'Anubhav' on improvement of student's interest in learning process**

**Table 14:** Improvement in interest in learning process after the intervention through project Anubhav

| Response | Frequency | Percent |
|----------|-----------|---------|
| Yes | 104 | 82.5 |
| No | 7 | 5.6 |
| Can't say | 15 | 11.9 |
| **Total** | **126** | **100.0** |

Above Table 14 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on change in student's interest in learning process with respect to interactive and playful learning experience. According to 82.5% respondents this intervention resulted in significant improvement in student's interest in learning process while 5.6% respondents feels that in this intervention students not interested. Furthermore, 11.9% respondents stated that they not sure about it. In the backdrop of study results it is evident that majority of teachers of study area feel that there was significant improvement in students interest in learning process with respect to interactive and playful learning aspects after intervention through project 'Anubhav'.
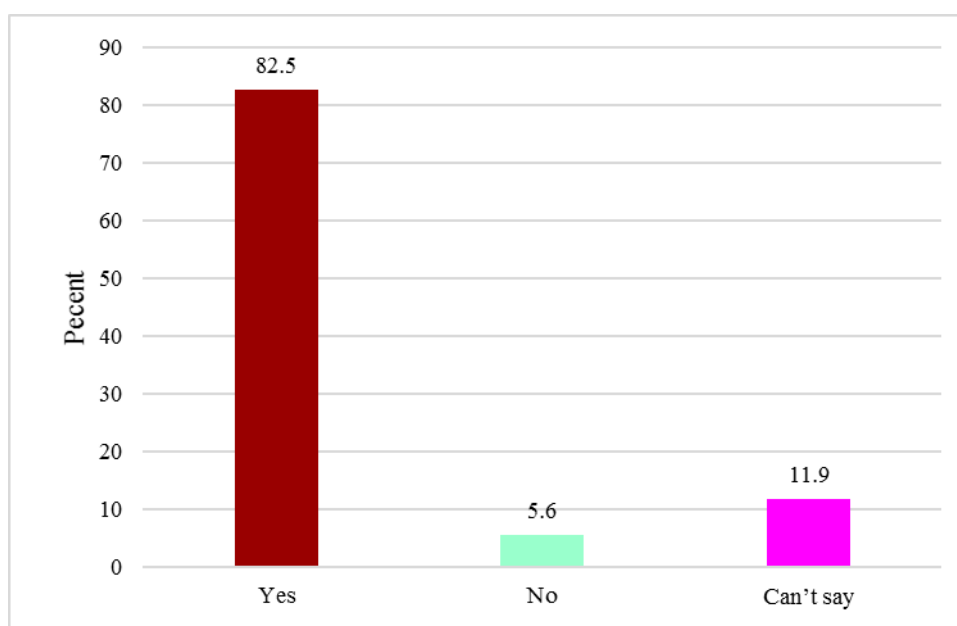


**Fig 14:** Improvement in interest in learning process after the intervention through project Anubhav

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## 4.15 Impact of project 'Anubhav' on visual and multi-sensory engagement

**Table 15**: Improvement in visual and multi-sensory engagement in learning process

| Response | Frequency | Percent |
|---|---|---|
| Yes | 107 | 84.9 |
| No | 5 | 4.0 |
| Can't say | 14 | 11.1 |
| **Total** | **126** | **100.0** |

Above Table 15 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on change in student's interest in learning process with respect to visual and multi-sensory engagement. According to 84.9% respondents post intervention there was improvement in student's visual and multi-sensory engagement in learning process while 4.0% respondents feel there was no improvement. Furthermore, 11.1% stated that they not sure about it. In view of the study results it is evident that majority of teachers feel that there was significant improvement in visual and multi-sensory engagement of students in learning process after intervention through project 'Anubhav'.
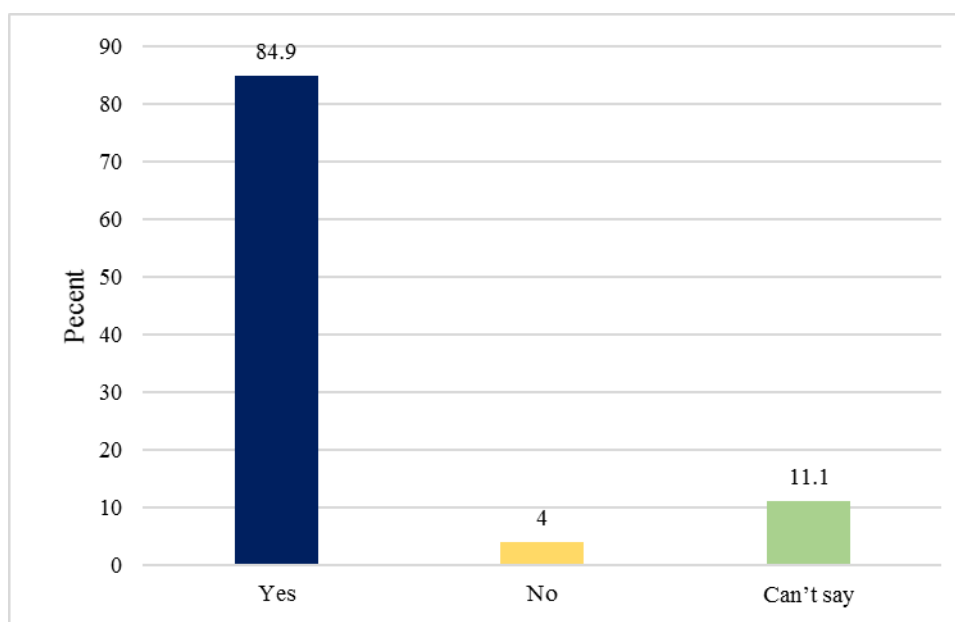


**Fig 15**: Improvement in visual and multi-sensory engagement in learning process

### 4.16 Impact of project 'Anubhav' on Peer Interaction and Collaboration

**Table 16:** Improvement in peer interaction and collaboration after intervention through project Anubhav

| Response | Frequency | Percent |
|----------|-----------|---------|
| Yes | 112 | 88.9 |
| No | 5 | 4.0 |
| Can't say | 9 | 7.1 |
| **Total** | **126** | **100.0** |

Above Table 16 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on peer interaction and collaboration of students in learning process. According to 88.9% respondents there was improvement in peer interaction and collaboration of students in learning process after intervention while 7.1% respondents are not sure about it. Furthermore according to 4.0% respondents there was no improvement in peer interaction and collaboration of students in learning process after intervention. In view of the study results it is evident that majority of teachers feel that there was significant improvement in peer interaction and collaboration of students in learning process after intervention through project 'Anubhav'.
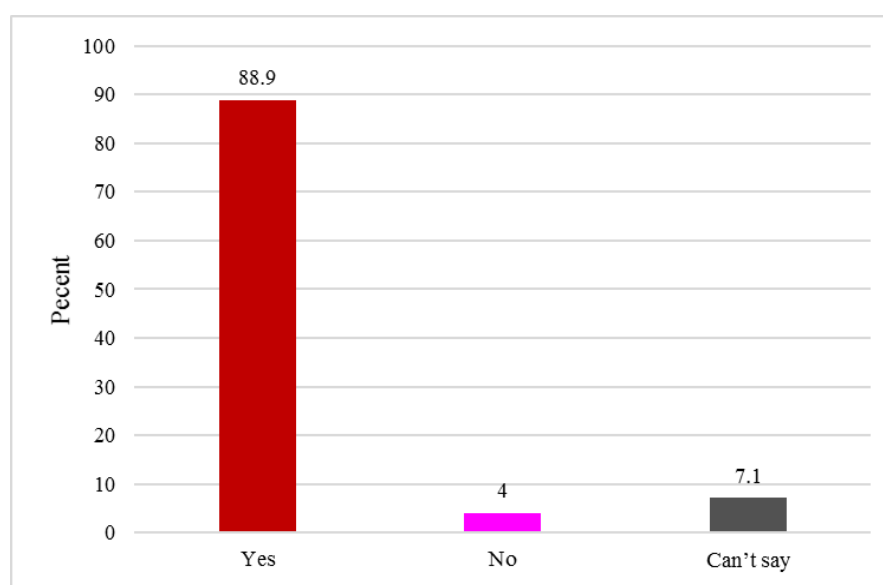


**Fig 16:** Improvement in peer interaction and collaboration after intervention through project Anubhav

## 4.17   Impact of project 'Anubhav' on Choice and Autonomy

**Table 17:** Improvement in choice and autonomy of students' vis-à-vis learning process after intervention through project Anubhav

| Response | Frequency | Percent |
|---|---|---|
| Yes | 107 | 84.9 |
| No | 7 | 5.6 |
| Can't say | 12 | 9.5 |
| **Total** | **126** | **100.0** |

Above Table 17 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on choice and autonomy (providing options for selecting activities, materials, or topics allows children to explore their interests, express preferences, and take ownership of their learning) aspects of learning process. According to 84.9% respondents there was significant improvement in choice and autonomy of student after this intervention while 5.6% respondents are not sure about it. Furthermore, according to 5.6% respondents there was no improvement in choice and autonomy of student after this intervention. In view of the study results it is evident that majority of teachers feel that after intervention through project 'Anubhav' there was significant improvement in students interest in learning process with respect to choice and autonomy.
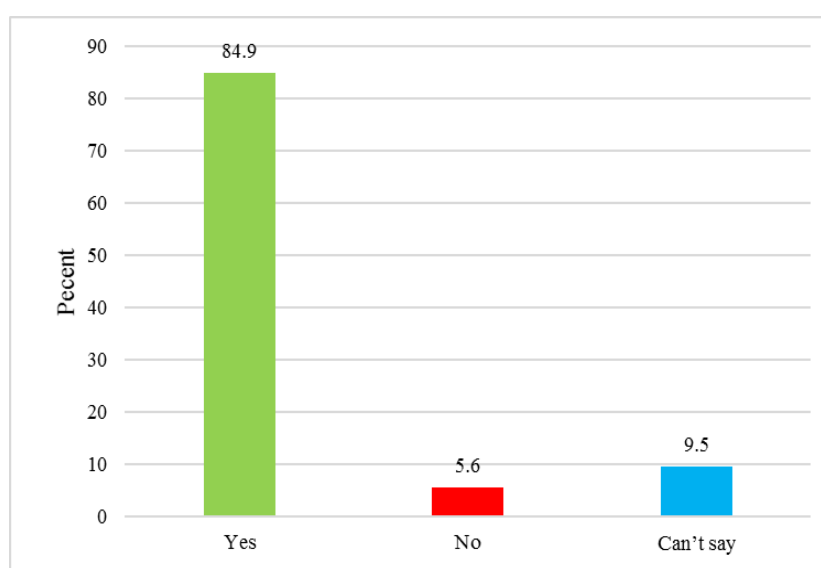


**Fig 17:** Improvement in choice and autonomy of students' vis-à-vis learning process after intervention through project Anubhav

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### 4.18    Impact of project 'Anubhav' on Hands-on Experiences and Exploration

**Table 18:** Improvement in on student's interest in learning process (hands-on experiences and exploration) after intervention through project Anubhav

| Response | Frequency | Percent |
|----------|-----------|---------|
| Yes | 107 | 84.9 |
| No | 6 | 4.8 |
| Can't say | 13 | 10.3 |
| **Total** | **126** | **100.0** |

Above Table 18 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on change in student's interest in learning process with respect to hands on experience and exploration (Science experiments, nature walks, art projects, and hands-on activities stimulate curiosity). According to 84.9% respondents there was improvement in student's interest in learning process (hands on experience and exploration attributes) after this intervention while 10.3% respondents are not sure about it. Furthermore, according to 4.8% respondents there was no improvement in student's interest in learning process (hands on experience and exploration attributes) after this intervention. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has resulted in significant improvement in student's interest in learning process (hands on experience and exploration attributes) after this intervention.
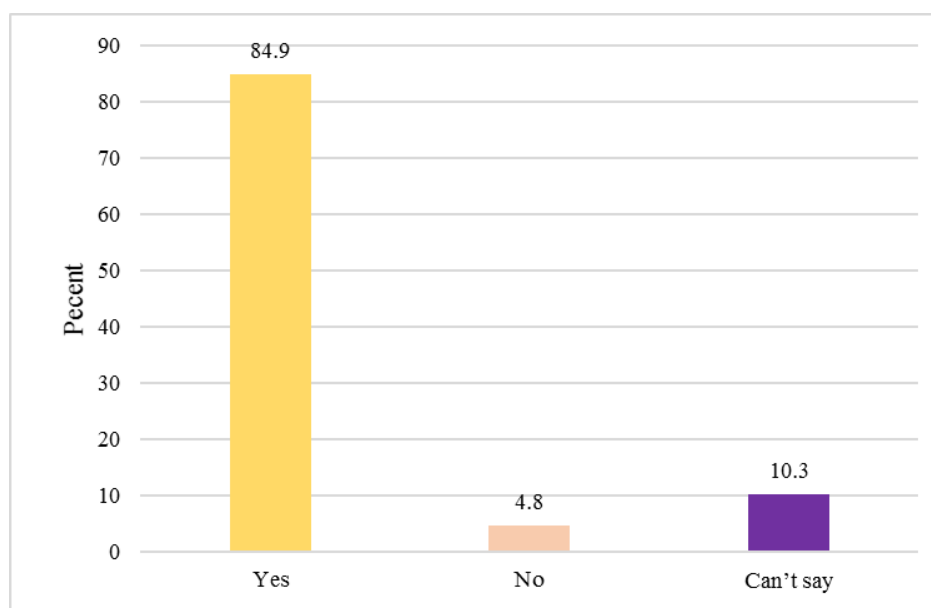


**Fig 18:** Improvement in on student's interest in learning process (hands-on experiences and exploration) after intervention through project Anubhav

### 4.19   Impact of project 'Anubhav' on learning engagement

**Table 19:** Impact of the intervention (through project Anubhav) on improvement in learning engagements

| Response | Frequency | Percent |
|---|---|---|
| Significant Improvement | 84 | 66.7 |
| Slight Improvement | 35 | 27.8 |
| No Change | 7 | 5.5 |
| **Total** | **126** | **100** |

Above Table 19 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on improvement in students learning engagements. According to 66.7% respondents there was significant improvement in the student's engagements in learning process after this intervention while 27.8% respondents feel that it has shown slight improvement. Further according to 5.5% respondents there was no change in the student's engagements in learning process after this intervention. In view of the study results it is evident that majority of teachers feel that there was significant improvement in engagement in learning process after intervention through project 'Anubhav'.
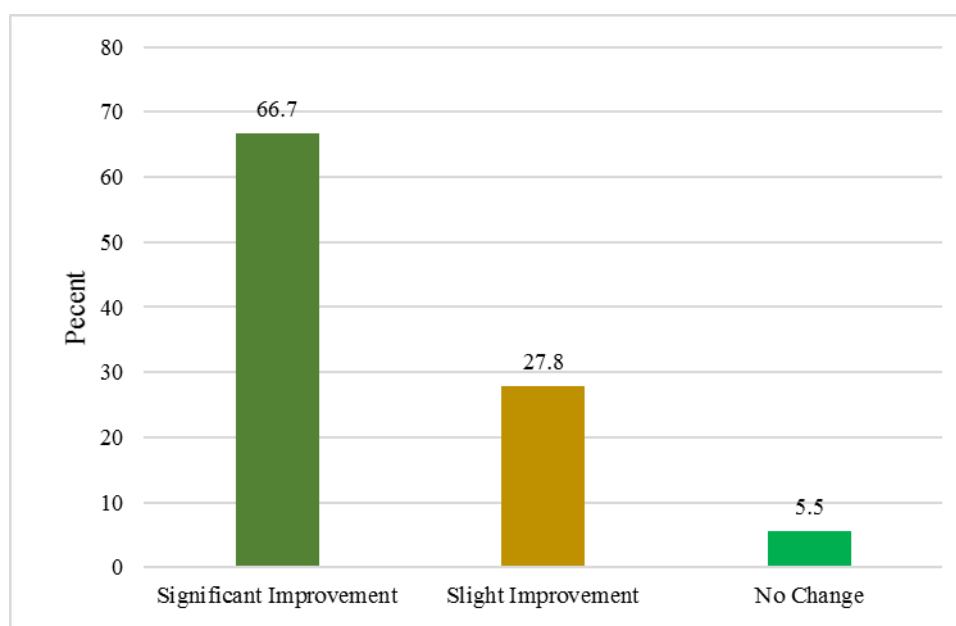


**Fig 19:** Impact of the intervention (through project Anubhav) on improvement in learning engagements

**4.20 Impact of project 'Anubhav' on Student's ability to apply the concepts learnt in school**

**Table 20:** Impact of the intervention (through project Anubhav) on improvement in Student's ability to apply the concepts learnt in school

| Response | Frequency | Percent |
|---|---|---|
| Yes | 115 | 91.3 |
| No | 4 | 3.2 |
| Can't say | 7 | 5.6 |
| **Total** | **126** | **100** |

Above Table 20 presents opinion of the respondents about impact of intervention through project '**Anubhav**' on improvement in Student's ability to apply the concepts learnt in school. According to 91.3% respondents, students showed improvement in the ability to apply the concepts learnt in school after this intervention while 5.6% respondents are not sure about it. Furthermore, according to 3.2% respondents, there was no improvement in the ability of the students to apply the concepts learnt in school after this intervention. In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' resulted in significant improvement in students ability to apply the concepts learnt in school.
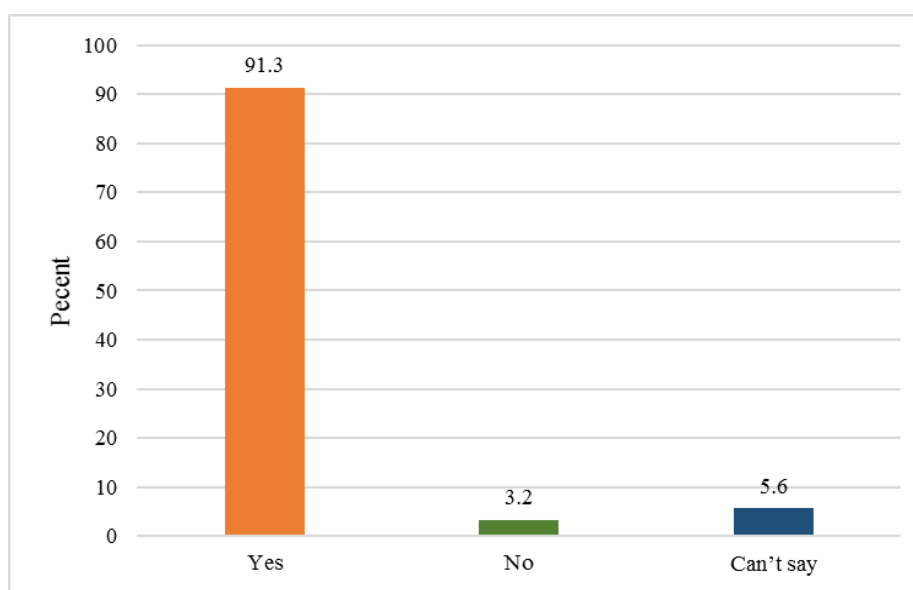


**Fig 20:** Impact of the intervention (through project Anubhav) on improvement in Student's ability to apply the concepts learnt in school

# Chapter – V

# Conclusions

## 5.1    Demographic details of the respondents

### 5.1.1    Age of the Respondents

- In view of the study results it is evident that, majority of teachers of study area belong to the age-group above 45 years.

### 5.1.2    Gender of the respondents

- In view of the study results it is evident that, majority of teachers of study area are female.

## 5.2    Assessment of the intervention method

### 5.2.1    Relevance of the intervention

- In view of the study results it is evident that, majority of teachers feel that intervention through project 'Anubhav' has high impact vis-a-vis its relevance in the teaching learning process.

### 5.2.2    Coherence of the intervention

- From the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has high impact vis-a-vis its coherence in the teaching learning process.

### 5.2.3    Effectiveness of the intervention

- From the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has high impact vis-à-vis its effectiveness in the teaching learning process.

### 5.2.4: Impact of the intervention (through project Anubhav) on improvement in students' learning skills

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students' learning skills.

**5.2.6    Sustainability of the intervention**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has high impact vis-a-vis its sustainability in the teaching learning process.

**5.3    Impact of project 'Anubhav' on Learning Outcome**

**5.3.1    Impact of project 'Anubhav' on improvement in basic knowledge**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students' basic knowledge.

**5.3.2    Impact of project 'Anubhav' on improvement in Mathematics Skills**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students' mathematics skills.

**5.3.3    Impact of project 'Anubhav' on improvement in critical thinking & problem solving**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students critical thinking & problem solving.

**5.3.4    Impact of project 'Anubhav' on improvement in learning strategies**

- In view of the study results it is evident that majority of teachers of study area feel that intervention through project 'Anubhav' has significant improvement in students learning strategies.

**5.3.5    Impact of project 'Anubhav' on overall improvement and confidence**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students' confidence.

**5.3.6    Impact of project 'Anubhav' on improvement of learning outcomes**

- In view of the study results it is evident that majority of teachers of study area feel that intervention through project 'Anubhav' has significant improvement in learning outcomes of the student.

**5.4    Impact of project 'Anubhav' on interest in learning process**

**5.4.1   Impact of project 'Anubhav' on improvement of students' interest in learning process**

- In view of the study results it is evident that majority of teachers of study area feel that intervention through project 'Anubhav' has significant improvement in students interest in learning process with respect to interactive and playful learning.

**5.4.2   Impact of project 'Anubhav' on visual and multi-sensory engagement in learning process**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students interest in learning process with respect to visual and multi-sensory engagement.

**5.4.3   Impact of project 'Anubhav' on Peer Interaction and Collaboration**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students interest in learning process with respect to peer interaction and collaboration.

**5.4.4   Impact of project 'Anubhav' on Choice and Autonomy**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students interest in learning process with respect to choice and autonomy.

**5.4.5   Impact of project 'Anubhav' on Hands-on Experiences and Exploration**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students interest in learning process with respect to hands on experiences and exploration.

**5.5    Impact of project 'Anubhav' on learning engagement**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students learning engagement.

**5.6    Impact of project 'Anubhav' on Student's ability to apply the concepts learnt in school**

- In view of the study results it is evident that majority of teachers feel that intervention through project 'Anubhav' has significant improvement in students ability to apply the concepts learnt in school.

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# Annexure – I

## Impact evaluation of the Project "ANUBHAV"

## Transforming School Education

An experiential Learning Project by Nikalas Foundation

Dear Sir/Madam,

I am approaching you with this questionnaire, to get your feedback in view of assessing impact of the project Anubhav. I request you to spare some time to provide your valuable feedback. I assure you that the information provided herein will be kept confidential and will be used for this research work only. Kindly read each statement carefully and indicate your choice by (√) on any of the options given below:

### Questionnaire for the Teachers

**Section A:** Demographic Information

1. Name of the respondent   : _____

2. Name of the School        :_____

3. District: ----------------------------------------------------------------------

4. State: ----------------------------------------------------------------------

5. Age :  (a)  18 - 30                (b)  31 - 45                (c)  More than 45

6. Gender:    Male/Female

**Section B:** Opinion about impact of project '**Anubhav**', the experiential learning project vis-à-vis on students learning outcomes

Learning outcomes describe the measurable skills, abilities, knowledge or values that students should be able to demonstrate as a result of a completing a course (which in this case is project **Anubhav**). In view of the above, you are requested to kindly provide your response to the following statements/questions so as to determine the overall impact of the project.

**Section B-1: RELEVANCE** is the intervention doing the right things?

| Statements/Questions | Yes | No | Not sure |
|---|---|---|---|
| • Contents of all the learning kits are as per syllabus | | | |
| • Students consider kit as part of their learning process | | | |
| • Students willingly participate in the learning process | | | |

**Section B-2: COHERENCE** how well does the intervention fit?

| Statements/Questions | Yes | No | Not sure |
|---|---|---|---|
| • The learning kits are easy to use | | | |

| Statements/Questions | | | |
|---|---|---|---|
| • Kits contain all the things mentioned | | | |
| • Kits help teachers in explaining the concepts | | | |
| • Students are curious to use the kits | | | |

**Section B-3: EFFECTIVENESS** is the intervention achieving its objectives?

| Statements/Questions | Yes | No | Not sure |
|---|---|---|---|
| • Student's interest in learning process has improved | | | |
| • Students understood the concepts easily | | | |
| • Students learned the concept in less time | | | |

**Section B-4: EFFICIENCY** how well are resources being used?

| Statements/Questions | Yes | No | Not sure |
|---|---|---|---|
| • Components of kits are easy to use | | | |
| • All the components are used | | | |
| • Students are eager to use the learning kits | | | |

**Section B-5: IMPACT** what difference does the intervention make?

| Statements/Questions | Improved Significantly | Moderate Improvement | No Change |
|---|---|---|---|
| • Student's Creativity | | | |
| o **Originality** (how novel/unique ideas students use) | | | |
| o **Relevance** (Considers how useful or valuable the ideas are) | | | |
| o **Fluency** (Speed and ease of generating new creative ideas) | | | |
| o **Flexibility** (Diverse categories of ideas ) | | | |
| • Student's Focus | | | |
| • Student's Cognition | | | |
| • Student's Problem-Solving Skills | | | |
| • Student's Visualisation | | | |
| • Student's Motor Skills | | | |
| • Student's Spatial Thinking | | | |
| • Learning Outcomes | | | |
| • Student's psychological well-being post experiential learning activity | Positive | Indifferent | Exhausted |

**Spatial thinking**: The ability to understand, reason about, and remember the spatial relationships between objects or spaces. It involves visualizing, interpreting, and mentally manipulating shapes, structures, and their positions in both real and abstract environments.

**Section B-6: SUSTAINABILITY** will the benefits last?

| Statements/Questions | Yes | No | Not sure |
|---|---|---|---|
| • Students look forward to engaging in experiential learning | | | |
| • Students can independently apply the concepts | | | |
| • Learning kits are durable and work as per claim | | | |
| • There is very less rework of teaching difficult concepts | | | |

**Section C: Assessment of Improvement in learning outcomes**

Kindly indicate the changes in learning outcomes with respect to following attributes

| Attributes | No change | Slight Improvement | Significant Improvement |
|---|---|---|---|
| **Basic Knowledge Assessment** | | | |
| • Ability to identify simple features of plants, animals, food items etc | | | |
| • Understanding relationship amongst family members | | | |
| • Understanding directions | | | |
| • Counting things with ease and accuracy | | | |
| • Understanding time | | | |
| • Identification of basic shapes like circle square, rectangle and triangle | | | |
| **Mathematics Skills** | | | |
| • Ability to perform basic arithmetic operations | | | |
| • Ability to compare numbers with ease | | | |
| • Understanding fractions | | | |
| • Ability to estimate length, distance, height, weight, volume etc | | | |
| **Critical Thinking and Problem Solving** | | | |
| • Ability to immediately explain how to solve a problem when he/she doesn't know the answer | | | |
| • Approach towards solving difficult tasks | | | |
| • Ability to categorise the given data and form groups of similar information | | | |

| Attributes | No change | Slight Improvement | Significant Improvement |
|---|---|---|---|
| **Learning Strategies** | | | |
| • Having specific or favourite way to learn new things | | | |
| • No hesitation about asking questions when he/she doesn't understand something | | | |
| • Helping a classmate understand something they were struggling with, etc. | | | |
| **Overall Improvement and Confidence** | | | |
| • Overall progress in school | | | |
| • Confidence of students in various abilities compared to the beginning of the year | | | |
| • Overcoming learning related challenges | | | |

### Section D: Improvement in interest in the learning process

Kindly indicate the <u>changes in student's interest in learning process</u> with respect to following attributes

| Attributes | Yes | No | Can't say |
|---|---|---|---|
| **Interactive and Playful Learning** | | | |
| • Students are keen to learn through hands-on, interactive, and playful activities | | | |
| • Students are keen to learn through exploration | | | |
| • Students are keen to learn through experimentation | | | |
| **Visual and Multi-Sensory Engagement** | | | |
| • Visual aids raised student's interest in learning | | | |
| • Multi-sensory materials promote interest in learning | | | |
| • Colourful visuals, tactile objects, and storytelling stimulated children's interest in learning | | | |
| **Peer Interaction and Collaboration** | | | |
| • Group activities raised student's interest in learning | | | |
| • Peer discussions encourage student's interest in learning | | | |
| **Choice and Autonomy** | | | |
| • Offering choices and opportunities raised students interest in learning | | | |
| • Available options for selecting activities, materials, or topics raised students interest in learning | | | |
| • Opportunity to take ownership of their learning raised student's interest in learning | | | |
| **Hands-On Experiences and Exploration** | | | |

| Attributes | | | |
|---|---|---|---|
| • Option to explore, manipulate, and discover concepts raised student's interest in learning | | | |
| • Hands-on activities stimulated curiosity and raised student's interest in learning | | | |
| • Recognizing and celebrating students' efforts and achievements raised student's interest in learning | | | |

**Section E: Improvement in learning engagements**

Kindly indicate the <u>improvement in student's learning engagements</u> with respect to following attributes

| Attributes | No change | Slight Improvement | Significant Improvement |
|---|---|---|---|
| **Attention** | | | |
| • Task oriented teaching improved ability of students to focus and sustain attention on learning activity. | | | |
| **Interest** | | | |
| • Variety in activities raised student's engagement in learning process | | | |
| **Relevance** | | | |
| • Personal Experiences related to children's lives raised student's engagement in learning process | | | |
| **Challenge** | | | |
| • Adequate level of challenges in activities raised student's engagement in learning process | | | |
| **Feedback** | | | |
| • Timely and constructive feedback by teachers raised student's engagement in learning process | | | |
| **Intrinsic Motivation** | | | |
| • The design and variety of activities resulted in intrinsic motivation | | | |

**Section F: Assessment of student's ability to apply the concepts learnt in school**

Kindly provide your feedback about student's <u>ability to apply various concepts learnt in school</u> with respect to following attributes

| Attributes | Yes | No | Can't say |
|---|---|---|---|
| **Curriculum and Instructional Design** | | | |
| • Emphasis on application-based learning help student's to develop ability to apply the concepts learnt | | | |
| **Teacher Training and Professional Development** | | | |
| • Training given to teachers played a crucial role in fostering application-based learning | | | |

| Resources and Materials | | | |
|---|---|---|---|
| • Access to appropriate resources, materials, and technology supported application-based learning | | | |
| • Recognizing and celebrating student achievements in application-based learning motivates student's to develop ability to apply the concepts learnt | | | |

What changes you feel are needed to improve the effectiveness of the project '**Anubhav**'?

-------------------------------------------------------------------------------------------------

-------------------------------------------------------------------------------------------------

Thank you for your time!

# Annexure – II

# List of Schools

1. Vanvasi Kalyan Ashram Shala Guhi

2. Vanvasi Kalyan Ashram Shala Mangaon

3. Surhud Mandal Bhandarkar Road Pune

4. Surhud Mandal Hadapsar, Pune

5. Surhud Mandal Dhayri Pune

6. Surhud Mandal Nigdi, Pune

7. Ankur Vidya Mandir, FC Road, Pune

8. Utkarsh Vidya Mandir, Khapri Nagpur

9. Niwasi Muk Badhir Vidyalaya Hudkeshwar

10. Deaf and Dumb Residential School, Saoner

11. Ekal Gram Sanghathan Pandharkawada Sanch

12. Ekal Gram Sanghathan Gondia Sanch