CHAPTER-VI
SUMMARY, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

"The unsolved problems of education are so numerous and varied that it is necessary to simplify a survey of them by using some rather arbitrary classification"

- F.C. Whitney
6.00 Background

Education is the key to all processes of development, especially, human development. Catalytic action of education in this complex and dynamic growth process needs to be planned meticulously and executed with great sensibility. Education is fundamental to all round development of human potential – both material and spiritual. It refines sensibility and perceptions that contribute to national cohesion, a scientific temperament and independence of mind and spirit. Thus, education is an instrument for developing an economically prosperous society and for ensuring equity and social justice through enriching the knowledge. Education is the key factor in the development of human potentialities. Every country gives due importance to the education system through which all types of challenges are possible to be faced. It is possible to reach all the people with the benefit of economic and technical developments through well planned and well implemented system of education. Education is a process which leads to harmonious development of an individual in terms of cognitive, affective and psychomotor abilities (Education Commission, 1964-66). John Dewey has viewed education as “the development of all those capacities in the individual, which will enable him to control his environment and fulfill his possibilities”.

Education is regarded as the potential instrument of national development. A modern society cannot achieve its aim of economic growth, technical development and cultural advancement without fully harnessing the talents of its citizens. Educationists thus strive to develop fully the intellectual potential of the students and make efforts to see that their potentialities are fully recognised and channelised for the benefit of the individuals and that of the society. So, education is the process of bringing out the talents and potentialities of individuals and to unfold their natural abilities and interests before the society. It proceeds from birth to death and schools exert greater influence in educating the child and promoting his/her academic achievement. Therefore, the level of academic achievement of a child at any stage depends on the extent to which his/her natural potentialities have been developed.

Knowledge plays an important role in achieving the aims of education. The present study a comparative study of academic achievement and intelligence of the students in Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas are of great
significance for the educationists, policy makers, administrators. Therefore, the researcher has thought it better to investigate and to find out the relationship between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas in relation to academic achievement and intelligence of the students, which appear to be yet an investigated in the area of research.

As we know the trend in the scholastic achievement, drop outs rate, failures and low percentage of X and XI class students in their examination was a question for the researcher to probe into the psychological factors that leads to poor achievement. Concise Dictionary of Education (1982) has explained academic achievement as “successful accomplishment or performances in particular subjects, areas, or courses usually by reasons of skill, hard work and interest typically summarized in various types of grades, marks, scores, or descriptive commentary”.

Academic achievement is the core of the entire educational growth. It is regarded as an important goal of education. Academic achievement is the outcome of the instruction provided to the children in schools which is determined by the grades, or marks secured by the students in the examination. It generally indicates the learning outcomes of the pupils which require a series of planned and organised experiences. Academic achievement is the prime and perennial responsibility of a school or any other educational institution established by the society to promote the whole scholastic growth and development of a child. Academic achievement plays a very significant role in the attainment of the harmonious development of the child. The prediction of academic achievement has assumed enormous importance to its practical view. In our society, academic achievement is considered as a key criterion to judge one’s total potentialities and capacities. It forms the main basis of admission and promotion in a particular class. It is also important for obtaining a degree or getting a suitable job. Therefore, it is more pressing for the pupils/students to have high academic achievement. For a student, value of academic achievement is important not only for higher education on the one hand and finding valuable job on the other, but also for bringing better personal satisfaction and proper social recognition. Saxena and Dwivedi (1979), consider that the term scholastic achievement refers to the attainment or accomplishment in the field where a subject receives some instruction or training. According to Clifford et al. (1986), achievement is the task oriented behaviour that allows the individual’s performance
to be evaluated according to some internally and externally imposed criterion. In the present world, everything is changing very fast. There is an explosion of knowledge in all walks of life. Thus, academic achievement has become a case of educational growth. Good academic achievement helps to develop self esteem, self respect and self confidence and helps the individual to create a niche for him in the competition driven society. Today, good academic achievement is becoming more and more pressing requirement for the individual to have. Individual differences in abilities of achievements are reflected in the academic progress of the students even though all students are exposed to a similar educational facilities, environment, aspiration and even intelligence in the school environment. Each student may vary in respect of their academic achievements by showing different levels of competence. Such variations may be attributed to a host of factors, innate as well as environmental.

Intelligence provides direction to the human potential for achieving the goal. It is a component of successful living and related to the process of mental mechanism which is the best way to increase academic achievement of the students. Intelligence is an important determinate of one’s performance in any field of activity, it tries to make an estimate of one’s future success or failure. It is the future reference to predict the degree of attainment or success of an individual in an area or activity. Intelligence is the necessary condition for achievement. It is impossible to achieve without corresponding intelligence which is comprised of mental abilities. Ability is about the quality of being that enables one to do something which serves as the foundation of achievement.

The ability to use memory, knowledge, experience, understanding, reasoning, imagination and judgement in order to solve problems and adapt to new situations (All Words Dictionary, 2006). According to M. Anderson (1951), “Intelligence is that facet of mind underlying our capacity to think, to solve novel problems, to reason and to have knowledge of the world”. Intelligence, considered as a mental trait, is the capacity to make impulses focal at their early, unfinished stage of formation. Intelligence is, therefore, the capacity for abstraction, which is an inhibitory process (L. Thurstone, 1924).

There are many definitions of intelligence was given by various psychologists. However, intelligence is the ability to learn from, understand and
interact with one’s environment. This general ability consists of a number of specific abilities, which include these following specific abilities:

(a) Adaptability to a new environment or to changes in the current environment.
(b) Capacity for knowledge and the ability to acquire it.
(c) Capacity for reason and abstract thought.
(d) Ability to comprehend relationships.
(e) Ability to evaluate and judge and
(f) Capacity for original and productive thought.

6.10 Rationale of the Study

As a society becomes increasingly complex owing to rapid scientific and technological progress, it needs high capacity manpower to sustain and maintain the pace of progress of the society. No sphere of life, where education has remained uninfluenced by the intelligence. One of the most important outcomes of any educational setup is the academic achievement and intelligence of the students. So, the educational status of the students is fairly determined through academic achievement and intelligence. Now a days, this trend has been intensively felt by academicians, parents and students. Therefore, academic achievement and intelligence have become indices of a child’s future in this highly competitive society. Intelligence is a vital factor in academic achievement. It may be explained as the capacity for knowledge and understanding especially as applied to the handling of new situation. Therefore, the researcher intended to a comparative study on academic achievement and intelligence of students belonging to Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas. Both the institutions are managed by two autonomous bodies under the Ministry of Human Resource Development by the Government of India. The mission and philosophy of Jawahar Navodaya Vidyalayas are to provide quality education to the girls, children of SC and ST communities and rural talented poor children in residential way. However, the main objective of Kendriya Vidyalayas are to cater to the educational needs of children of transferable Central Government employees including defence and paramilitary personnel by providing a common programme of education in non-residential system. These schools have different philosophy and base for their existence. The two types of
institution need further investigation which prompted the investigator to take up this study.

6.20 Statement of the Problem

“A Comparative Study of Academic Achievement and Intelligence of class X Students of Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas in Assam”

6.30 Objectives of the Study

The study aimed at achieving the following objectives:

1. To compare the mean, SD and t-values on academic achievement of class X students between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas.

2. To test the significance of the mean difference on academic achievement between a) male and female b) rural and urban c) rural male and female d) urban male and female e) rural and urban male and f) rural and urban female students of Jawahar Navodaya Vidyalayas.

3. To test the significance of the mean difference on academic achievement between (a) male and female (b) rural and female (c) rural male and female (d) urban male and female (e) rural and urban male and (f) rural and urban female students of Kendriya Vidyalayas.

4. To compare the mean, SD and t-values on academic achievement between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas of (a) male students (b) female students (c) rural students (d) urban students (e) General students (f) OBC students (g) SC/ST students (h) rural male students (i) rural female students (j) urban male students and (k) urban female students.

5. To compare the mean, SD and t-values on intelligence of class X students between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas.

6. To test the significance of the mean difference on intelligence between (a) male and female (b) rural and female (c) rural male and female (d) urban male and female (e) rural and urban male and (f) rural and urban female students of Jawahar Navodaya Vidyalayas.

7. To test the significance of the mean difference on intelligence between (a) male and female (b) rural and female (c) rural male and female (d) urban
male and female (e) rural and urban male and (f) rural and urban female students of Kendriya Vidyalayas.

8. To compare the mean, SD and t-values on intelligence between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas of (a) male students (b) female students (c) rural students (d) urban students (e) General students (f) OBC students (g) SC/ST students (h) rural male students (i) rural female students (j) urban male students and (k) urban female students.

9. To find out the relationship between (a) academic achievement and intelligence of JNV and KV students (total sample) (b) academic achievement and intelligence of JNV students and (c) academic achievement and intelligence of KV students.

10. To analysis qualitatively the mental characteristics of Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas class X students.

6.40 Hypotheses

In view of the stated objectives of the present study the following hypotheses have been formulated:

\( H_0: \) 1 There is no significant mean difference on academic achievement between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas.

\( H_0: \) 2 There is no significant mean difference on academic achievement between (a) male and female (b) rural and urban (c) rural male and female (d) urban male and female (e) rural and urban male (f) rural and urban female students of Jawahar Navodaya Vidyalayas.

\( H_0: \) 3 There is no significant mean difference on academic achievement between (a) male and female (b) rural and urban (c) rural male and female (d) urban male and female (e) rural and urban male (f) rural and urban female students of Kendriya Vidyalayas.

\( H_0: \) 4 There is no significant mean difference on academic achievement between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas of (a) male students (b) female students (c) rural students (d) urban students (e) General students (f) OBC students (g) SC/ST students (h) rural male students (i) rural female students (j) urban male students and (k) urban female students.
H₀: 5 There is no significant mean difference on intelligence between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas.

H₀: 6 There is no significant mean difference on intelligence between (a) male and female (b) rural and urban (c) rural male and female (d) urban male and female (e) rural and urban male and (f) rural and urban female students of Jawahar Navodaya Vidyalayas.

H₀: 7 There is no significant mean difference on intelligence between (a) male and female (b) rural and urban (c) rural male and female (d) urban male and female (e) rural and urban male (f) rural and urban female students of Kendriya Vidyalayas.

H₀: 8 There is no significant mean difference on intelligence between Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas of (a) male students (b) female students (c) rural students (d) urban students (e) General students (f) OBC students (g) SC/ST students (h) rural male students (i) rural female students (j) urban male students and (k) urban female students.

6.50 Methodology

In this study a comparison on academic achievement and intelligence of X class students in Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas. The investigator has gathered Final Board Examination marks to measure academic achievement. Intelligence test for children by Dr. S. Jalota has been used for the collection of the relevant data. This tool has been administered upon 500 class X students. The result results were complied and statistically analyzed for further conclusions.

6.51 The Research Design

Descriptive method has been used for the collection of the data of the present study. The data was collected by the investigator for analysis, interpretation and for drawing out the conclusions.

6.52 The Population

The present study was conducted on class X students of Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas. All the students studying in class X of all the
Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas in Lakhimpur, Dhemaji and Sonitpur district constituted the population of the study.

6.53 The Sample

A sample is the representative part of the population. The sample for the present study consisted of 500 students studying in class X. There are a very few schools in these districts. The data were collected from only 7 schools (3 JNVs and 4 KVs) selected from Lakhimpur, Dhemaji and Sonitpur districts of Assam. So, the data were collected from whole class of the respective schools. The selection has been done on the basis of sex, location and community.

6.54 Tools Used in the Study

The following tools have been used in this research study for the collection of data.

(i) Academic Achievement: Marks obtained by the students in Board Examination of Class X conducted by CBSE in the session 2014-15.

(ii) Intelligence Test developed by Dr. S. Jalota.

6.55 Statistical Techniques Used

In order to measure the significance of difference between the means and analyzing the data different statistical techniques such as Mean, Standard Deviation t-value and correlation were employed.

6.56 Delimitations of the Study

The study is delimited to the following limitations:

a) The present study has covered only the class X students of Navodaya Vidyalayas and Kendriya Vidyalayas.

b) The present study has confined to 500 students of Navodaya Vidyalayas and Kendriya Vidyalayas.

c) The study has covered only the sessions 2014-15.

d) The study has covered only three districts of Assam viz, Lakhimpur, Dhemaji and Sonitpur.
6.60 Major Findings

1. There was no significant mean difference on academic achievement of class X students of JNV and KV.

2. There was significant mean difference on academic achievement between male and female students of JNV. The female students’ academic achievement score of JNV was higher than the male students and difference was found to be significant. The rural and urban comparisons of JNV students have showed no real difference on academic achievement.

3. There was no significant mean difference on academic achievement of JNV students between (i) rural male and female (ii) urban male and female (iii) rural and urban male and (iv) rural and urban female.

4. The male and female students of KV as well as belonging to rural and urban; rural male and female; urban male and female; rural and urban male and rural and urban female have not shown any significant difference on academic achievement.

5. There was no significant mean difference on academic achievement between JNV and KV of (i) male (ii) female (iii) rural (iv) urban (v) general (vi) OBC (vii) SC/ST (viii) rural male (ix) rural female (x) urban male and (xi) urban female students.

6. There was significant mean difference on intelligence of total sample of JNV and KV. The students of JNV and KV have showed real difference on intelligence. The intelligence scores of JNV was higher than the KV students.

7. There was no significant mean difference on intelligence of JNV students between (i) male and female (ii) rural and urban (iii) rural male and female (iv) urban male and female (v) rural and urban male and (vi) rural and urban female.

8. There was no significant mean difference on intelligence of KV students between (i) male and female (ii) rural and urban (iii) urban male and female and (iv) rural and urban female.
9. There was significant mean difference on intelligence of KV students between (i) rural male and female (ii) rural and urban male.

10. There was no significant mean difference on intelligence between JNV and KV students of (i) male (ii) female (iii) urban (iv) general (v) rural female (vi) urban male and (vii) urban female.

11. There was significant mean difference on intelligence between JNV and KV students of (i) rural (ii) OBC (iii) SC/ST and (iv) rural male.

12. There was positive substantial relationship found between academic achievement and intelligence of JNV and KV students.

13. The percentage of rural students was higher than that of urban in case of JNV whereas reverse trend was visible in case of KV where urban students have shown an edge on rural students on the mental ability charateriscis.

14. There were more superior students on the mental ability characteriscis in General and OBC groups than that of SC/ST in case of both JNV and KV.

6.70 Discussion of the Results and Conclusions

and Saikia & Chaudhary (2014) found that academic achievement and intelligence were positively correlated.


However, academic achievement and intelligence were found positively correlated between the students of JNV and KV in the present study. The findings of the present study agreed with the other studies conducted by Dixit, M.K (1985), Begum & Phukan (2001), Diseth (2003), Panda (2005), Habibolla et al. (2010), Dhall (2012).

6.71 Conclusions

Witfully analysis and interpretation of the results discussed above has revealed the following conclusion:

From the study it has been found that there is significant difference between academic achievement of the male and female students of Xth class in JNV. It may therefore be concluded that male students have lower academic achievement in comparison to female students of JNV. The meant that female students are found better on academic achievement than male students which reflect the advantage taken by female students from the government policies. More facilities are now given to female in education. As a result the literacy rate of females is increasing more steadily than the males in population. There is a great change in the outlook of parents for sending their girls to schools. They concentrate more on studies and board examinations and found more aggregate development of intellect. It was also found that there was significant difference between urban female students of JNV and KV on academic achievement. It was aslo supported that urban female students
are better on academic achievement than the urban female students of KV. The admission process in Jawahar Navodaya Vidyalayas is that the students need to sit in entrance test. Generally, 75% seats are reserved for rural talented poor students and other 25% seats are filled up by urban students. From the urban female students get first preference to take admission. As JNV selected talented poor students, that is why academic achievement of urban female students of JNV are better than urban female students of KV.

In case of intelligence, it has been also found that there is significant difference between intelligence of the students of JNVs and KVs. The study revealed that students of KV have lower intelligence in comparison to JNV students. The reason may be that JNV is a residential school with good infrastructure facilities. So, they can interact with their friends, teachers and authority constantly and can develop right kind of intellect, attitude and aspiration when they live in home-like residential schools.

The present study also showed that there is significant difference between (a) rural students of JNV and rural students of KV (b) OBC students of JNV and OBC students of KV (c) SC/ST students of JNV and SC/ST students of KV (d) rural male students of JNV and rural male students of KV. The results revealed that rural JNV students, OBC, SC/ST and rural male students of JNVs are better in intelligence than KV students. The JNV students showed better performance on intelligence than that of KV students. It may be because of the fact that JNV provided better that of KV students. It may be because of the fact that JNV provided better guidance, special emphasis was laid on diagnostic and remedial teaching, good library facility, laboratory facility from class six onward, live quiz programme, various activities are organized regularly on every Saturday like singing, dancing, things is that 24 hours services where student gets special contact with teachers and every night they can discuss their doubts with house masters. Further, the children who are under economic pressure of the family can be relieved when they are in the residential school like JNV with free accommodation for education. Jawahar Navodaya Vidyalayas are situated in such an environment that they may develop good habit of study of different books, journal, magazines, news paper etc. which can definitely develop their intellectual ability and personality.
6.80 Recommendations of the Study

The present study is basically focused on the comparison of class X students of Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas on academic achievement and intelligence. This study mainly discussed the academic achievement and intelligence of residential and non-residential school students like JNV and KV. Both these two institutions are fully financed by the Government of India through two different autonomous organizations under the Ministry of Human Resource Development (MHRD). The main difference of these two institutions is that JNV are meant specifically for rural poor talented students and KV is to cater educational needs to the children of central, defense personnel and transferable jobs. The study has some implications for the authority, teachers, employees who are involved in the process of development of education in KV. The findings of the study have some significant messages for the policy makers, Board members, administrators, teachers, employees who have significant role and responsibility in improving education of KV.

(i) The defense sector has the largest share in Kendriya Vidyalayas Sangathan then after project sector. So, for proper management structure and design, some of the representatives from these two sectors should be included in the Board. If the KVs is to retain its distinctive position in future then representatives from these two sectors is highly essential.

(ii) For effective management and academic monitoring and leadership of this large organization, power should decentralized for effective management. The KVS headquarters cannot keep in touch longer with every schools or employees.

(iii) The inability of KVS to set up an effective in-service training and professional upgradation facility for its teachers, supervisory officers and other employees. The KVS staff and officers are highly qualified and competent at the time of induction. But, they slowly lapse into routine demotivation and non-performance say after 5-7 years. Therefore, the spark of innovation and brilliance is rarely seen and while the pass percentages are good, the share of KVS students among the best performers in CBSE is small. There is need to ponder upon the reeseon for improving this scenario in the specific context of KVs.
(iv) It may be said that due to the overshadowing presence of Board examinations, attention in schools is getting disproportionately focused at secondary or senior secondary stage. The educational grounding in primary classes is the foundation on which all further educational progress depends. The KV starts from class-I therefore, immediate strengthening of education in primary classes is an urgent need of the KV.

(v) From interaction with the teachers in KV, it is noted that there is abnormal delays in finalizing pension and other retirement benefits, counting of past service, sanctioning long leave etc. These delays have obvious influences on the morale of the teachers and other employees on their performance. Besides these, the study has some other suggestions for the concerned authority who prepare the policies for education.

(a) Regular academic inspection and appraisal of school functioning should be made compulsory with very short time gap.

(b) Construct proper school buildings especially in civil sectors. The buildings in this sector are not attractive and talented students are not interested to take admission in this sector. Therefore, academic performance and intelligence of the students particularly in this sector is very low in comparison to defense or project sectors.

(c) Attention should be paid for the supply of textbooks and other study materials at the beginning of academic session particularly in North East Region.

(d) Posting of teachers particularly in North East Region and smaller towns need considerable improvement.

(e) The KV should be opened only those areas where there are sufficient number children belonging to category I and II i.e central government employees and public sector undertakings.

(f) The laboratories and libraries in KVs need to be strengthened. Junior science lab should be provided.

(g) Guiding and counseling services should be introduced in all KVs.

The present study has also an implication for the school administrators, principals, teachers who have to regulate all the plans and policies for an effective functioning of the school. The administrators should have leadership
quality to manage the teachers' activities in terms of their efficiency in academic and non-academic matters in dealing with students.

(i) The school authority should arrange for inviting the eminent personalities and interaction with them so as to make the children inspire for high achievement in life.

(ii) The school authority should create an academic environment. So that the student can develop attitudes, skills and knowledge of self-confidence, responsibilities for their own actions, sharing abilities, independence in learning and can adjust in school situation.

(iii) The teacher should develop a sense of morality and devotion in performing their responsibilities to shape the child's future particularly male students, so that their performance and intelligence level will increase.

(iv) Transfer of teachers should be made only during summer vacation, So that classes are not hampered.

(v) Every KV should give individual attention particularly for the students of class X students in their academic needs.

6.90 Suggestions for Further Research

No research work is complete in itself. Every research effort adds to the new knowledge which is ever increasing. Hence the investigator suggests some areas for further research.

- Similar studies can be carried out at senior secondary level.
- A comparative study of intelligence and academic achievement of students under SEBA and CBSE Board schools may be conducted.
- A comparative study on intelligence and academic achievement for students of JNV, KV and Private Convent schools.
- A study of achievement in various subjects can also be made in relation to academic anxiety and intelligence.
- Studies can be carried out on job satisfaction of teachers in JNV and KV separately.