The present study was designed to investigate the effect of learning in second language as medium of instruction at school on cognitive and personality variables. Cummins' assumption of threshold levels in second language was examined in the monocultural, bilingual context.

Based on literature relevant hypotheses were formulated. The hypotheses were related to the dependent variables namely intelligence, creativity, academic achievement, adjustment problems of children at home and school, cheating tendency, extraversion-introversion and neuroticism.

The sample consisted of 210 monolingual and bilingual children with low, average and above average proficiency in Tamil. There were 10 boys and girls in each of the linguistic groups with different levels of Tamil proficiency. The sample belonged to middle socio-economic status and the difference in mean age between monolingual and bilingual group was statistically not significant. Monolingual children studied through Tamil medium from first standard and their first language was Tamil. Bilingual subjects maintained their first language at home and the proficiency of the language was rated by parents as average in skill of speech and reading. The first language of bilingual subjects was either Telugu or Kannada. They learn through their second language, Tamil, from first standard.

For assessing intelligence, Tamil version of Gujarati adaptation of Wechsler's Intelligence Scale for children was used. Verbal, nonverbal and global intelligence were ascertained through the scale.
Paramesh's adaptation of Wallach and Kogan test of creativity in Tamil was used to measure the divergent production of ideas to verbal and nonverbal stimuli.

Academic achievement of the subjects were ascertained through the average of the marks obtained in half yearly and annual examinations in fourth standard.

Adjustment problems of children at home and school were obtained from parent's and teacher's rating scale using Rao's Adjustment Inventories.

Hartshorne and May's test of deception was standardized to assess the cheating tendency of the children in nonverbal, arithmetic and verbal tests.

To assess extraversion and neuroticism, Junior Eysenck's Personality Inventory as adopted by Sarojini (1971) to Indian context was used.

A language proficiency test, as standardised for the subjects under investigation was used to measure children's proficiency in Tamil. The preliminary study revealed that scores were normally distributed. Based on interquartile range, the subjects were classified as low, average and above average achievers in Tamil.

The collected informations were subjected to statistical analysis. Analysis of variance, analysis of covariance and student ' t test were used to study the effect of bilingualism on the dependent variables. The results are as follows:

**Intelligence:**

1. Levels of second language proficiency does not affect global intelligence and nonverbal intelligence. Levels of second language proficiency influences verbal intelligence. The results partially support the hypothesis 1, namely, levels of second language are interdependent.
2. Effect on the components of nonverbal intelligence indicate that levels of second language proficiency and ability of perceptual analysis in scanning essentials from nonessentials and perceptual organisation are interdependent. Levels of second language proficiency do not affect logical reasoning, perception of part to whole relationship and flexible manipulation of codes.

3. The effect on the components of verbal intelligence reveal that levels of second language proficiency and the ability to solve arithmetic problem, vocabulary are interdependent. The degree of proficiency does not affect comprehension of social judgements and verbal concept formation.

4. Between the linguistic groups, there is no sex based differences on the components of nonverbal intelligence namely: perceptual analysis, logical reasoning, perceptual organisation, perception of part to whole relationship and flexible manipulation of codes.

5. With reference to components of verbal intelligence, there is no sex based difference between the linguistic groups on information, comprehension of social judgement, problem solving ability in arithmetic and verbal concept formation. Among the boys, a low level proficiency in Tamil handicaps the bilingual group in comparison to their counterpart in the monolingual group in vocabulary. But with increase in proficiency in Tamil, there is no sex based difference between the linguistic groups in vocabulary. A similar trend was observed among the girls.

6. Within the linguistic groups, levels of Tamil proficiency and global intelligence, nonverbal intelligence are independent. Within the monolingual group, levels of proficiency in medium of education and verbal intelligence are interdependent. Within the bilingual group, threshold levels of second language proficiency and verbal intelligence are interdependent.
difference within the monolingual group on the five components of nonverbal intelligence. Within the bilingual group, levels of second language proficiency and perceptual analysis, perceptual organisation are interdependent. Levels of second language proficiency and logical reasoning, perception of part to whole relationship, flexible manipulation of codes are independent.

8. Analysis on the components of verbal intelligence indicate that higher levels of proficiency in Tamil promote acquisition of information, ability to solve arithmetic problems and vocabulary in monolingual children. Within the bilingual group, higher levels of second language proficiency facilitate acquisition of information, ability to solve arithmetic problems, verbal concept formation and vocabulary. Levels of proficiency in second language do not affect comprehension of social judgement.

Creativity:

9. Levels of second language proficiency are independent of verbal creativity, verbal and nonverbal creativity. It accepts the hypothesis 2 namely, levels of second language proficiency and creativity are interdependent.

10. Levels of second language proficiency and creativity in class concept are interdependent.

11. There is no difference between the linguistic groups with different levels of Tamil proficiency on other components of creativity.

Academic achievement:

12. Levels of second language proficiency is independent of academic achievement in general and achievement in English and social studies. But degree of proficiency in second language and achievement in science and mathematics are interdependent. Hypothesis 3, namely,
interdependent, is partially supported.

13. There is no sex based differences between the linguistic groups with different levels of Tamil proficiency in academic achievement in various subjects.

Adjustment problems of children at home:

14. Levels of second language of proficiency is independent of adjustment problems exhibited at home. This rejects the hypothesis 4, namely levels of second language proficiency and adjustment problems of children at home are interdependent.

15. Levels of Tamil proficiency and nervousness exhibited at home are interdependent. Other dimensions of adjustment problems, namely aggressiveness, withdrawal tendency, feelings of inadequacy, social skills are independent of their levels of proficiency in Tamil.

16. There is no sex based differences between the linguistic groups with different levels of Tamil proficiency in adjustment problems exhibited at home.

17. Within monolingual and bilingual group, levels of Tamil proficiency and nervousness exhibited at home are interdependent. The degree of proficiency in Tamil and other dimensions of adjustment problems, namely, aggressiveness, withdrawal tendency, social skills, antisocial tendency, feelings of inadequacy are independent of each other.

Adjustment problems exhibited at school:

18. Levels of second language proficiency is independent of global adjustment problems exhibited at school, aggressiveness, nervousness and feelings of inadequacy exhibited at school. Increased levels of second language proficiency influences social skills and tend to
hypothesis 4.2 namely, proficiency in second language and adjustment problems of children at school are interdependent.

19. Boys and girls of monolingual and bilingual group with different levels of Tamil proficiency do not differ in adjustment problems exhibited at school.

20. Within the bilingual group, levels of second language proficiency and aggression, withdrawal tendency, social skills, antisocial behaviour are interdependent. Levels of second language proficiency do not affect nervous habits and feelings of inadequacy. Within the monolingual group, levels of proficiency in Tamil and various dimensions of adjustment problems exhibited at school are independent.

Cheating tendency:

21. Levels of proficiency in second language do not affect cheating tendency in nonverbal and arithmetic task, but affects the tendency to cheat in linguistic task. The results partially support the hypothesis 5 namely, levels of second language proficiency and cheating tendency in children are interdependent. Bilingual children with a low level of Tamil proficiency cheat in linguistic task more than their counterpart in the monolingual group. The difference between the linguistic groups do not exist with increased levels of Tamil proficiency.

22. No sex based differences exist between the linguistic groups with different levels of Tamil proficiency in cheating tendency.

23. Within the monolingual group, levels of proficiency in Tamil do not affect cheating tendency. Within the bilingual group, average and above average proficiency in second language tend to decrease the tendency to cheat in verbal task. Levels of proficiency in Tamil do not affect the tendency to cheat in nonverbal and arithmetic task.
Personality:

24. Levels of proficiency in second language do not affect extraversion-introversion. This rejects the hypothesis 6.1, namely levels of second language proficiency and extraversion-introversion are interdependent.

25. Proficiency in second language does not affect neuroticism which rejects the hypothesis 6.2, namely, levels of second language proficiency and neuroticism are not independent.

26. There is no sex based differences between the linguistic groups with different levels of Tamil proficiency on extraversion and neuroticism.

27. Within monolingual and bilingual group, levels of proficiency in Tamil do not affect extraversion and neuroticism.

The results indicate that threshold level of second language influences verbal intelligence, achievement in science and mathematics; levels of proficiency in second language affect the children at school more than at home. A low level of second language proficiency affects the bilingual child's social skills and the child tend to be withdrawn more than a monolingual child. Bilingual children with a low level of proficiency in medium of education tend to cheat in linguistic task more than their counterpart in the monolingual group. The difficulties of bilingual children needs to be drawn to the attention of school teachers and help them to overcome the difficulties.

Cummins' assumption of threshold levels in second language is supported by the above mentioned variables. Probably the knowledge of reading and speech in first language and skill of writing in second language do not promote global nonverbal intelligence, creativity and personality traits like extraversion and neuroticism.
It is concluded that bilingual environment with maintenance of first language imparts detrimental effect when there is a lower level of second language proficiency and endowed potentials could be achieved when a higher level of second language is attained.

**Limitation of the present study and suggestions for future research:**

Measurement of first language could be ascertained through objective tests and similar skills both in first and second language could be measured to ascertain bilingual competency.

Developmental study relating cognitive and personality variables would enable researchers to understand the trend of changes in the repercussions of bilingualism.

The results of the present study have indicated that high threshold level of second language is beneficial in some of the cognitive and personality variables. Further research can attempt to understand the conditions under which threshold levels of second language are attained.

Bilingual educational programmes in which bilingual learn subjects in both first and second language could be started as in western countries and the programmes can be suitably structured to meet the needs of Indian bilingual children.