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**СЕКЦІЯ 2. СПЕЦИФІЧНІ ВИКЛИКИ СИСТЕМИ ОХОРОНИ  
ПСИХІЧНОГО ЗДОРОВ'Я: ДИТЯЧА ПСИХІАТРІЯ, СУПРОВІД  
ЛЮДЕЙ З ІНВАЛІДНІСТЮ, ЛЮДЕЙ ПОХИЛОГО ВІКУ;  
СИСТЕМА ОХОРОНИ ПСИХІЧНОГО ЗДОРОВ'Я У СІЛЬСЬКІЙ  
МІСЦЕВОСТІ**

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**IMPACT OF VISUAL LITERACY SKILL PROGRAM  
ON VISUAL LITERACY OF DEPRIVED CHILDREN  
AND NON-DEPRIVED CHILDREN**

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*In the present study an effort has been made to evaluate the effect of early visual literacy skill program on visual literacy of deprived and non deprived children. There were three levels of visual literacy skill program and their impact on different groups of children was made to measure up the levels of visual literacy skill program on performance of both deprived and non deprived children. It was hypothesis that visual literacy skill program will level off the performance of both deprived and non deprived children. As the duration of visual literacy skill program increase it will result in better performance of pictorial perception and visual literacy. The findings of the study have revealed that by enriching the exposure of deprived children with visual literacy skill program one can enhance their performance to the level of non deprived children. An effort has also been made to address the issues related to the development of simulation program on visual literacy.*

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**Key words:** Visual literacy skill program, Early Intervention and Simulation, Amelioration of Deprivation with Early Intervention, Pictorial Perception Simulation, Deprivation and Cognitive Development, Early Child Development and Simulation.

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Visual literacy taxonomy begins with pictorial perception, construction of pictorial meaning, visual memory, visual learning, mental imagery of seeing, understanding and interpreting the visual world [13, 14]. It comprehend in discrimination and make sense of visual object as a part of visual acuity, it also helps in defining space and interpreting the visual objects with the eye of mind. Hence, today's world is visual driven world which is much more than sequencing and discriminating of visual objects and visual literacy refers to a group of competencies which enable a person to define space and interpret visual object with the visual meaning construct.

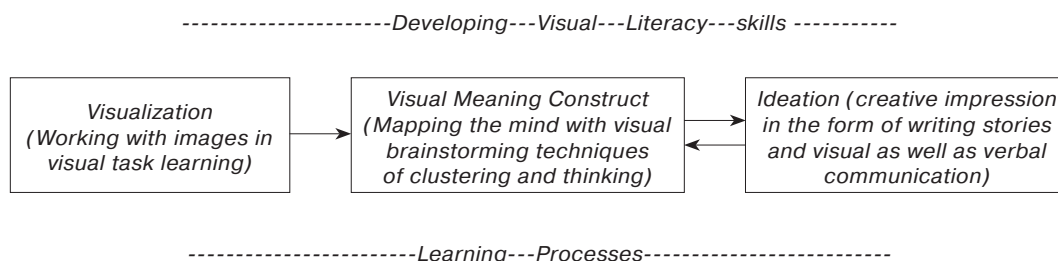
Visual literacy occurs by way of developmental trajectory and practices which includes three broad categories visualization (visual thinking), visual meaning construction and ideation (creative expression) [9]. The findings of neuroscience also indicates that interpreting information in multiple ways engage multiple channels for processing the information [3].

It is extensively believed that psychological deficiencies noted on the part of deprived children are not genetic in nature rather they are associated with deficiencies of physical and socio-culture nature. Thus, in the present study an effort have been made to study the impact of visual skill literacy program on the visual skill of deprived children and non deprived children.

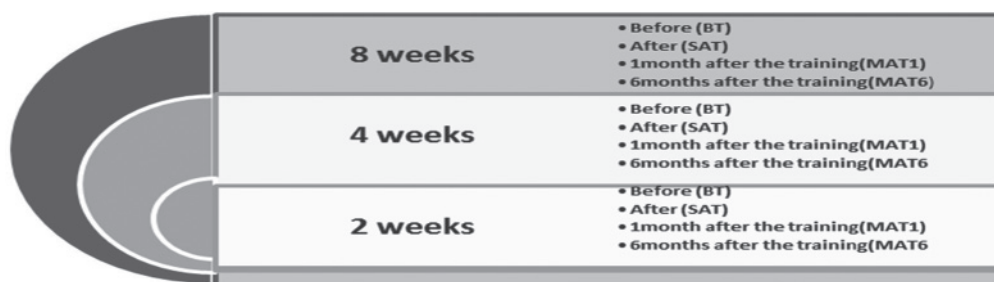
**Hypothesis.** 1. Non-deprived children will perform better than deprived children before the training. 2. Visual skill literacy program will level off the difference between deprived and non deprived children. 3. Duration of visual skill literacy program will have positive relation with the performance. 4. The impact of visual skill literacy program will maintained over the longer duration of time.

**Sample.** The study was conducted with 8-9 year age village children on the outskirts of Varanasi, India. An equal number of deprived and non-deprived children were selected. The main occupation of the population, from which the children were selected, was agriculture. Children of 8–9 years were selected because it is around this age level that the maximum difference between the performance of high and low caste or deprived and non-deprived children has been reported [10, 11]. The overall sample consisted of 120 children drawn through a quasi randomization procedure. The sampling was done on the basis of SES (socio economic scale) level and children were matched in SES level to put in two groups deprived and non-deprived.

**Methodology.** There are two kinds of tests and tasks used for the purpose of study. The use of criterion test was to measure the performance before (BT), soon after training (SAT), one month after the training (SAT<sub>1</sub>) and six month after the training (SAT<sub>6</sub>) was made to compare the performance of deprived and non- deprived children over the period of time with various levels of training. Then ‘training tests and task’ were used for the purpose of visual literacy development. The visual skill program was designed in the given manner to enhance the visual literacy of deprived and non deprived children.



Thus the performance of visual literacy was measured with three durations of training (2weeks, 4 weeks and 8weeks) in four consequent manners (BT, SAT, MAT<sub>1</sub>, MAT<sub>6</sub>), the diagrammatic representation is as follows;



### Test Materials:

Two kinds of tests/tasks were used in study.

#### 1. Criterion Test/Tasks

These were used to measure the child's ability to perform the test before and after training. Included in the category was the Sequence Perception Test (SPT) [7].

**1.1. Sequence Perception Test.** This test consists of six set of pictures. In the present study only three of them were used due to their appropriateness for the rural children. The test was developed to measure the skill for perception and interpretation of relationship among pictures. The sets used in the study were: 1.The school boy, 2. The farmer, and 3. The hunter and the deer. The first one was used for practice purpose; the remaining two constituted the test series.

On the Sequence Perception Test, scores were provided for the sequential arrangement and description of pictures. If the child arranged the pictures in the first phase, “four” scores were given. On the succeeding phases, “three”, “two” and “one” scores

were provided respectively. The failure to arrange cards in the proper sequence was scored “zero”. The scores ranged from 0 to 8 on this test.

The stories were also analyzed qualitatively. They were categorized as “good”, “poor” or “nil” depending on their degree of correspondence with the original story. “Two”, “one” and “zero” scores were provided for these stories respectively. These were called “description scores” which ranged from 0 to 6. The inter-score agreement was found to be 94.

**2. The Training Tests and Tasks.** These tests/tasks were used for inducting children into the process of testing and making them learn the mechanisms or operations on various tasks. The training test and tasks consisted of *Indo-African Embedded Figures Test* [7], *Kohs’ Block Design and Picture Comprehension Task* [5] and *Object Perception and Classification Task* [12].

**Analysis of Results.** The pictorial perception of children was measured in terms of arrangement and description of pictures. These analysis are presented separately.

**2.1. Arrangement Measure.** Table 1 presents the mean scores and SD of HC and LC groups for each training level. A clear effect of training on the pictorial perception of both caste groups is evident. The magnitude of improvement varies positively from two to four and eight weeks of training. The effect is not so strongly evident with two week training as with four and eight week training in either caste group. A successive improvement in pictorial perception up to 6 months clearly in evidence with eight week training.

Table 1. Mean and SD of groups of SPT (Arrangement measure)

Training Duration	Groups	Scores	BT	SAT	MAT <sub>1</sub>	MAT <sub>6</sub>
Two Weeks	HC	Mean	3.6	6.25	3.53	3.2
		SD	1.38	9.63	1.16	0.16
	LC	Mean	4.9	5.7	5.8	5.15
		SD	1.17	1.58	1.72	1.15
Four Weeks	HC	Mean	3.15	6.4	7.1	6.55
		SD	1.85	1.83	1.92	1.5
	LC	Mean	3.55	6.6	8.25	7.35
		SD	1.69	1.98	1.66	1.35
Eight Weeks	HC	Mean	4.85	9.85	10.1	10.4
		SD	2.45	1.53	1.99	1.91
	LC	Mean	4.5	8.75	9.75	9.75
		SD	1.99	0.81	2.02	2.02

ANOVA revealed significant effect of training on children’s pictorial perception ( $F = 64.12$ ;  $df = 1,236$ ;  $P < 0.01$ ). Further analysis suggested that the difference between HC and LC children was not significant after training. Longer duration of training was more effective than shorter duration of training both for high and low caste children.

**2.2. Description Measure.** The mean scores and SD of various groups on the measures are presented in Table 2. It may be observed that after training the overall pictorial perception of children has considerably increased. Longer duration of training has produced greater impact on pictorial perception than a shorter duration of training. With regard to maintenance of training effect overtime, the sores show a relatively less impact of two week than that of four and eight week training.

ANOVA revealed significant effect of training on pictorial perception ( $F = 34.46$ ,  $df = 1,236$ ,  $P > 0.01$ ). The interaction between caste and training was not significant ( $F = 0.09$ ;  $df = 1,236$ ;  $P > 0.05$ ), indicating a uniform effect of training for both the groups. The effect of duration ( $F = 26.33$ ;  $df = 2,114$ ;  $P < 0.01$ ) of training was significant. Suggesting a longer duration of training to be more effective than shorter duration of further analysis suggested that while the effect of two week training dissipated over time the effects of four and eight week training were maintained almost to the same level by high as well as low caste children.

Table 2. Mean and SD of groups on SPT (Description measure)

Tracing Duration	Groups	Scores	BT	SAT	MAT <sub>4</sub>	MAT <sub>6</sub>
Two Weeks	HC	Mean	0.2	0.7	0.75	0.6
		SD	0.4	0.55	0.54	0.58
	LC	Mean	0.38	0.4	0.25	0.25
		SD	0.48	0.49	0.43	0.43
Four Weeks	HC	Mean	0.3	1	1.3	1.05
		SD	0.46	0.55	0.64	0.49
	LC	Mean	0.55	1.35	1.25	1.1
		SD	0.5	1.82	0.54	0.54
Eight Weeks	HC	Mean	1.1	2.9	2.9	3.05
		SD	1.41	1.81	1.7	1.56
	LC	Mean	1.19	2.95	3.05	3
		SD	1.4	1.57	1.55	1.92

**Discussion** The findings reveal that there was significant difference between the children of high and low caste prior to visual literacy skill program but with the help of visual literacy skill program cognitive-perceptual pictorial perception of deprived children has been brought to the level of non deprived children. In the same way, effect of different durations of visual literacy skill program becomes more dominant feature. Thus, the children who were exposed to longer duration of visual literacy skill program perform better than those who were exposed to shorter duration. The effect of visual literacy skill program was similar for the children of both groups up to a period six months. Showing that the effect of visual literacy skill program was not only evident immediately but it was maintained up to longer duration of time in the same magnitude by deprived as well as non deprived children.

**3. Visual Literacy.** Among the plural concept of literacy visual literacy has its own significance for the novice. Visually literate people can read the intended meaning in a visual text, interpret the purpose and intended meaning, and evaluate the form, structure and features of the text.

**3.1. Visualization (Visual thinking).** Results have established that early simulation program was useful in terms of enhancing *visualization* (visual thinking) among the children of both deprived and non deprivation group. Their performance was significantly improved to think and visualize the sequence in story after the early simulation program. Visualization of pictures contains the step such as gathering interpreting, understanding, organizing and communication the information [9].

**3.2. Visual meaning construction.** The *visual meaning construction* is the ability, in which one can see orders and eyes visit in different elements of scene to link one picture to another. This helps one to see propinquity from one picture to another picture in a meaningful manner to construct a visual meaning and then increase ability to order the pictures in a linear path to form a story. Absence of pictorial environment cause progressive deprivation in pictorial perception [10]. On the other hand studies have revealed that by enriching the environment one can reduce the negative consequences of deprivation [4, 5, 8, 13, 15] into positive development.

**3.3. Ideation** (creative expression). Visual communication is subordinate area of visual literacy [9] and "A picture is worth a thousand words." The elements of visual communication and the levels of expression are also analyzed separately in the present study which includes visualization and narration of a story depicting in different set of pictures and form different stories for each set of picture. Story telling is one of the most primal forms of communication which is linked with schema and cognitive mapping in mind. At the end of early simulation program both deprived children and non-deprived children were found narrating good stories from the pictures.

**4. Effect of Visual Literacy Skill Program.** Transfer of knowledge and strategies as an important aim to simulation program is perceived. In the present study training through different tests and tasks shows a formative influence on cognitive-perceptual task pictorial perception of high and low caste children.

4.1. The Effect of Durations of Visual literacy skill program. A synoptic analysis of the effect of duration of training showed that there was considerable improvement in pictorial perception from two to four and eight weeks of visual literacy skill program. Effect of interference due to number of intervening activities was measured only in two weeks training group, on the other hand in eight weeks of training group there was a successive improvement in scores. It appears that optimum level of arousal resulted in latest rehearsal similar to the phenomenon of “reminiscence” of Ballard [1]. Thus we can say (1) visual literacy occurs by way of a developmental trajectory and requires instruction as well as practice, and (2) that it involves as much thought as it does visual awareness and is an integral component of the skills and beliefs related to inquiry.

**Conclusion.** According to Ann Marie Seward Berry, Visual thinking has its own holistic logic, which operates on every level of awareness from subliminal perception process to holistic creative thinking which allow us to consciously combine different elements in new and surprising way. Visual literacy skill with reading writing illiteracies has huge implication for learning as well as for teaching. It helps in parallel development of multiple illiteracies. Visual and verbal illiteracies operate together and contribute together to provide context and understanding of visual phenomena. Therefore visual thinking is also important for creativity. It has been found that spoken information paired with visual information results in better recall [3]. The ability to create images help learner to decipher understand and communicate with images and at the same time help to integrate with other sensory experiences. Visually literate people are more sophisticated with visual images and enjoy the master work of visual communication. Thus the visual literacy program is providing visual information for practice and mastering visual skills with other related skills.

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ВПЛИВ ПРОГРАМИ ЗОБРАЖАЛЬНОГО МОДЕЛЮВАННЯ  
НА ВІЗУАЛЬНУ ГРАМОТНІСТЬ ДІТЕЙ З ОБМЕЖЕНИМИ МОЖЛИВОСТЯМИ  
ТА НА ЗВИЧАЙНИХ ДІТЕЙ

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У дослідженні зроблені зусилля для оцінки ефекту ранньої симуляційної програми з образотворчого сприйняття обмежених і звичайних дітей. Було проведено три рівня програми моделювання, і вивчено їх вплив на різні групи дітей. Була зроблена оцінка ефективності впливу цих рівнів симуляційної програми на обмежених і звичайних дітей. Гіпотеза полягала в тому, що симуляційна програма буде вирівнювати ефективність як обмежених так і звичайних дітей. У міру збільшення рівнів симуляційної програми це призведе до підвищення ефективності графічного сприйняття і візуальної грамотності. Результати дослідження показали, що, збагачуючи сприйняття обмежених дітей за допомогою симуляційної програмою, можна підвищити їх ефективність до рівня звичайних дітей. Були також зроблені зусилля для вирішення питань, пов'язаних з розробкою симуляційної програми по візуальній грамотності.

**Ключові слова:** раннє втручання та моделювання, пом'якшення відмови від раннього втручання, моделювання образного сприйняття, позбавлення та пізнавальний розвиток, розвиток раннього дитинства та моделювання.

ВЛИЯНИЕ ПРОГРАММЫ ИЗОБРАЗИТЕЛЬНОГО МОДЕЛИРОВАНИЯ  
НА ВИЗУАЛЬНУЮ ГРАМОТНОСТЬ ДЕТЕЙ С ОГРАНИЧЕННЫМИ  
ВОЗМОЖНОСТЯМИ И НА ОБЫЧНЫХ ДЕТЕЙ

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В исследовании предприняты усилия для оценки эффекта ранней симуляционной программы по изобразительному восприятию ограниченных и обычных детей. Было проведено три уровня программы моделирования, и изучено их влияние на различные группы детей; оценена эффективность воздействия этих уровней симуляционной программы на ограниченных и обычных детей. Гипотеза заключалась в том, что симуляционная программа будет выравнивать эффективность как ограниченных так и обычных детей. По мере увеличения уровней симуляционной программы это приведёт к повышению эффективности графического восприятия и визуальной грамотности. Результаты исследования показали, что, обогащая восприятие ограниченных детей ранней симуляционной программой, можно повысить их эффективность до уровня обычных детей. Были также предприняты усилия для решения вопросов, связанных с разработкой симуляционной программы по визуальной грамотности.

**Ключевые слова:** раннее вмешательство и моделирование, смягчения отказа от раннего вмешательства, моделирование образного восприятия, лишения и познавательное развитие, развитие раннего детства и моделирование.