

CREATIVE ACTIVITY IN PRESCHOOLERS

BY

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1. INTRODUCTION

Childhood shows the man, as morning shows the day John Milton
The early childhood years are the root years for creativity
says Torrance (1966) and they are the great creators too / /

Hurlock (1972) opines that the creativity gives the child
tremendous personal pleasure and satisfaction, rewards that have
a marked influence on his developing personality.

(Sandler; Taylor; Corn, 1977) described that creativity as
a transactive in the sense of being able to design or shape the
environment in accordance with internal systems or motivations.

Hurlock (1972) expressed that a person can be creative when
he produces something he has never produced before, although it may
have been produced in almost the same form, or even in an
identical form by someone else.

Guilford (1964) and Alexeborn (1983) believed that creativity
was an outcome of certain problem solving aspects of intellect.

The popular notion of creativity is that is a unique mental
process—a process needed for no other purpose than to produce
something new, different and original opined Hurlock (1972).

Children are more apt to know themselves whole heartedly into any project if they themselves have participated in the selection and planning of the enterprise (Wingo, Morse, 1970).

Whenever a child discovers an original solution to a problem some degree of creative thinking has been involved. Some children may display creative abilities more often than others, but no children are without some degree of creativity (Reardon and Trotter, 1977). Sundberg, Norman (1959) viewed that children show creativity in sudden solutions to problems, in imaginative use of old things in a new way, and in an interest in things that puzzle them. Jerald (1969) has said that a large and fascinating world opens up to a child when he is able to imagine. He now deals with the imagination of things instead of being bound to what is tangible before him.

The child's drawings for the first attempt are elements, after a prolonged experience. Even incomplete zig-zag discoveries, work may bestow astonishment to them. He moves from the making of lines, which he hardly notices of making careful and deliberate lines, then to spatial compositions and as to drawing the livelier objects, the average of making a drawing recognizable by adults being a little less than 4 years (Russell, 1950).

Creativity is largely a matter of imagination and intangible as it may seem, imagination can be systematically cultivated and it can be taught (Deburn, 1953).

Milgard (1959) suggests that creative thinking occurs largely in the extent of problem solving and involves originally, the ability to reconstruct both the problem and the method of solving them. Rogers (1959) postulates that for the creative process there must be something to observe, a novel construction and an individual stamp on that construction. Logan (1960) said that a good piece of creative art is not only a matter of technique but also one of expression.

"To teach toward creativity is to teach toward the future of society" Louren Fuld and Brittain (1964). They add that the ability to abstract, the skill of analyzing the various parts of a problem or seeing specific relationships. The ability to synthesize, or the ability to combine several elements into a new form or whole, and the ability to organize that is, the ability to put parts together in a meaningful way.

Taylor (1972) brings out the values of creative expression as follows:-

Promotes:-

Independence, satisfaction, enjoyment, emotional release, work habits, muscle development and exploration.

Newell; Shaw and Simon (1962) say that creative expression helps children develop creative thinking. The spontaneity and imagination of the young child will die if it is not encouraged and nurtured. Creativity can also be discussed in terms of a novel or an original product that is usually satisfying, meaningful, valuable to the creator, such a product is a modification or a rejection of previously accepted ideas, represents large amounts of motivation and intellectual energy, and is prompted by an initially ambiguous and ill-defined problem.

As a process creativity can be considered complex thinking that requires as yet unknown properties of knowledge, the ability to see new relationships among objects or events, rather like attention to the environment (McCandless, 1973). The goal of pre-school education is not to increase the amount of knowledge but to create the possibilities for a child to invent and discover says Ripple and Rockcastle (1964).

A good nursery school can provide a very satisfactory second best home for a child (Jolly, 1975).

At the nursery and kindergarten level the aim would not be to teach concrete operations, but to provide experience with their pre-requisites so that creativity will subsequently flourish (Kamii and Radin, 1967).

"Creativity" is rather like 'the weather' in the old joke, every-body talks about it, but nobody does anything about it. The school is to provide environment which allows for the natural flowering of special gifts and opens to all children the opportunity to develop an energetic, flexible, and exploratory style of learning and expression which is appropriate to their individual capacities and interests (Weninger, 1977). Based on the hypothesis the preschoolers will be more creative than non preschoolers of the stimulating environment and opportunity provided to them during the preschool experience this study was undertaken to find out the creative ability of preschool attended and non attended of selected elementary school children, Coimbatore city.

II. REVIEW OF LITERATURE

The review of literature pertaining to this study falls under the following headings:

- A. Importance of the age group**
- B. Importance of the preschool education**
- C. Impact of preschool experience on the allround development**
- D. Definitions on creativity**
- E. Factors influencing creative expression .**

A. Importance of the age group:

The preschool child has the capacity and the language to absorb knowledge, especially about the real world around him where things come from, begins to master the complexity of his experience through his ideas what things are alike, which are different, what things belong together, what is a small part of a bigger thing (Baker, 1976). Muralidharan (1973) opines that preschool years are also crucial for developing proper values and attitudes.

Report of the seminar (1973) expresses that the period of early childhood is also a period of rapid growth and change.

Ambyan (1975) gives out the suggestion of Scott (1968) that the preschool years are of great importance not only for social and emotional one but also for intellectual growth.

Blair and Jones (1978) expressed that since so much of psychological development has occurred before the first grade, services such as nursery schools, home visitation services and other services should all be extended to the preschool children. Ambton (1978) viewed that through preschool period the child learns to focus his attention on more and more elements of a situation with a single 'task'. National association for the education of the young children (1966) reports that the preschool years are the key years in which children learn how others accept them and their demands.

Report of the seminar on preschool child (1973) brings out while this age so important, children under six, particularly between 1-6, had to be organized services in relation to health, nutrition, education and recreation. Evans (1975) opined that a growing body of research experiences that by the age of six most children have already developed a considerable part of the intellectual ability they will possess as adults.

B. Importance of preschool education:

D' Souza (1973) opined that preschool is the training or preparation for future life, whereby the child gets benefitted physically, intellectually morally and psychologically.

Preschooling is desirable for all children, but it is necessary for the disadvantaged without it, there is little possibility of achieving equality in education (O'Leary, 1973).

Only a massive effort to establish both public and private, preschool educational intellectual capacities and physical skills essential to success in achieving total basic literacy (Evans, 1975).

Hunt (1964) believed that the early preschool experience is more important for the perceptual, cognitive, and intellectual functions than it is for the emotional and temperamental functioning. Education is the most important means for a society to move forward (Ambrose 1975). And, Education for the development of maximum individual potential in other related and frequently expressed long range goals for early education include independence in judgement, critical thinking ability, personal initiative and responsibility, self respect, and respect for the rights and properties of others (Evans, 1975).

The movement of preschool education is a new endeavour in the educational system in itself. Education for children below five years is of great importance and in a preschool is of a new and recent origin in the history of education (Pankajen, 1968). Research evidence prove that given environmental stimulation, through preschool education, it is possible to give children a better start in life and thus give them a better chance of higher achievement in later life (Gretberg, 1969).

The preschool education today is to help the child to explore and know his world to discover himself and to become acquainted with many sources from which he can learn (Ruth Strong, 1960). It exists today mainly for the purpose of scientific study of young children (Alpenfels, 1961).

In a large scale study conducted by National Council of Educational Research and Training on the development of children in the age group of 2½ to 5 years it was found that rural children who did not have the opportunity to attend a preschool, were far behind in their development level when compared to urban nursery school going children. They were particularly poor in a draw a man, in complete man copy of forms etc., in tests involving in picture reading in colour naming and in other tasks. The urban nursery school going children on the other hand fared well in these tests (Ruslihdaran, 1968). Early childhood education is to be considered as an segment of our educational process which is continuous throughout the life of organism (Devil, 1969).

C. Impact of preschool experiences on all round development of children:

In short nursery education satisfies the physical emotional intellectual, moral, psychological and social needs of the growing child of the age group 3-5 (Gracoun, 1973).

A nursery school, in words of Austin and Bourne, is child's world, where it is the master of all he surveys, and where he finds

an environment specially designed for the expression of his creative urges (Safaya, 1973). Another benefit of preschool is the experiences a child gains through spending time to a group of children who are not brothers and sisters, under the supervision of an adult who is not one of his parents (Jolly, 1975).

Scott (1968) suggests that the preschool years are of great importance not only for social and emotional one but also for intellectual growth.

11. Definitions on creativity:

"A good piece of creative art is not only a matter of technique but also one form of expression" defined by Logan (1960). Hurlock (1972) defined creativity as a process by which something new, either an idea or an object in a new form or arrangements, is produced. The emphasis on the act of producing rather than on the end result of this act is accepted today as central to the concept of creativity. Davis and Scott (1971) defined creativity, "Creativity is obtaining a combination of things or ability that is new or different as far as the creator of those about him are concerned.

Wingo and Morse (1975) defined creativity, as creative learning is changing ways of thinking, feeling and doing through a process of enquiry and exploration, a looking for relationships and implications, an imagining a relating to things known as assigning of value.

Torrance (1962) defined creativity as creative thinking as gaps or the process of sensing disturbing, missing elements, forming ideas or hypothesis concerning them testing those hypothesis and communicating the results.

"Creative ability is usually regarded as a special talent or aptitude which manifests itself late in adolescence or in adulthood and somewhat exclusively among young people" defined by Millard (1958).

Factors influencing creative expression:

The factors affect the extent and nature of his creative expression. The following are the factors influencing creative expression.

- a. Environmental factors
- b. Heredity factor
- c. Physical factor
- d. Social factor
- e. Cultural factor

E. Environmental factors:

Garrison, Kingston, Mc. Donald (1966) say that the environment is the one, which furnishes the child an opportunity to express himself and encourage him to do so which supplying media in harmony with his interests and abilities is most important, Lehman (1953) has explained the early phase in creativity as due

environmental factors, such as poor health, family circumstances, financial pressures and lack of free time. Whether this pattern will be followed or not will depend largely upon environmental influence that facilitate or hinder the expression of creativity.

Within the home many conditions that affect the development of creativity. If unfavourable, they may present almost insurmountable obstacles. A first environment of any natural ability to be creative when this characteristic is maturationally ready to develop can be most damaging. Further, unfavourable conditions in the home when the child is young are likely to persist and thus to obstruct the development of creativity as the child grows older (Hurlock, 1972).

The age of school entry is a "critical period" in the development of creativity. Among the many school conditions that discourage the development of creativity are very large classes where regimentation is essential. If teachers regard academic achievement as the only path to be overwhelming (Hurlock, 1972).

Heredity factors:

McKinnon (1962) Torrance (1960) the family, therefore has a more profound influence on him than on most of his peers since the peers, the neighbourhood, and probably the school has less opportunity to induce behavioural change.

Creative talents come, to what extent they are inborn, and to what extent they are acquired through practice. These talents very early in childhood to be convinced of the importance of heredity (Guilford, 1964).

Es Physical factors:

Various factors in the child's physical status affects the extent and nature of his creative expression (Garrison, Kingston, McDonald (1966). He adds on that the principles in growth and learning are also applicable to creative ability. The creative expressions of the child will be limited by the extent to which he has discovered the physical and social world he lives in.

Social factors:

A factor influencing creativeness is the social climate where the child does not feel inhibited, he will be free to express himself (Garrison et al, 1967).

Social factors often militate against the development of creativity. Obstructive social factors take into two common forms. Unfavourable attitudes toward children who are creative and lack of social rewards for creativity. In discussing unfavourable social attitudes (Terrence, 1962).

Es Cultural factors:

Hunt (1964) views that the culture of poverty includes restrictions which affect every member of the family in every aspect

of life and development. Deprived children may never have the visual and tactile stimulation which comes from play with colours, blocks, cubes, puzzles, paints, clay crayons and paper (the creative materials) . Children of the higher socio economic groups tend to be more creative than those of the lower groups (Singh, 1970).

We transmit to our children in a thousand ways, explicit or implicit, during the early years of their life. His dexterity can be channelled into the shaping of a spearhead or into the playing of a piano; his visual acuity can mature as an ability to discriminate among many colours or among many pictures (Leadbe, 1972).

III. EXPERIMENTAL PROCEDURE

The present investigation creativity in preschoolers with and without preschool experience consisted the following steps in experimental procedure:

- A. Selection of the school**
- B. Selection of the sample**
- C. Selection of the method**
- D. Conducting the study.**

A. Selection of the school:

Sri Avinashilingam Junior Basic School, Coimbatore is opted for the following reasons.

- 1. Availability of adequate number of sample.**
- 2. Co-operation extended by school teachers.**
- 3. Easily accessible to the convenience of the investigator.**

B. Selection of the sample:

The selected school children, 50 in number, of age six years were selected and the LFT test fabricated by Chatterjee and Sharma (1966) was administered to them. Among 50, 25 had preschool experience while the other half did not have preschool attendance.

C. Selection of the method:

The LMT test was selected to study the creative ability of the children.

Description of the test:

The test consists of 360 pieces as follows :

Squares	60
Rectangles	60
Rhombus	60
Equilateral Triangles	160
Isosceles Triangles	160
Crosses	160

The pieces are in six colours: red, green, blue, yellow, pink and black. Because of the symmetrical distribution of the pieces between the six colours and six shapes, there are always 10 pieces of the same shape and colour combination. These are placed in 36 small compartments in a detachable drawer placed inside the case.

The following method was adapted to find out the outcome of the test.

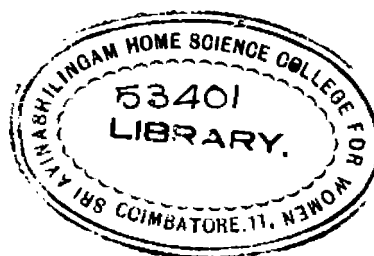
Replicating method:

In this method, the experimenter makes use of pieces of

coloured papers, which correspond in colour, shape and size with the actual plastic pieces. These pieces of the coloured test papers must be made ready before hand. The drawer containing the mosaic pieces in 36 compartments is lifted out of case, and placed outside. We see that the lower most chamber also has 36 compartments, in which these coloured pieces of papers are stored.

A very thin of colourless paper (tissue paper or tracing paper will do.) is placed on the mosaic design, and its position stabilised by placing four weights on the four corners. Care should be taken to ensure that the pieces on the tray are not disturbed. Next, pieces of paper of the correct shapes and colour are picked up one by one, and pasted on to each piece of the mosaic visible under the tracing sheet. When all the mosaic pieces have been covered by coloured pieces of paper in this way, the sheet is removed, the paste allowed to dry up (Appendix-B) identification mark-given, folded and stored. This method is more time-consuming, than the other one, but costs more or less the same. The replicas obtained is quite accurate, and has an advantage over the other two methods. (Photographic method and copying method).

On completion time was noted for each child. The outcome of the results were analysed based upon the averages in the pilot study.



Relevancy of the test:

This test is a performance type of projective test since performance with subjects verbal ability is not essential. The non verbal test will be suitable for preschoolers than a verbal test since their verbal expression will be less marked. Some preschool children develop adequate comprehension of language, yet are unable to speak. (Mussen, Conger and Kagan, 1964).

Taking the cue from andrew (1930) the whipple standardized inkblots 1-20 and a picture to find out the nature of creative imagination this WIT projective performance test was administered as a trial to the preschoolers with suitable modifications. Twenty children of Coimbatore, city were selected at random preschool attended and non attended. The meantime, the space occupied, the type of shapes selected, number of pieces used and preference of colours were the five areas selected to find out their creativity. The following were the results.

Details	Average	
	P.S.	N.P.S.
Meantime taken	110.	1.88
Space occupied	142.4	69.3
Type of shapes preferred	3.	3.23
Number of pieces used	13.3	12.24
Number of colours used	3.88	4.16

The investigator had collected information from parents with regard to the family background of samples. (Appendix A).

B. Conducting the study:

The creative ability of the sample had been assessed individually in an allotted room. The child was asked to sit comfortably to perform the test and the instructions were given. On completion, they were asked to inform the investigator. Though there was no stipulated time limit, the time taken by each child was noted.

Administration of the tests:

On opening the box flat out, the folded tray is found, which is lifted and opened flat and placed on a table or on the ground.

On removing the tray, the drawer is seen, displaying the pieces neatly stacked in 16 compartments, so that the subject has full view of the material. The subject is then told that "this is a play in which, you make something. You make anything you like with the pieces". So saying, the experimenter takes out a few pieces, but not more than 6, at random from the compartments, and places them on the tray (also randomly). The experimenter then appears to arrange the pieces in some meaningful fashion, but stops half way, picks up the pieces and replaces them in the compartment



4:1 CHILD - ENGAGED IN DESIGN MAKING

carefully. He then tells the Subject "Now, you go hard" Then
Experimenter tells the Subject "You are free to use as many pieces
as wish of any colour any shape. There is no hurry, you may make
anything you want" (figure-1.). Ideally there should not be any
restriction on the time taken by the Subject. But some Subjects
may go on and on, intending to use all the pieces available. In
such cases he was asked to stop after 15 minutes.



IV. RESULTS AND DISCUSSIONS

The findings of the study in "Creativity in preschoolers" dealt on two main facts to find out the degree of difference in creativity among preschoolers and non preschoolers and the impact of preschool experience on creativity among preschoolers.

The results of the study are presented and discussed as follows:

- A. Parental income of preschoolers and non preschoolers.**
- B. Type of family of preschoolers and non preschoolers.**
- C. Parental occupation.**
- D. Parental Education of preschoolers and Non preschoolers.**
- E. Caste wise distribution of preschoolers and non preschoolers.**
- F. Birth order of preschoolers and non preschoolers.**
- G. Preference of shapes of the selected samples.**
- H. Colour preference of the selected samples.**
- I. Mean differences of creative test scores of preschoolers and non preschoolers.**
- J. Mean differences of creativity test scores of preschoolers with one year and two years of experience.**
- K. Number of pieces in shapes used by preschoolers and non preschoolers.**
- L. Number of colours used by preschoolers and non-preschoolers.**

4. Parental Income of preschoolers and non preschoolers:

The parental income which states the socio economic back ground of the families of the selected samples is indicated in the below table.

TABLE NO. 1

**PARENTAL INCOME OF PRESCHOOLERS AND
NON PRESCHOOLERS.**

S.No.	Income Level	Preschoolers		Non Preschoolers	
		N-25	Percentage	N-25	Percentage
1.	Below = 500	12	48	12	48
2.	501 = 1,000	18	40	9	36
3.	1,001 = 1,500	1	4	1	4
4.	1,501 = 2,000	2	8	3	12
5.	and above				

forty eight percent from both groups fall in the income range below 500. forty percent (preschoolers) Thirty six percent (non preschoolers) fall into the income range between 501-1,000. four percent from both groups belonged to the income range 1,001-1,500. Eight percent (preschoolers) and twelve percent (non preschoolers) belong to the income range 1,501-2,000.

8. Type of family of preschoolers and non preschoolers.

The below table indicates to which type of family the samples belong.

TABLE NO. II

**TYPE OF FAMILY OF PRESCHOOLERS AND
NON PRESCHOOLERS.**

S.No.	Type	Preschoolers		Non Preschoolers	
		N-25	Percentage	N-25	Percentage
1.	Joint	6	24	7	28
2.	Nuclear	19	76	18	72

Twenty four and Twenty eight per cent of the samples belonged to the joint family respectively. Where as seventy six and seventy two percent belonged to the nuclear family respectively. This shows that comparatively more number of preschool children are from nuclear family and a lesser number of them are non preschoolers from joint family.

C. Parental occupation:

The occupational status of the parents of the selected people is stated in the below table.

TABLE NO. III**PARENTAL OCCUPATION.**

S.No.	Occupation	Preschoolers		Non Preschoolers	
		N=25	Percentage	N=25	Percentage
1.	Business	0	32	2	8
2.	Agriculturalist	3	12	1	4
3.	Mill worker	2	8	2	8
4.	Coolie	1	4	1	4
5.	Officers			7	28
6.	Professional	11	44	12	48

The highest number of parents (44%, 48%) belonged to the professional among both groups. Only one parent from each group belonged to the occupation coolie.

0. Parental education of preschoolers and non-preschoolers

The parental educational qualifications of the selected sample is given in the below table.

TABLE NO. 10

PARENTAL EDUCATION OF PRESCHOOLERS
AND NON PRESCHOOLERS.

S.No.	Parental education	Preschoolers		Non Preschoolers	
		N=25	Percentage	N=25	Percentage
1.	S.S.L.C	22	88	17	68
2.	Degree	2	8	6	24
3.	Professional	1	4	2	8

Eighty eight percent and sixty ^{eight} percent of parents of pre-schoolers and non preschoolers respectively possessed S.S.L.C. qualification. While eight percent and ~~twenty four~~ percent of parents of both groups respectively were degree holders. Four percent and eight percent of parents of the sample of both groups had the professional qualification. Only S.S.L.C qualified parents percentage is high when compared to the other with regard to sending the children to the school. Probably they desire to provide higher education for them.

5. Caste-wise distribution of preschoolers and non preschoolers:

The caste-wise distribution of the sample is indicated in Table V.

TABLE NO. V

**CASTE-WISE DISTRIBUTION OF PRESCHOOLERS
AND NON PRESCHOOLERS.**

S.No.	Caste	Preschoolers		Non Preschoolers	
		N=25	Percentage	N=25	Percentage
1.	Forward	7	28	7	28
2.	Backward	16	64	18	72
3.	Schedule caste	1	4		•
4.	Muslim	1	4		•

Sixtyfour percent of the preschoolers and seventy two percent of non preschoolers respectively belonged to the backward class. None of the non preschoolers either belonged to the scheduled caste or Muslim where as only four percent of preschoolers were scheduled caste and Muslim.

C. Preference of shapes of the selected samples

The shapes preferred by the samples is seen in Table VII

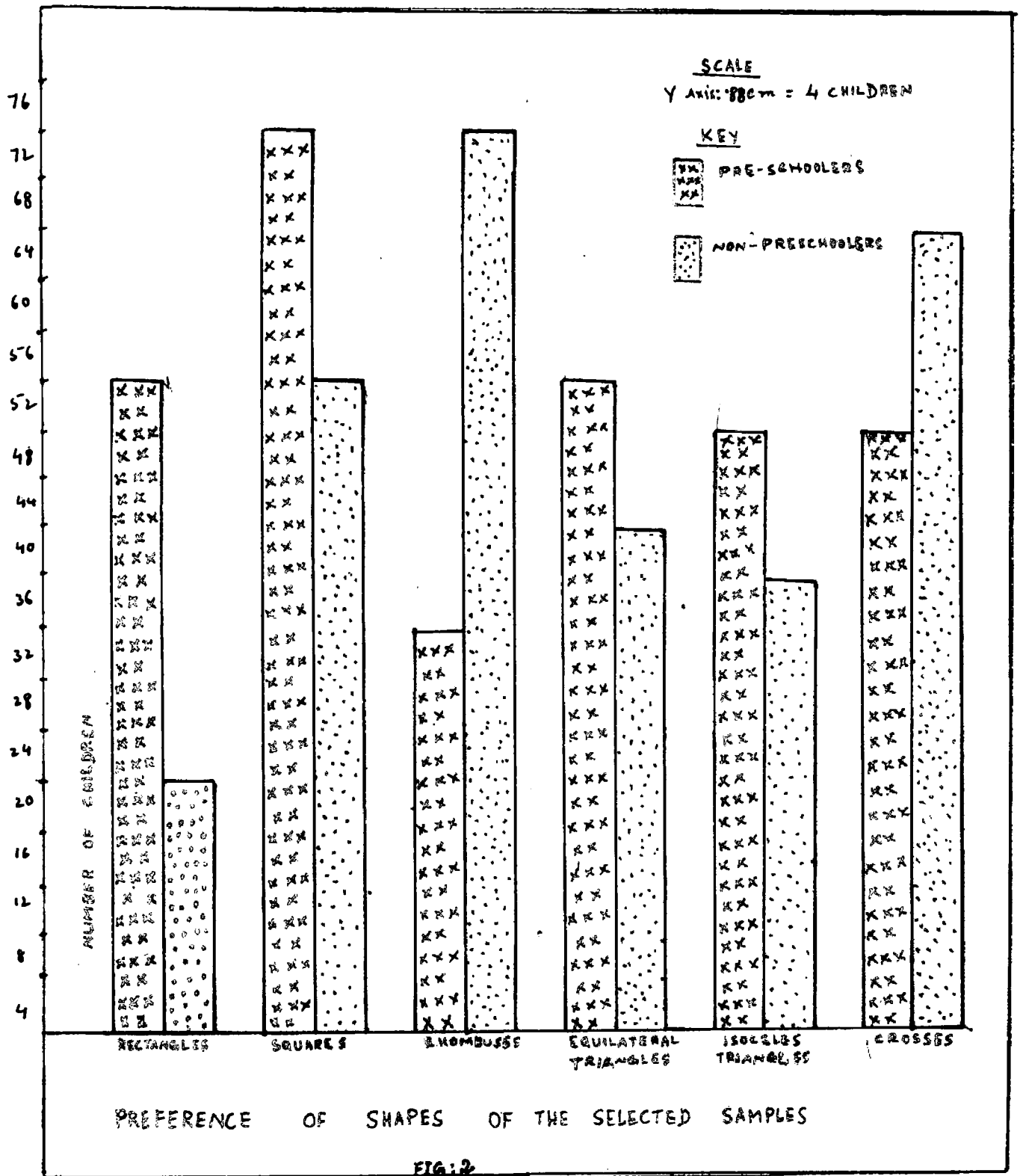
TABLE NO. VII

PREFERENCE OF SHAPES OF THE SELECTED SAMPLES

S.No.	Shapes	Preschoolers		Non preschoolers		C.R.
		N=25	Percentage	N=25	Percentage	
1.	Rectangles	13	52	5	20	10.90 **
2.	Squares	18	72	13	52	1.44
3.	Rhombus	8	32	18	72	2.43 **
4.	Equilateral Triangles	13	52	10	40	1.56
5.	Isosceles Triangles	12	48	28	84	.06
6.	Crosses	12	48	16	64	1.39

** Significant at 1% level.

It is seen from the table VII that in the choice of shapes of the samples there is a positive relationship. It is shown that the choice of different shapes by the preschoolers and non preschoolers along with the percentages, difference and C.R. observations of the results received revealed that the choice of shape differences significantly among preschoolers and non preschooler



with regard to namely 2 shapes is rectangle and Rhombus. With regard to rectangle more number of preschoolers (82%) have chosen the shape compared to non preschoolers (20%) Regarding rhombus more number of non preschoolers (72%) have chosen the shape than the preschoolers (32%). Regarding the other shapes of square, equilateral triangle, isosceles and cross there is no significant difference with choice of preschoolers and non preschoolers. Diagrammatical representation is also given in Figure-2.

No. Colour preference of the selected samples:

Table VIII shows the preference of colours of the selected samples.

TABLE NO. VIII

CLOUR PREFERENCE OF THE SELECTED SAMPLES.

S.No.	Colour	Preschoolers		Non preschoolers		Difference	
		N=25	Percentage	N=25	Percentage	No.	Percentage
1.	Blue	14	56	12	48	2	8
2.	Green	20	80	23	92	3	12
3.	Yellow	16	64	15	60	1	4
4.	Pink	16	64	15	60	1	4
5.	Red	17	68	14	56	3	12
6.	Black	8	32	11	44	3	12

In both the groups they preferred green (50%) colour more. Where as the least number of choice among both (3%, 4%) groups is black respectively. There is not much difference in the preference of colours between the groups.

1. Mean differences of creative test scores of preschoolers and non preschoolers

The mean differences of creative test scores of preschoolers and non preschoolers is indicated below

TABLE NO IX

MEAN DIFFERENCES OF CREATIVE TEST SCORES OF PRESCHOOLERS AND NON PRESCHOOLERS

Time		Space		Shape		Colour		Pieces	
Pp N=25	Nps N=25	Pp N=25	Nps N=25	Pp N=25	Nps N=25	Pp N=25	Nps N=25	Pp N=25	Nps N=25
M 108.5	180	141.68	68.64	3	2.84	3.64	0.823	11.48	11.08
SD 53.47	77.84	32.73	28.06	1.019	1.05	0.92	1.016	6.59	17.85
MD	71.5	73.04		0.16		2.717		0.4	
T**	**3.7350	**4.1368		0.523		0.285		0.250	

** significant at 1% level.

Table IX shows the mean scores with S.D. The 'T' ratios reveal that the mean differences are significant between the preschoolers only for time and space. The preschoolers have taken lesser time (108.5 sec)

to complete the creative activity (designmaking) where as the non preschoolers have taken more time (180 Secs). The creatives take less time than the non creatives to complete a design (Torrence, 1969).

The preschoolers have used more space (141.68 Square Cm) than the non preschoolers (68.64 square cm). This is in cuncurrent with the hypothesis that the high creative would use more space in making a design Wallach and Kagan (1966). The above results showed that the preschoolers are having higher creativity scores with regard to time and space and it is highly significant at 1% level, however no significant differences were found between the preschoolers and non preschoolers regarding the other three shape, colour and pieces. School is the place which can encourage creativity in artistic expression by providing materials, space, time and plenty of freedom to explore. (Wingo and Morse, 1970). Hence we conclude that the preschoolers are more creative than the non preschoolers.

3. Mean difference of creative test scores of preschoolers with one and two years of experience:

To know whether there is an impact of preschool experience on creativity the out come of the test is indicated in table X.

TABLE NO. X

MEAN DIFFERENCES OF CREATIVITY TEST SCORES OF PRESCHOOLERS WITH ONE YEAR AND TWO YEARS OF EXPERIENCES

	Time		Space		Shape		Colour		Pieces	
	1Year	2nd year	1year	2ndyear	1year	2nd year	1year	2nd year	1year	2ndyear
	N=6	N=19	N=6	N=19	N=6	N=19	N=6	N=19	N.6	N.19
M	116	139	51.17	77.05	3.5	2.84	3.5	3.68	11.34	11.83
SD	57.40	66.64	28.19	43.0	.98	.395	.978	1.126	8.90	6.60
FD	9.24		25.88		0.66		0.66		0.19	
t	0.729		**4.559		0		0.682		0.006	

** Significant at 1% level

Table X indicates the mean differences of creative test scores of preschoolers with one and two years of experiences. Nursery school attendance is an obvious source of enrichment of child's environment and there is of his intellectual achievement (Gonenberg, 1970). The table drawn, results out that the mean scores of preschoolers with experience of 1 year and below and 2 years. The 'T' test revealed that there is a significant difference between the 2 groups only with regard to space. That is the 2 years of experienced group has used more space. (77.5) square cm than the one year experienced. (51.17 square cm) This reveals that the

2 years experienced people are more creative than the one year experienced as stated by Torrance (1969) that the more creatives use more space than less creatives. Regarding the other factors of time, space, colour and number of pieces no significant difference is observed between one year and 2 years experienced groups.

K. Number of pieces in shapes used by preschoolers and non preschoolers

The below table indicates the number of pieces in shapes used by the selected samples.

TABLE NO. XI

NUMBER OF PIECES IN SHAPES USED BY PRESCHOOLERS AND NON PRESCHOOLERS.

Sample	Rectangle	Square	Rhombus	Equilateral triangle	Isosceles triangle	Cross
Preschoolers	42	68	33	48	48	55
non preschoolers	14	46	86	31	33	70

The table XI indicates the number of pieces of different shapes used by both preschoolers and non preschoolers, Squares, Crosses and equilateral triangle are dominant (68, 55, 48) in number

among preschoolers where as Rhombus, Crosses and squares (36,70,46) are dominant among non preschoolers. From the table it is obvious that preschoolers used more number of pieces compared to the non preschoolers. Again the hypothesis that the more creatives use more number of pieces than the less creatives (Terrance, 1969) is proved.

4. Number of Colours used by preschoolers and non preschoolers:

Colours preferred by the selected samples is indicated in table XII.

TABLE XII

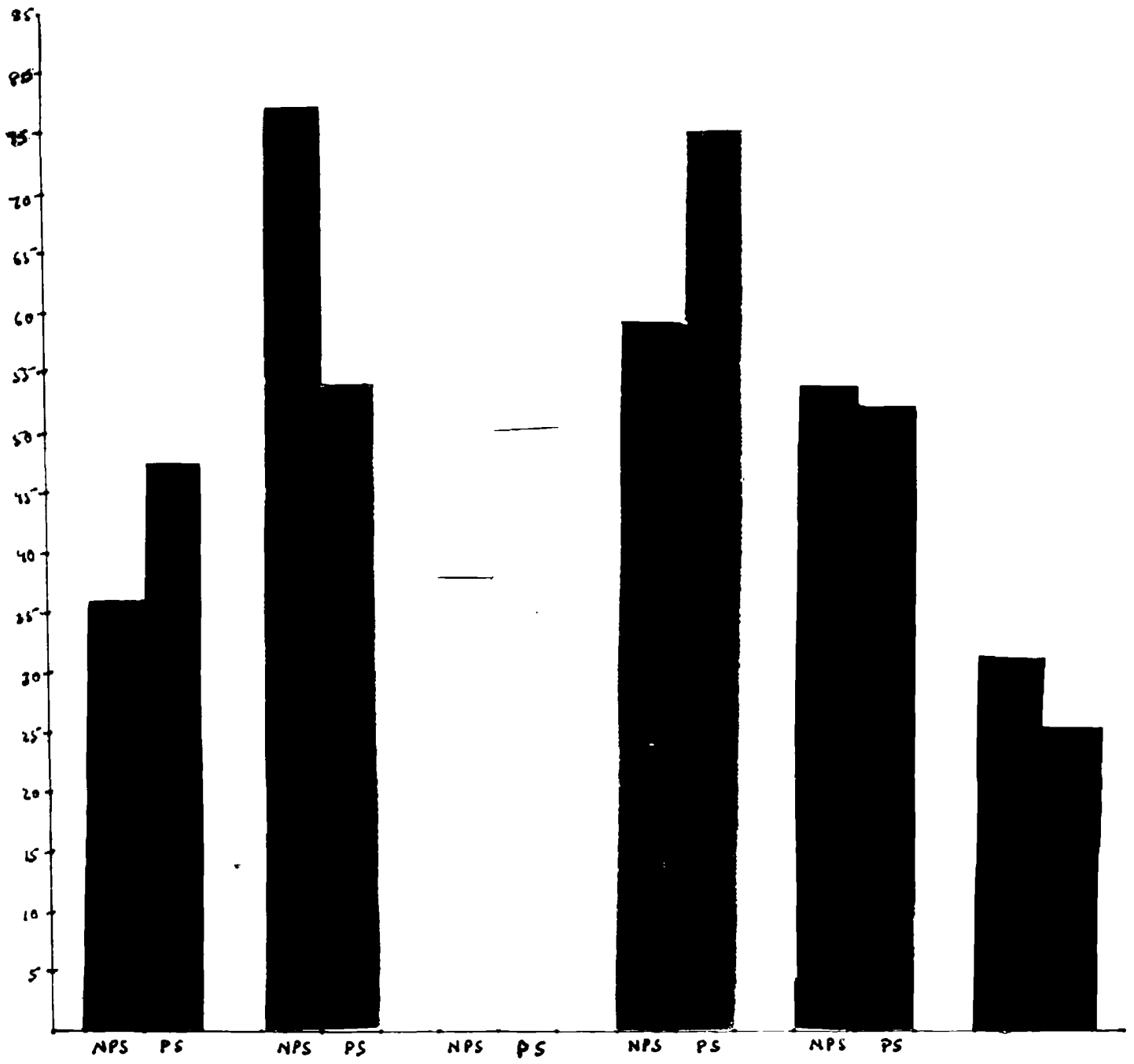
NUMBER IN COLOURS USED BY PRESCHOOLERS AND NON PRESCHOOLERS.

Sample	Blue	Green	Yellow	Pink	Red	Black
Preschoolers	47	54	49	60	52	28
Non preschoolers	36	77	37	47	53	34

From the above table it is seen that the number in colours used by the both groups. Blue, Green and pink are more dominant (47,54, 60) in preschoolers where as green and red are more dominant (77,53, 57) in non preschoolers. The choice of colour is

SCALE

y axis: 1cm = 5 colours



NUMBER IN COLOURS USED BY SELECTED SAMPLES.

FIG:3

more in number among preschoolers than non preschoolers (figure-3) there by concluding that they are more creative than the other group. Torrence (1969) again states that high creatives would use more number of colours to make the design than the less creative.

V. SUMMARY AND CONCLUSION

The findings of the present study creativity in children are summarized below:

1. Forty eight percent from both groups belonged to the income range below 500. Forty percent and thirty six percent from each group belonged to the income group between 501-1000. A meagre number from both groups belonged to the income groups between 1001-1500 and 1501-2000.
2. The preschool children (76%) who belonged to nuclear family were more than the non preschoolers (72%).
3. The highest number of parents (44% 48%) respectively belonged to the professional jobs among both groups. Only one parent from each group belonged to the occupation like coolie.
4. Among matriculation degree holders and the professionally qualified the more number of parents (50% , 60%) from each group possessed the qualification B.S.L.C. compared to the other two groups.
5. Sixty four percent and seventy two percent belonged to the backward class respectively under each group where as only 4% from both groups belonged to the scheduled caste, Muslim.

6. The children who were first born were more (32%) among non preschoolers where as second born is more (40%) among preschoolers. None of them are sixth born among preschoolers where as only one is sixth born among non preschoolers.
7. with regard to choice of shapes there is significant difference (significant at 1% level) among both groups only in two shapes (Rectangle and Rhombus) among the total six.
8. The preference of green colour is more (80% , 92%) among both the groups when compared to the other colours. The least choice (32%, 12%) respectively was given to the colour black. There was not much difference in the preference of colours among the groups. On the other hand the number of children used are more among preschoolers than the other group.
9. Among the five areas namely time space, shape colour and pieces only the two areas time and space are significant at 1% percent level proving that the preschoolers are more creative to non preschoolers.
10. It was quite evident that the children who had 2 years of preschool experience there is a significant difference among the groups only with regard to the space and it is clearly seen from the results that those who had long period of experience in nursery school used more space considered to be more creative where as the other group is not.

11. Squares (69) crosses (95) and equilateral triangle (48) are dominant in number among preschoolers where as Rhombus (86) crosses (70) and squares (46) are dominant among non preschoolers. It is obvious from the result that the preschoolers used more number of pieces than the other group and proved to be more creative.
12. Blue (47) green (54) and pink (60) are dominant among preschoolers where as Green (77) and red (53) are dominant among non preschoolers. Number of colours used is high among preschoolers compared to the other. Moreover, the more the colours used the more is creative. Based on the results of the present study the following are the recommendations given below:

Recommendations:

1. The study should be considered on a large scale there by standing as guidelines for further research work.
2. Variables should be increased and dealt still intensively and extensively.
3. Every nursery school should provide opportunity to develop creative abilities of the children.
4. Since this is a proven test it could be tried for assessing the creative ability of the child.

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APPENDICES

APPENDIX - A

Information on the family background of the child.

- 1. Name of the child:
- 2. Name of the parent:
- 3. Age of the child:
- 4. Sex:
- 5. Caste:
- 6. Address:
- 7. Type of family : Joint Nuclear

8. Family Background:

S.No.	Name of the family member	Relation to the child	Sex	Age	Educational qualification	Occupation	Income per month
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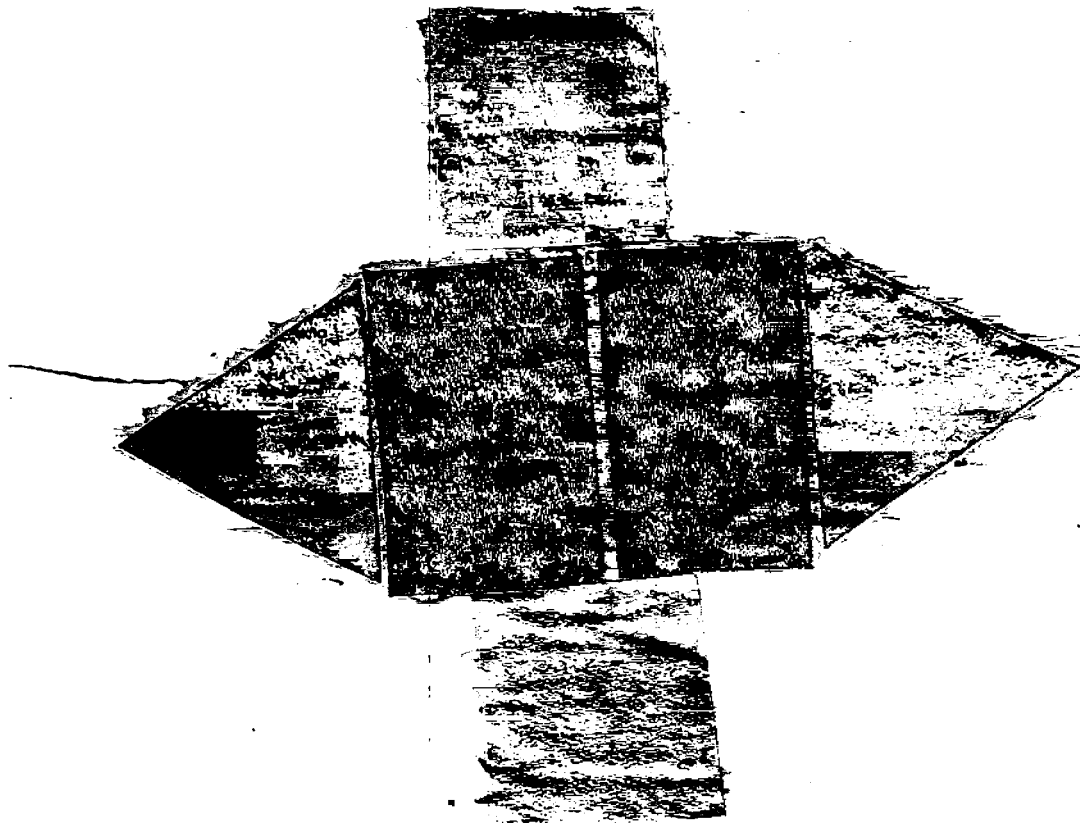
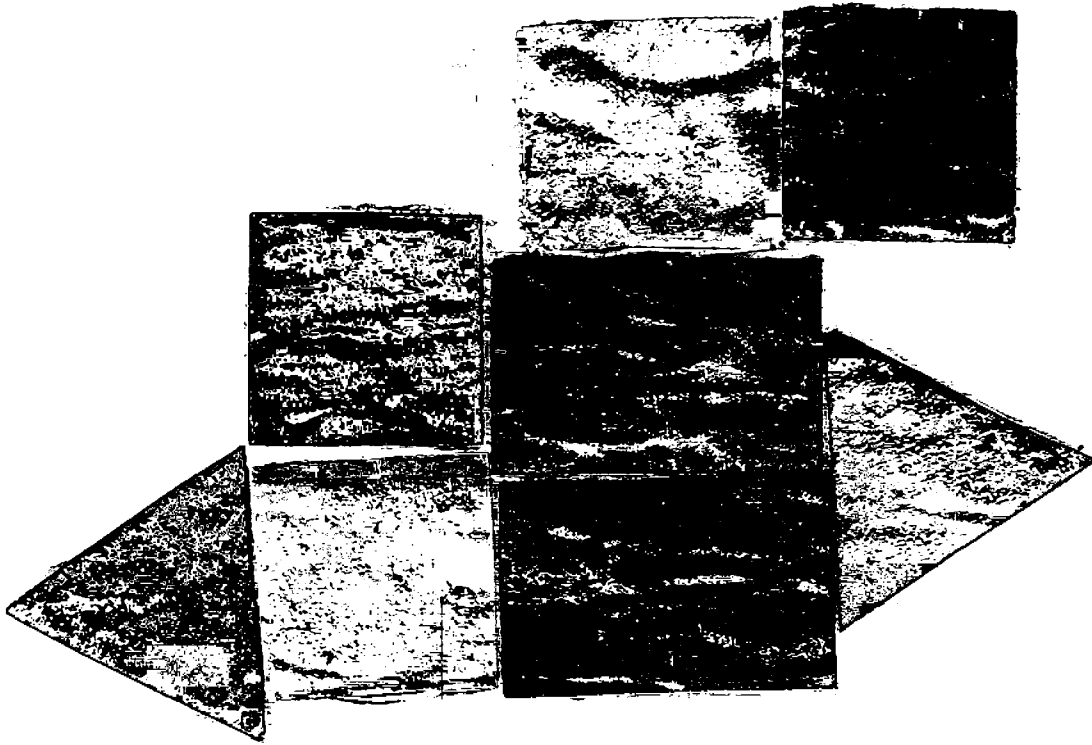
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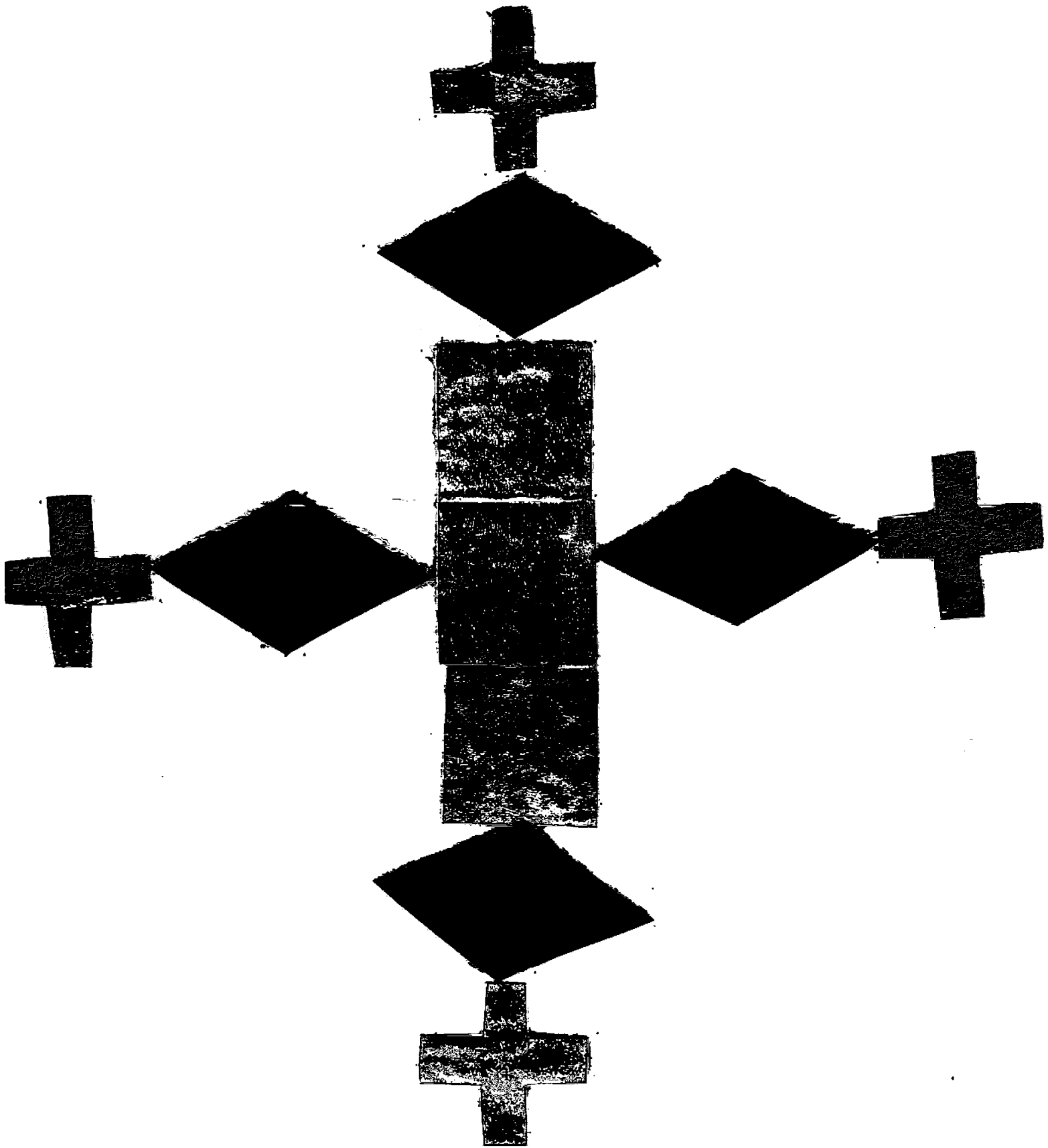
9. Other sources of income Investment Interest
 house rent Any other

Total monthly income

APPENDIX - B
SAMPLE DESIGNS OF THE REPLICATING
METHOD

I. NO. 6





APPENDIX - C

STATISTICAL APPRAISALS

PREFERENCE OF SHAPES OF THE SELECTED SAMPLES

S.No.	Shapes	Preschoolers		Non preschoolers		CR
		N.25	Percentage	N.25	Percentage	
1.	Rectangle	13	52	5	20	10.90**
2.	Square	10	72	13	52	1.44
3.	Rhombus	8	32	18	72	2.83**
4.	Equilateral Triangle	13	52	10	40	1.56
5.	Isosceles Triangles	12	48	9	36	.86
6.	Cross	12	48	16	64	1.39

** Significant at 1% level.

**MEAN DIFFERENCES OF CREATIVE TEST SCORES OF PRESCHOOLERS
WITH ONE YEAR AND TWO YEARS OF EXPERIENCES.**

	Time		Space		Shape		Colour		Picturs	
	1 year	2nd year	1 year	2nd year	1 year	2nd year	1 year	2nd year	1 year	2nd year
	N=6	N=19	N=6	N=19	N=6	N=19	N=6	N=19	N=6	N=19
M	116	139	54.17	77.05	3.8	2.84	3.5	3.08	11.34	11.53
SD	57.40	66.04	28.10	43.0	.95	.895	.978	1.126	5.90	6.60
MD	9.24		25.88		3.66		0.66		0.19	
t	0.729		** 4.859		0		0.682		0.006	

** Highly significant at 1% level.

**MEAN DIFFERENCES OF CREATIVE TEST SCORES OF
PRESCHOOLERS AND NON-PRESCHOOLERS.**

	Time		Spots		Shapes		Colours		Pieces	
	Ps N=25	Nps N=25	Ps N=25	Nps N=25	Ps N=25	Nps N=25	Ps N=25	Nps N=25	Ps N=25	Nps N=25
M	100.5	180	141.68	85.48	3	2.08	3.64	0.925	11.48	11.08
SD	53.47	77.04	32.73	25.06	1.019	1.05	0.92	1.016	0.59	17.25
MD	71.5		73.04		0.16		2.171		0.4	
t	**3.7350		**4.1308		0.523		0.268		0.250	

** highly significant at 1% level.