CHAPTER V

* DISCUSSION
DISCUSSION

The results presented in the previous chapter are analysed and discussed here in the light of earlier hypotheses formulated for this study.

Hypothesis - ONE

Internal Locus of control children will do better in creative subtests than external locus of control children.

Locus of control scale for children (Bialer and Cromwell, 1960) and the Indianised Torrance's best battery of creativity (Mehdi, 1973) are used here to study the relationship of locus of control and creativity subtests. On the LC scale higher scores indicate ILC and lower scores identify the ELC pattern. Creativity has three verbal subtests like consequences, unusual uses, and new relationships. These subtests are scored as fluency, flexibility, and originality. The nonverbal subtests are picture construction, incomplete task, and triangles and ellipses. These subtests are scored as elaboration and originality. The relationship of internality and externality of control in each of the subtests are observed in the study.
It is hypothesized that the relationship between LC and creativity would be positive and significant. The correlations are calculated separately between locus of control and creativity subtests namely verbal fluency, flexibility, originality; nonverbal elaboration and originality, and also with the total creativity. The relationships in two subcultures such as urban, rural, and the tribal culture have also been indicated in Table 18. The rs are positive and highly significant. In the light of such results it can be said that locus of control is positively related with creativity. It means children possessing higher scores on the LC scale (ILC) projecting internal locus of control personality also possess higher scores on creativity. On the otherhand, those who possess lower scores on the LC scale (ELC) representing external locus of control personality have low creativity. This observation, thus, goes against the findings of Cohen and Oden (1974) who has got negative relationship. But it supports the findings of Bamber, Joe, and Boice (1975) who pointed out that ILCs are more fluent and flexible than ELCs. Introversion and extraversion are
significantly related to LC variable (Mishra, 1978) and those are also positively and significantly related with creativity (Cattell and Butcher, 1968). Therefore, the inference, that the LC and creativity are significantly related, is verified and found correct under the present experiment.

Creativity subtest scores such as fluency, flexibility, originality, and elaboration are analysed separately in order to determine the effect of locus of control on the components of creative thinking. It has been given in the hypothesis - I that the ILC children are likely to do better in creative subtests than the ELC children. The verbal tests are analysed first. The mean scores of consequences - fluency test are higher for ILCs than ELCs (Table 9). ANOVAs (Tables 7 & 11) indicate that F ratios for LC are significant at .01 level. Tukey Test (Wright, 1976) confirms the significance of difference in each pair of means. Moreover, mean scores are presented in bar diagrams (Fig. 3 & 4). It is observed that the diagrams for ILCs are at the higher level than ELCs.

Flexibility mean scores of consequences test are higher for ILCs than ELCs (Table 9). It is found that ILCs have mean scores such as 20.30, 18.07, and 12.10 against 8.25, 6.05, and 4.73 for ELCs in urban, rural and tribal samples respectively. Differences are found
significant in ANOVA tests (Tables 9 & 11). Moreover, differences in each pair of means are examined by a Tukey Test and it is found that they are highly significant. Means are presented in graphs (Fig. 3 & 4). It is observed that ILC diagrams are at the higher level than ELCs in each subcultural sample.

Originality mean scores in Table 9 indicate that ILCs secure higher score of response than ELCs. ANOVA tests (Tables 9 & 11) indicate that the F ratios are significant at .01 level. Tukey Tests indicate the significance of differences within a pair of means. Again the graphical presentation (Fig. 3) indicates that ILCs responses are at the upper level.

The consequences test scores either in term of fluency, flexibility, or originality are, thus, higher for ILC subjects than ELCs. As described earlier the test consists of some hypothetical questions and is based on imagination and originality. It is observed that ILCs have higher expectancy (Mishra, 1976) and higher level of aspiration (Lefcourt, Lewis, and Silverman, 1968). The present results corroborate with those of previous findings.

Unusual uses in a verbal test of creativity is the reproduction of one's personal and retrieving experiences. The test is scored as fluency, flexibility, and
originality. The fluency mean scores (Table 8) indicate that ILCs secure higher scores in each subculture. The mean differences are examined by ANOVAs (Tables 9 & 11) and found that 𝐹 ratios are significant at .01 level. Tukey Test results indicate that pair of means of ILCs and ELCs are significantly different. It is observed in Figures 5 & 6 that the ILC curve is at the upper level than the ELC one except in certain cases.

Coming to the flexibility and originality scores we find the same trend as observed in case of fluency (Table 8). Higher mean scores are found in favour of ILCs than ELCs. ANOVAs (Tables 9 & 11) show that LC is significant at .01 level.

All the three variables of the unusual uses test have presented higher scores for ILCs than ELCs. This test, as described beforehand, is a test recalling past experiences. Studies indicate that ILCs recall more story contents, historical dates, and more names than external individuals (Wolk and Ducette, 1974). It is also reported by Phares (1968) that they gather more information and utilise them in appropriate places. Hence, the present findings are supported by the previous results.

The verbal - new relationships test is also scored as fluency, flexibility, and originality. It is observed that in each subtest the ILC and ELC subjects differ in
their responses. The differences are quite significant (Table 8). ANOVAs indicate that the F ratios are significant at .01 level. Graphs (Fig. 7 & 8) confirm the trend that ILC is superior to ELC in those tests also. New relationships, as a task, require combination and recombination as well as associations of events. Under such circumstances ILCs do better than ELCs.

Nonverbal picture construction tests are evaluated as elaboration and originality. In each of the cases ILC subjects obtain higher scores than ELCs (Table 8). The significance of differences has been observed through ANOVAs (Table 10 & 19) and each pair of means of ILCs and ELCs is examined by Tukey Test. The test results show that the mean scores are significantly different. Figures (9 & 10) indicate that in most of the cases this trend is maintained. It has been described that ILC subjects are more sensitive to intra-task cues (Miller, 1961). They get direct feedback from their efforts in picture construction. But externals are sensitive to extra-task cues which may be the feedback from social responses, rewards, punishment etc. Therefore, they can not get adequate feedback from the present task. And as such, the performances of internals are better than those of externals.

Elaboration and originality scored of the nonverbal - incomplete task are found to be superior for ILCs than ELCs.
This has been presented in Table 8. The significance of differences of means have been tested by ANOVAs (Tables 10 & 12). It is found that the $F$ ratios for LC are significant at .01 level. Figures (Fig. 11 & 12) indicate this trend too. It may be reasonable to say that ILCs get feedback in the task itself. Therefore, they keep their interests to do the same task more often and more correctly than ELCs as a result of which they obtain maximum number of scores.

Nonverbal — triangles and ellipses tasks had elaboration and originality scores. Elaboration scores are higher for ILCs than ELCs in each of the subcultures (Table 6). ANOVAs (Tables 10 & 12) indicate that $F$ ratios are significant at .01 level. Tukey Tests show significant differences of pairs of means. Figures (13 & 14) indicate the trend of high ILC than ELC.

Total creativity scores are also higher for ILCs than ELCs. This has been presented in Table 8. ANOVAs (Tables 15 & 16) indicate that the $F$ ratios for locus of control are significant at .01 level of significance.

From the above analysis of results it is evident that internal and external locus of control, as personality variables, have certain effect on subtests of creativity as well as on the total battery of creativity tests containing a number of subtests. It is observed that ILCs
obtain better scores than ELCs. These findings corroborate with those of Efran (1963), Powell and Centa (1972). Considering the verbal and nonverbal aspects of creativity test it can be said that ILC subjects attach reward values for success more than ELCs. They have the ability to recall more items and have greater mental ability. As pointed out by Gakhar and Joshi (1980), production of unique and new things under creative thinking require self sufficiency, stability, and the risk taking of the subject. Under such circumstances ILCs perform better than ELCs (DuCette and Wolk, 1972; Liverant and Scodel, 1960). Similarly, level of expectancy is higher for ILCs (Mishra, 1976). This leads them to produce new ways concerning experiences than the ELC subjects. But the deviation is observed in certain cases in the urban sample. For example in case of disadvantaged children ILCs secure lower scores than ELCs on total creativity test scores and some verbal and nonverbal subtest scores. Since the differences are not significant according to the Tukey Test results, no further discussion is necessary. The present experiment was tried only on male subjects. Therefore, it requires further study with female subjects in all the subcultural samples.
Hypothesis - TWO

Internal locus of control children will have better educational achievement than external locus of control children.

The hypothesis II indicates that internal locus of control children would have better educational achievement (Ed Ach) than external children. Mean Ed Ach scores are given in Table 15. It is observed that ILCs secure higher scores than ELCs. Thus, Ed Ach scores are different for ILCs and ELCs. The significance of differences are tested by ANOVAs in Table 16 and 17. In each case the F ratios are found to be significant at .01 level. Moreover, Tukey's HSD (Honestly Significant Difference) Test results indicate that the difference of mean Ed Ach scores in each pair viz; ILC and ELC is "honestly significant". In addition to those tests, bar diagrams showing mean scores are plotted (Fig. 15). The trend of ILCs superiority over ELCs is also found in the graphs.

It is observed in the review of literature that internals have higher aspiration than externals. Educational achievements leading to scholarship, higher education, better job prospect etc., naturally motivate ILC subjects for higher achievements. Results of the present findings confirm some of the findings in the past (Chance, 1972; McGhee and Crandall, 1968; Panda and Panda, 1978; Prociuk and Breen, 1975; Wolfgang and Potvin, 1973). Wolfgang and Potvin (1973) observed that the female ILC subjects had
higher Ed Ach scores than ELCs. The present project does not include any female subject. But these results support boys' achievements too. However, the uniqueness of the study is that higher achievements of ILCs over ELCs are found in all the subcultures such as urban, rural and the tribal culture.

There are significant and positive relationship between locus of control and educational achievements. Results show (Table 18) that the correlations are positive and very high. This is also observed in urban, rural and the tribal culture. The $r$ between LC and Ed Ach in the urban sample is 0.58, in the rural sample it is 0.61, and in the tribal culture it is 0.84. All the coefficient correlations are significant at .01 level of significance.

It has been observed in the second hypothesis that a student securing higher scores in the LC scale also secures higher scores on the Ed Ach test. And on the other hand, who secures lower scores on the LC scale also secure lower scores on the Ed Ach test. Therefore, it may be stated that the relationship is positive. Moreover, LC scores are highly related with creativity and creativity is related with Ed Ach scores. So logically speaking, LC is also related with Ed Ach. Once it is established that the internals secure high Ed Ach scores and externals secure low scores, the reverse may be possible. That is
those who do well in the school examinations are more confident for their activities. And as such, they may be internals. This requires further study for the verification of the proposition.

From the results, discussed above, it is evident that the hypothesis is strongly supported. The findings are quite in tune with some of the findings in this area (McGhee and Crandall, 1968; Panda and Panda, 1978). Total marks in English, Oriya, Mathematics, general science, and social studies in the school curriculum are taken in to consideration in this project. The high and positive relationships between total Ed Ach and LC scores confirm the findings of Crandall, Katkovesky, and Crandall (1955). They have taken total achievement scores and found significant relationship with the scores of locus of control.

**Hypothesis - THREE**

**Advanced children will have higher scores in the locus of control scale than disadvantaged children.**

The hypothesis III is that the advantaged children would have higher LC scores than the disadvantaged children. Results (Table 2) indicate that mean LC scores for advantaged and disadvantaged children in the urban
sample are equal. It is 11.62 in case of urban children. But rural advantaged children have 10.58 and disadvantaged children have 10.20 mean LC scores. Since the total number of subjects are different for advantaged and disadvantaged groups both in urban and rural subcultures, the equal means may be statistically significant. A 2 x 2 ANOVA (Table 3) indicates that the F ratio across subcultures is significant at .01 level. But the F ratio for the advantaged and the disadvantaged dimensions is not significant. Similarly, the interaction between subculture and SEB is not significant. Therefore, the hypothesis is not accepted. In other words, advantaged children do not have significantly higher scores than disadvantaged children. And as such, they are almost equal in the LC scale.

Although there are examples where SEB affects personality yet it is not found in the present project. The reasons for which there are no significant differences are difficult to explain. But it is found that both the groups of children read together. Therefore, the schooling effect might have affected both the groups equally well. Secondly, this effect might have been more than that of the home environment. However, this is left for further findings. Das (1973); Das and Singh (1975) have observed no consistent tendency on LC scores between high (Brahmin) and low (Harijan) SES groups in the Orissa sample. Between
middle class black and white children Battle and Rotter (1963) could not find significant differences. Likewise, Katz (1967); Solomon, Houlihan, and Parelius (1969) found no race differences in response to the Intellectual Achievement Responsibility scale. They have not attributed any clearcut reason for failure to get social class and race related differences. But they opined that classroom situations are more responsible to control a large number of behaviours of children than other environmental situations.

Advantaged children in urban and rural subcultures do not differ across LC scores. Although the ANOVA (Table 3) shows that the F ratio on subculture is highly significant yet a t test (Table 5) shows that the difference of means of advantaged children in urban and rural samples is not significant. Therefore, it can be interpreted that the subculture only may not affect the locus of control scores very much.

Hypothesis - FOUR

Among the three disadvantaged samples the urban disadvantaged children are likely to have highest locus of control scores compared to rural and tribal children. Among the latter two, the tribal will be at the lowest end of the LC scores.
The hypothesis IV maintains that the locus of control scores of disadvantaged children would be significantly different in urban and rural subcultures and the tribal culture. In other words disadvantaged children in the urban sample would have highest LC scores, tribals would have lowest, and rural children would have scores in between urban and tribals. Results (Table 2) indicate that mean LC scores are 11.62, 10.20, and 9.51 for disadvantaged urban, rural, and tribal children respectively. An ANOVA (Table 4) indicates that the F ratio for locus of control is highly significant. And as such, mean differences are significant. But to determine the significance of differences between any two mean scores t tests are calculated (Table 5). It is observed from the test that urban and rural disadvantaged groups are heterogeneous. The t test for these two groups indicates that mean differences are significant at .05 level (Table 5). Urban and tribal disadvantaged groups are also heterogeneous. The t test for these two groups indicates that it is significant at .05 level. Therefore, two mean scores are significantly different. It is observed from tests, specially made to determine homogeneity or heterogeneity of two groups (Table 5), that the urban disadvantaged group is heterogeneous with that of tribal
and rural. It given us a clearcut idea that the urban group is different from rural and tribal disadvantaged groups. In case of rural and tribal samples it is observed that two groups are likely to be homogeneous on the LC scale. There may be some sort of similarity on perceiving the self among the constituents viz; rural and tribal disadvantaged groups. However, the t-test indicates that two group means are significantly different at .05 level (Table 5).

Thus, the hypothesis is acceptable. As discussed earlier, the reasons for the urban superiority is mainly due to the effect of enriched environment. Although all of them are economically poor yet urban children are more exposed to better and enriched environments of the city. For example, they may be visiting exhibitions, film shows, and may attend any extra mural lecture delivered by various people who come to the city as well as to their schools. And as such, they learn to react in a more complex situation. These results corroborate with the view described by McArthur (1970) that LC scores shift with relevant environmental events. On the otherhand, culturally deprived tribal children are traditional, superstitious, and religious by nature. (Riessman, 1962). They may be feeling socially alienated.
Hence, tribal children lag behind the urban and rural disadvantaged children in responding to the LC scale. Rural disadvantaged children have lower mean score than urban children and higher mean score than tribals. Rath, Dash, and Dash (1979) have observed that in certain personality aspects like intelligence Scheduled Caste (Harijan) children secure higher scores than those of Scheduled Tribes. Since there is significant relationship between LC and intelligence (Bialer, 1961; Miller, 1960), it may be expected that rural disadvantaged children secure higher LC scores than the tribals. Moreover, they are socially associated with other children some of whom are from the high SES group. It might have affected them to possess higher LC scores than that of tribals.

Hypothesis - FIVE

Advantaged children will have higher creative thinking than disadvantaged children.

The hypothesis V is based on the comparison of creativity scores between advantaged and disadvantaged children. It is hypothesized that the advantaged children would have higher creativity scores than the disadvantaged children. The focus of discussion is limited here to two subcultures viz; urban and rural. It is observed in Table 8 that the mean scores of verbal tests are lower for the
disadvantaged children compared to those of the advantaged children both in the urban and the rural samples. $F$ ratio for socioeconomic background indicates (Table 11) that the difference is significant at .01 level. $F$ ratios for $B \times C$ interactions between LC and SEB, and $A \times B$ interaction for subculture and SEB in all the subtests are significant. All the $(A \times B \times C)$ three factor interactions viz; between subculture $X$ SEB $X$ LC have significant $F$ ratios. However, in case of originality scores of the verbal new relationship tests the $F$ ratios for $B \times C$ interaction between SEB and LC and the three factor interaction are not significant. In case of the subtests the $A \times C$ interactions in fluency, flexibility and originality are also not significant. This shows that subculture along with LC have a little effect on verbal creativity tests. But the socioeconomic effect is significant.

The trend that the advantaged children have higher scores, is found in most of the nonverbal subtests (Table 8). The stray cases are the elaboration mean scores of picture construction, and triangles and ellipses tests on the urban sample.

The $2 \times 2 \times 2$ ANOVA (Table 12) indicates that $F$ ratios for SEB on originality scores of picture construction and incomplete task are significant at .01 level. Other $F$ ratios on elaboration and originality are not significant. About its interaction with subculture $(A \times B)$,
the differences are significant only in originality of picture construction and incomplete tasks. The $B \times C$ interaction is significant in most of the cases. But the $A \times B \times C$ interaction is not significant in all cases. Thus, the trend does not show the satisfactory difference between advantaged and disadvantaged samples. It requires further investigation to determine why there is no nonverbal difference across SES.

Considering the total creativity mean scores (Table 8) it is found that advantaged subjects have higher scores than disadvantaged subjects on each of the urban and rural samples. A $2 \times 2 \times 2$ ANOVA (Table 14) indicates that the $F$ ratio for $SES$ is significant at .01 level. Tukey Tests indicate that two means in each of the subcultures show "Honestly Significant Difference". The $F$ ratio for subculture alone is not significant. But the $F$ ratios including $A \times B$, $A \times C$, $B \times G$, and $A \times B \times C$ interactions are significant. The conclusion may be drawn that the advantaged children secure higher scores on creativity than disadvantaged children.

Results as discussed above, show that advantaged children have higher responses on creativity subtests than disadvantaged children. Thus, the hypothesis $V$ in the present project is accepted. It corroborates with the findings of Hallman (1970) and Singh (1970) who have seen that sociocultural factors have an impact
on creativity. Rath, Dash, and Dash (1979) have observed that academic achievement scores are higher for the Brahmins than the Scheduled Caste Children. Since there are high relationship between creativity and educational achievements (Getzels and Jackson, 1962; Hasan and Butcher, 1966; Torrance, 1962; Yamamoto, 1964), it is assumed that creativity can also differ according to the socioeconomic difference. Henderson (1966), LeShan (1952) have reported that disadvantaged children are more present-oriented, vague and have undefined notions about the future. They have little sense of pattern and regularity. These children are more concerned with meeting their daily needs rather than future-pay-off. These findings seem to be consistent with those at the present project.

Advantaged children in the urban sample secure higher creativity scores than their rural counterparts. But the mean creativity scores are not significantly different (Table 14). The reason may be that the variables like age, sex, education, parental education etc. are equal except the place of residence. Moreover, locus of control score (Table 5) do not show significant difference between these two groups. Since, there is high correlation between LC and creativity, it may be possible that the group behaviours are not significantly different. Therefore,
the subcultural difference at the present study may not affect much the creative behaviour of such children. Results corroborate with the findings of Glover (1976); Taylor, Delacey, and Nurcombe (1975) who have not got significant difference due to the difference in culture. However, the present unisex study may be verified with bi-sex in future projects.

Hypothesis - SIX

Among the three disadvantaged samples, urban children will have highest scores on creativity subtests, tribals will have lowest, and rural children will have scores in between urban and tribal children.

The hypothesis VI is that the disadvantaged children of the urban sample would have highest scores on creativity subtests. Tribals would have lowest, and rural disadvantaged children would have scores in between urban and tribal children. Mean scores of the creativity subtests show (Table 8) that fluency scores of consequences subtest in the rural sample is maximum. Then comes the tribal sample and the children of the urban sample have the lowest score.
The $F$ ratio for subculture in an ANOVA (Table 9) is significant at .05 level. The same trend is also observed in case of flexibility and originality. $F$ ratios in both the cases are significant at .01 level. The A X B interactions are also highly significant.

In case of unusual uses the mean scores of fluency and originality are found to be highest in the rural sample (Table 8) and lowest in the urban sample. Tribals come in between them. But there are some deviations in case of flexibility. The rural disadvantaged children secure the highest mean score, then there are urban children, and tribals have the lowest mean score. The ANOVAs (Table 9) indicate that the $F$ ratios for subculture on fluency and originality variables are significant at .01 level. But the $F$ ratio for flexibility is not significant. The A X B interaction effects are significant.

Results show that the fluency score of the new relationship subtest is highest in the rural sample and lowest in the urban sample. The same is also found in case of the originality score. The $F$ ratios for these test scores are significant at .01 level (Table 9). But the flexibility mean score, though it is highest among the rural children yet it is lowest among the tribal children. The mean score in the urban sample remains in between rural and tribal groups. The $F$ ratio
is significant at .05 level. All the A X B interaction effects are also highly significant.

A peculiar trend is observed in case of elaboration and originality scores of nonverbal picture construction test. Tribal children secure highest mean score of all the disadvantaged ones. Disadvantaged children of the urban sample secure the lowest mean score. But the mean score in the rural sample remains in between the same of the tribal and urban children. However, the F ratio for elaboration (Table 10) is not significant and the same for originality is significant at .05 level. The A X B interactions are significant.

Elaboration mean score of nonverbal incomplete task is highest in the rural subculture and lowest in the tribal culture. But the mean score for originality is highest in the tribal culture and lowest in the urban subculture. The mean score of the rural sample comes in between these two groups. Although, there is no any consistent trend yet the F ratios for both the types of scores viz; elaboration and originality as well as A X B interactions are significant at .01 level.

Elaboration and originality mean score of nonverbal triangles and ellipses are found to be highest in the tribal culture and lowest in the urban subcultures. Scores of the rural children remain in between urban and tribals. The F ratios for both the variables as well as
A X B interactions are significant at .01 level. Thus, there is uniform trend in both the responses and as such in the triangles and ellipses subtests.

The trend of total creativity scores shows that rural disadvantaged children secure highest scores, urban disadvantaged children obtain lowest scores, and tribals remain in between them. These findings are indicated from the mean scores in Table 8. The F ratios in a 3 x 2 ANOVA (Table 13) including A x B interactions show that the subcultural differences are highly significant at .01 level. Thus, from the analysis of results it is found that there is no uniform trend in different subtest scores of creativity among disadvantaged children. And as such, the hypothesis is not proved. But, however, the mean scores are significantly different.

It is observed from the trend of the mean scores that the children of the rural sample secure maximum scores in case of verbal subtests. Then comes the tribals and at last the urban children secure the minimum scores. Thus, urban Harijan children emerge as a special problem group having lowest scores in the verbal creativity. It may be reasonable to say that the children of the urban sample are more of the ILCs than those of the rural and tribal samples. They may be less attentive
in the class (Lefcourt and Wine, 1969). On the other hand, rural and tribal children, who are more external, might have listened the instructions of their teachers more attentively. Hence, according to Lefcourt and Wine (1969) they have recalled more verbal items.

Nonverbal subtest scores present completely a different trend. Tribal subjects secure highest scores and urban subjects have lowest scores in almost all the nonverbal subtests. These subtests contain drawings with some new ideas. Rath, Dash, and Dash (1979) have observed that out of seven academic achievement tests the tribal subjects have done well in drawing only. It is because they do better in the activities involving manual operations and skills. Thus, the present finding corroborates with the findings of Rath, Dash, and Dash (1979).

Hypothesis - SEVEN

**Advantaged children will have better educational achievements than disadvantaged children.**

The hypothesis VII is that the advantaged children would have better educational achievements than the disadvantaged children. Results in Table 15 show that advantaged children of urban and rural samples secure higher Ed Ach scores than disadvantaged children.
These results are found across LC variable (Table 15).
An ANOVA (Table 17) indicates that the F ratio for SEB is highly significant at .01 level. A X B interactions between subculture and SEB as well as B X C interactions between SEB and LC are also highly significant. But the F ratio for A X B X C interaction is not significant.

Analysis of results confirm the hypothesis.
It has been discussed earlier that advantaged children are superior in comprehension of concepts and association of ideas. Rath, Dash, and Dash (1979) have observed that the Brahmin children are superior to the Scheduled Caste (Harijan) children in single subject and all subjects taken together in their educational achievements. Therefore, the present finding is consistent with that of their studies. Poor school achievements by disadvantaged or low SES children are reported by Green and Farquhar (1965), and Riessman (1962). Correlational studies indicate that Ed Ach is highly related with RPM even separately on advantaged and disadvantaged samples. It has been observed that disadvantaged subjects score lower on RPM than their advantaged counterparts over 2, 3, and 5 grade levels (Sahu, 1978). Thus, the present finding is supported by the studies mentioned above.

The advantaged groups of the urban and rural samples have significantly different Ed Ach mean scores. The F ratio for A X B interaction between subculture and
SEB is highly significant (Table 17). It is indicated in Table 15 and Figure 15 that advantaged children in the urban sample secure high Ed Ach mean scores than their rural counterparts. Tukey Tests also indicate that the mean scores are significantly different. The rationale for this kind of results is that most of the urban parents are better educated. They might be looking after the education of their children at their leisure. Secondly, the home-tutors take a positive interest for the education of Pre-school and school going children. For instance, Wilkinson and Murphy (1976) have observed that the education in nursery-cum-home settings show significant gain in linguistic competence. Jensen (1976) has pointed out that uniformity of curriculum does not mean equality in performances. Advantaged children of the urban and the rural samples follow equal curriculum and have same schooling effects. But rural children are deprived of some facilities like home-tutors, preschool-cum-home settings and so on. Therefore, rural advantaged children secure lower Ed Ach scores.

Hypothesis - EIGHT

Among the three disadvantaged group of children
the urban group will have highest scores on educational achievement, tribals will have lowest and rural children will have Ed Ach scores in between the two.
The hypothesis VIII implies that educational achievement scores of urban, rural, and tribal disadvantaged groups of children would differ significantly. Urban disadvantaged children would have highest Ed Ach mean score, tribals would have lowest, and rural disadvantaged children's Ed Ach mean score would remain in between the scores of urban and tribal children. Results show (Table 15) that mean Ed Ach scores of urban and rural samples are almost equal. But it is in the tribal sample seem to be better than each of the scores of the urban and rural samples. A 3 x 2 ANOVA (Table 16) indicates that the $F$ ratio for subculture is significant at .01 level. A X B interactions are also significant. Thus, the mean differences are significant. But Tukey Tests show that urban - rural difference is not significant whereas the differences between urban-tribal, and rural-tribal mean scores are highly significant.

Of course, it is difficult to explain how tribal children have secured higher Ed Ach scores. Rath, Dash, and Dash (1979) have observed that the scheduled tribe (Tribal) children have secured higher scores than the Scheduled Caste (Harijan) children in the subjects like drawings, social studies, general science, English, and all subjects taken together. The $F$ ratios in all
these cases are significant at .01 level. But the t-test in drawing only is significant at .01 level and others are insignificant. The tribal children might be taking education quite seriously. It may be possible that disadvantaged children living closer to the advantaged children show poorer performance than the disadvantaged children living in isolation. However, the results of the present study partially corroborate with that of Rath, Dash, and Dash (1979). Moreover, the creativity subtest scores show a trend that the urban children secure lower scores than that of tribal and rural children. Since there is high relationship between creativity and educational achievement, the trend in creativity might have been present in the educational achievement too. The findings can be verified by taking single subject in to consideration along with all the subjects taken together.

Hypothesis - NINE

Educational achievement and creative thinking will have significant and positive relationship.

The hypothesis IX presents the relationship between Ed Ach and creativity scores. It is hypothesised that both the variables would have significant and positive relationship. Table 18 shows that the correlation coefficients between Ed Ach and creativity subtest scores
as well as creativity total scores in urban, rural, and tribal samples are very high and significant. Thus, the hypothesis is proved under present circumstances and as such, high creative persons have high educational achievements. This finding confirms the earlier results (Getzels and Jackson, 1962; Hasan and Butcher, 1966; Torrance, 1962; Yamamoto, 1964). Locus of control is significantly related with Ed Ach and creativity. Similarly intelligence is also significantly related with creativity and Ed Ach. (Getzels and Jackson, 1962; Torrance, 1962). Therefore, the relationship between Ed Ach and creativity is quite possible.