“Effective use of Braille is as important to the blind as independent mobility, knowledge in the use of adaptive technology, and the core belief that equality, opportunity and security are truly possible for all people who are blind.”

- Bob Ney
CHAPTER – VII

FINDINGS AND INTERPRETATION
Objective I

Findings

- The study revealed that while in Tokyo, the number of special institutions for blind was 5, in Kolkata it was only 3. However, among the five institutions in Tokyo, one institution did not provide education to the blind children. It provided education to the blind students who were in the High-School (classes X-XII) along with vocational education. Another institution did not have the required sample.

- All the 3 institutions for blind children in both Kolkata and Tokyo were Government sponsored. However, in the institutions of Kolkata, the Government only provided financial assistance in the form of hostel contingency and teachers’ salary; and if applied by the institutions, it provided lump grants for the maintenance and upkeep of the institution and teaching aids. Non-recurring grants were occasionally provided. But, in Tokyo, all the institutions were run by the Government. The entire cost of running the institution was borne by the Government.

- The study found out that all the 3 institutions in Kolkata were registered under the Department of Mass Education and Extension. But, in Tokyo 2 out of 3 institutions were under the Tokyo Metropolitan Board of Education. These institutions were bound to follow the rules and regulations laid down by the Metropolitan Board. 1 institution was under the University of Tsukuba. This institute could follow its own policies.
Findings and Interpretation

- All the 3 institutions in Tokyo were co-educational. But, in Kolkata, 2 institutions were co-educational and 1 institution was only for boys. However, in the institutions of both the places there was no fixed ratio of boys and girls.

- Regarding the total school period, it was seen that, both in Kolkata and Tokyo, 2 institutions (CBS and LFB in Kolkata and Hachioji and National in Tokyo) provided education from Preparatory/Kindergarten to class XII. 1 institution (BBA) in Kolkata provided education from class I to class X and 1 institution (Katsushika) in Tokyo provided education from Preparatory/Kindergarten to class IX. Regarding the provision of free education, it was seen that in Kolkata all the 3 institutions provided free education for the total school period that is from Preparatory to class X/XII; whereas in Tokyo, in all the 3 institutions free education was provided only from class I to class IX which is also the stage of compulsory education.

- With regard to residential facility, it was seen that all the 3 institutions in Kolkata and Tokyo had residential facility for the children. However, in Kolkata availing the residential facility was optional in 2 of the institutions (CBS and LFB) and it was compulsory in 1 institution (BBA). It was also observed that in 2 of the institutions (LFB and BBA) children were not charged anything for using the residential facility, but in 1 institution (CBS) children had to pay a sum of 60 rupees per month for using the residential facility. In Tokyo, the residential facility was mainly for those children who were in the Junior High School stage (classes VII - IX), and had to travel a long distance to come to the institution. Children, availing the residential facility, had to pay for their food in advance. Children at
the Elementary School stage (classes I [one] – VI [six]) did not use the residential facility.

- Regarding Vocational Training facility, it was seen that in 1 institution of Kolkata (BBA) it was provided only to the boys; in 1 institution (CBS), it was provided only to the girls, and in 1 institution it was provided to both boys and girls. But in Tokyo, 2 institutions (Hachioji and National) provided vocational training facility to both boys and girls. 1 institution (Katsushika) did not have a vocational training unit. In both Kolkata and Tokyo, vocational training was provided only after the blind children completed the stage of compulsory education.

- In Kolkata, none of the institutions provided any kind of transport facility. In Tokyo 2 institutions had their own bus. However, it was not compulsory for the children to avail the transport facility. In 1 institution transport facility was not available.

- Toilet facility was available in all the 3 institutions of both Kolkata and Tokyo.

However, the arrangement of the toilets was different in the institutions of Kolkata. In 2 institutions (BBA and CBS), there were separate toilet for boys and girls on all the floors, and in 1 institution (LFB) the boys’ toilet was on the ground floor and the girls’ toilet was on the first floor. But, in Tokyo it was seen that in all the 3 institutions there were separate toilet for boys and girls on all the floors.

- None of the institutions in Kolkata had any canteen facility. Boarders had their lunch in the hostel and day scholars carried their own tiffin.

In Tokyo, however, all the 3 institutions had canteen facility, but the children had the freedom to either buy food from the canteen or carry
their own lunch. All the institutions in both Kolkata and Tokyo supplied drinking water.

- The study revealed that both in Kolkata and Tokyo, 1 institution had a Medical Unit. 2 institutions only had provisions of First-Aid. In case of any emergency, children were taken to the nearest hospital.

- Regarding emergency facility, it was seen that out of the 3 institutions in Kolkata, in 1 institution (BBA) there were fire extinguishers on all the floors. Blind children, in this institution, received a lecture once/twice a year on how to deal with emergency situations. Teachers/other staff members were trained in using the fire extinguishers. In 1 institution (LFB) fire extinguishers were available but children did not receive any lesson or training in how to deal with emergency situations. Only the teachers were trained in using the fire extinguishers. In the third institution (CBS) fire extinguishers were not available. In Tokyo, fire extinguishers were available in all the 3 institutions. Helmets, to be used during earthquakes, were also kept in all the classrooms. Blind children were given training once a month to deal with fire and earthquake like situations. Once/twice a year, training was also given to deal with situations involving burglary or terrorist attacks.

- None of the institutions in Kolkata had Braille lines inscribed on the floor. But, in Tokyo, all the 3 institutions had Braille lines inscribed on the floor. Children were made to follow the Braille lines while walking. This helped in their mobility training.

- The data revealed that none of the institutions in Kolkata had lift facility. But, in Tokyo only 1 institution did not have lift facility. 2 institutions had lift facility. However, the blind children in those
institutions were not allowed to use the lift. This was done only to make them practice moving up and down the stairs more and facilitate their mobility skills. Only, those blind children who were also orthopedically handicapped were allowed to use the lift.

- In all the 3 institutions of both Kolkata and Tokyo, blind children used stairs to reach their classrooms. In Kolkata none of the institutions had handrails along the walls of the staircase; whereas in Tokyo, all the institutions had handrails not only along the walls of the staircase but also along the walls of the entire institution.

- It was seen that in all the 3 institutions of Tokyo, the name/number of the classroom was inscribed outside each classroom. This allowed the blind children to identify their classrooms independently. But, this facility was not available in any of the 3 institutions of Kolkata.

- Regarding the seating arrangement, it was seen that in Kolkata, 1 institution had a low bench and high bench seating arrangement. 4/5 children sat on one bench. This arrangement restricted the mobility of the blind children. In 2 institutions, children sat on separate chairs with high benches. The benches were placed very close to one another restricting the movement of the blind children. In Tokyo, in all the 3 institutions the seating arrangement included separate chairs and desks. While in Kolkata, only 1 institution had the provision of keeping the books in the classroom, in Tokyo all the 3 institutions had bookshelves within the classrooms so that the required books could be kept in them.

- All the 3 institutions of both Kolkata and Tokyo had a library along with a reading room. All the 3 institutions in both Kolkata and Tokyo also had a separate laboratory for Science subjects.
Findings and Interpretation

- Out of the 3 institutions in Kolkata, only 1 institution had a separate laboratory for Social Science subjects. But in Tokyo, all the 3 institutions had a separate laboratory for Social Science subjects. Again only 2 out of 3 institutions in Kolkata had a Computer Laboratory. 1 institution did not have a computer laboratory mainly because in that institution computer was not taught as a regular school teaching subject. In Tokyo all the 3 (100%) institutions had a computer laboratory.

- Music room was available in all the institutions of both Kolkata and Tokyo. While in Kolkata, 2 out of 3 institutions had playground and swimming pool, in Tokyo all the 3 institutions had playground and swimming pool. 1 institution in Kolkata which did not have playground and swimming pool took the blind children to a nearby ground for sports and a nearby pool for swimming. None of the institutions in Kolkata had a gymnasium, but all the 3 institutions in Tokyo had a gymnasium.

- In Kolkata, none of the institutions had any specially designed (sponge–coated wall) hall for sports. But, in Tokyo all the institutions had hall with sponge–coated walls. The walls of these halls were designed in such a way that even if a child collided against it, he/she would not get hurt. Games like basket ball and volley ball were played in those halls. These specially designed walls ensured safety of the blind children.

Interpretation

- The availability of special institutions for the blind was more in Tokyo than in Kolkata.
In Kolkata, the government only looked into the financial aspect, but in Tokyo, the Government was more involved with the institutions because it looked into the running of the institutions.

For all the three institutions under the Department of Mass Education and Extension in Kolkata, it was compulsory to follow the rules and regulations laid down by this body regarding admission of children. In Tokyo, as well, there was such a compulsion but only for those two institutions which were under the Tokyo Metropolitan Board of Education.

In Tokyo, education was free and compulsory from class I to class IX. So, blind children were not charged anything. After completing nine years of compulsory education, children could either pursue higher studies or any vocation. In case, they wished to pursue higher education then they had to pay the tuition fee. But in Kolkata, education was provided for free for the entire school period even after completing the compulsory school going stage. Therefore in Kolkata, it was financially less burdening for the blind students if they wished to pursue higher education.

In the institutions of Tokyo, there was no compulsion on the children to use the residential facility in any of the institutions. But, in Kolkata, one institution made it compulsory.

Even though vocational training facility was provided in all the three institutions in Kolkata and only in two institutions in Tokyo, yet it was more convenient in Tokyo, because children, whether boys or girls, who were studying in Hachioji or National, could continue with their vocational training in those institutions only. But in Kolkata CBS provided vocational training only to girls. So, those
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boys who were studying in this institution had to shift either to LFB or BBA if they wished to receive vocational training.

- Regarding transport facility, the difference between the institutions of Kolkata and Tokyo was quite stark. Even though optional, yet the facility was provided at least in two of the institutions in Tokyo. But, in the institutions of Kolkata this facility was not provided at all.
- Toilet facility was uniformly provided in all the institutions of Tokyo. But in the institutions of Kolkata, the facility was not uniformly provided.
- Provisions regarding canteen were also different in the institutions of Kolkata and Tokyo. In the institutions of Kolkata, day scholars had no option but to carry their own tiffin. But, in the institutions of Tokyo, children whether boarders or day scholars had the option either to buy food from the canteen or carry their own food.
- Provisions regarding medical facility were similar in the institutions of both Kolkata and Tokyo.
- Emergency facilities were equally available in all the institutions of Tokyo. Children were also trained in dealing with emergency situations. But, in the institutions of Kolkata, the emergency facilities were not similar in all the institutions. Blind children were not given any training in dealing with emergency situations. Thus, the blind children studying in the institutions of Tokyo were better trained in dealing with emergency situations than in the institutions of Kolkata.
- In Tokyo, throughout the city, Braille lines were inscribed on the roads. The children by following the lines while walking within the institution got familiarized with the conditions outside the institution. But, in Kolkata, there was no such provision and as a result, Braille lines were not inscribed on the floors within the institution.
Findings and Interpretation

- Though the institutions in Tokyo did not allow the blind children to use the lift, yet at least two institutions had the facility. But, in the institutions of Kolkata, the lift facility was not available at all.

- Blind children in the institutions of Tokyo were trained to hold the handrails while walking, so that they do not fall. This ensured their safety and made them more independent. There was no chance of them falling down the stairs. But, in the institutions of Kolkata, the children often had to take help of their low-vision peers while moving up and down the stairs.

- In the institutions of Tokyo children could themselves locate their classrooms easily by following the Braille inscriptions outside each room. But, in the institutions of Kolkata this facility was completely missing. Blind children, therefore, had to rely on their low-vision peers.

- The seating arrangement was similar in all the institutions of Tokyo, but in Kolkata there were differences within the institutions.

- It was more convenient for the children in the institutions of Tokyo than in the institutions of Kolkata because they did not have to carry the voluminous books. In the institutions of Kolkata, the children had to bring the books from the library and also put it back after the class was over.

- The availability of library with a reading room and separate laboratory for Science subjects was similar in all the institutions of both Kolkata and Tokyo.

- The availability of a separate laboratory for Social Science subjects and Computers was uniform in the institutions of Tokyo. But, it was not seen in the institutions of Kolkata.
Findings and Interpretation

- Some of the facilities like availability of music room were similar in the institutions of both Kolkata and Tokyo. But, some facilities like availability of playground, swimming pool and gymnasium were not similar in the institutions of Kolkata and Tokyo. While in Tokyo all the institutions provided a swimming pool, gymnasium and a playground, but in Kolkata two institutions provided these facilities. However, the third institution which did not have a playground and a swimming pool sometimes took the children to a nearby ground and lake to compensate for the lack of these facilities and ensure that blind children studying this institution were not deprived.

- Blind children in the institutions of Tokyo could play without any fear of getting hurt.

Objective II

Findings

- The obtained data showed that in the institutions of Kolkata, the session began from March; but with the changes in the rules of the Board of Education, the session would gradually begin from January. But, in the institutions of Tokyo, the session began from April.

- Both in Kolkata and Tokyo the age of admission to class I was fixed at 6 years. However, in 2 institutions (LFB and CBS) of Kolkata, blind children were also admitted into the Preparatory class at 5 years of age. But, in the third institution (BBA), children were admitted only in class I when they were 6 years old. On the other hand, in all the 3 institutions of Tokyo, there were provisions to admit blind children to Kindergarten when they were 3 years old. Admission at 5
years (for the institutions of Kolkata) or at 3 years (for the institutions of Tokyo) depended on the wishes of the children and their parents.

- With regard to minimum age of admission, it was seen that for all the 3 institutions of Kolkata, it was fixed by the West Bengal Board of Education; and for all the 3 institutions of Tokyo, it was fixed by the MEXT (Ministry of Education, Culture, Sports, Science and Technology).

The survey showed that all the institutions of Kolkata followed the rules of admission laid down by the Government. According to the rule, every individual seeking admission to a Special Institution should have a Certificate of Disability issued by a Government hospital. In Tokyo, as well all the institutions followed the rules of admission laid down by the Government. The rule in Tokyo stated that children seeking admission to special institutions for blind should have vision between 0 to 0.3 and should also possess a Certificate of Disability.

- In Kolkata, while admitting blind children, 1 institution (BBA), being strictly residential, tested the children on their preliminary Daily Living Skills and Mobility Skills. This institution basically checked whether the student had the preliminary idea of staying in a hostel. Questions about basic general knowledge were also asked but not much emphasis was laid on that. In the other 2 institutions (CBS and LFB) blind children were admitted mainly through an interview where they were asked questions on basic general knowledge. Children were also tested on preliminary Daily Living Skills and Mobility Skills. In these two institutions residential facility was not
compulsory. Therefore, knowledge about Daily Living Skills and Mobility Skills were not much emphasized for day scholars. But, in Tokyo only 1 institution (National) could follow its own criteria of admission because it was not under the Tokyo Metropolitan Government. Children in this institution were selected on the basis of an interview, where questions on Daily Living and general knowledge were asked. Children were also observed while they moved from one place to another. In the other 2 institutions (Katsushika and Hachioji), which were under the Tokyo Metropolitan Government, children were sent by the Tokyo Metropolitan Board of Education. At first the officials from the City Office met the parents along with their blind child. Then, they were sent to the office of the Tokyo Metropolitan Board of Education. In this office, the conditions of the children were monitored by the doctors and if their vision was found to be between 0 and 0.3, they were sent to the special institutions for the blind.

In all the 3 institutions of Kolkata, children were selected by a Board of Members, which mainly comprised of the Principal/Vice Principal, teachers, Eye Specialist, Hostel Superintendent, and Director of Mass Education Extension or his nominee. In Tokyo, on the other hand, in 1 institution children were chosen by the Principal or Vice Principal. In the other 2 institutions, children were chosen by the Tokyo Metropolitan Board of Education.

- None of the institutions in Kolkata admitted children in the middle of the session. But, in Tokyo, out of the 2 institutions which were under the Tokyo Municipal Government, only 1 institution (Katsushika) admitted children in the middle of the session and the other institute (Hachioji) did not. The 3rd institution (National), admitted children in
the middle of the session, on the basis of an admission test, only if there was vacancy.

- In all the 3 institutions of both Kolkata and Tokyo, children seeking admission from another blind institution were admitted. In 2 of the institutions of Kolkata (BBA and LFB), the progress reports of the children from the previous blind institutions were checked. The children’s IQ and their knowledge of Braille were also checked. Questions were asked from their subjects of study. In the 3rd institution (CBS), the children had to convince the Members of the Board about their reason of transfer.

In Tokyo, the two institutions (Katsushika and Hachioji) which were under the Municipal Government had to admit children sent by the Tokyo Metropolitan Board of Education. Children, seeking transfer, had to first inform the Tokyo Metropolitan Board of Education and then this Board transferred the children to the institutions which were under its jurisdiction. The 3rd institution (National) which was not under the Municipal Government had its own criteria of admitting children coming from another blind institution. Children seeking admission in the elementary classes (Classes I to VI) were admitted on the basis of an interview; and children seeking admission in the Junior High School (Classes VII to IX) were admitted on the basis of an entrance examination only if there was vacancy.

- Regarding admitting children from general schools, it was observed that in Kolkata, all the three institutions admitted children from general schools. While admitting the children, their IQ was tested through an interview. They were asked questions from their various subjects of study. After admitting them, the children were first placed in an Ungraded Class, where they were given training in Braille,
Daily Living Skills, and Mobility Skills. Then, on the basis of their ability and competence in these areas they were placed in the appropriate classes.

In Tokyo, the institutions under the Tokyo Municipal Government had no say in this matter. It all depended on the Tokyo Metropolitan Board of Education. Children seeking admission from general schools to special institutions for the blind had to inform the Board and then this Board took their decision, whether they could be transferred or not. But, the institution which was not under the Municipal Government admitted children on the basis of an interview (at the elementary stage) and a written test (at the junior high institution stage) provided there was vacancy.

It was also noted that in Kolkata, children shifted from general schools to Special Institutions for the Blind because general schools did not have properly trained teachers and necessary teaching equipments.

In Tokyo, however, it was seen that parents generally preferred sending their children to Special Institutions for the Blind. Though, sometimes children were sent to general schools, but in the course of time these children shifted to Special Institutions for the Blind due to lack of Braille text books. Sometimes, blind children got bullied by their sighted peers. Lack of properly trained teachers was also another reason.

In Kolkata, it was seen that blind children rarely wanted to shift to general schools from blind institutions. In case, any student wanted, he just had to apply to a general school and if he fulfilled all the criteria of that school, then he was admitted. In Kolkata, according to the Government regulation, 1% of seats in all the government or
government-aided schools were reserved for visually handicapped children. Sometimes, children felt that their prospects would be better in a general school and so they wanted to shift. In Tokyo, as well, children rarely wanted to shift to general schools. In case, they wanted to shift to a school under the Tokyo Municipal Government, then they had to first inform the Tokyo Metropolitan Board of Education (TMBE). The TMBE transferred the children from a special institution for the blind to a general school on the basis of his/her academic performance and on the insistence of the parents. For the general schools which were not under the Municipal Government, the children had to first fulfill the eligibility criteria. Then it depended on the discretion of the principal of that school whether the child would be admitted or not.

• In Kolkata, none of the institutions admitted children with multiple disabilities because of lack of facilities. But, in Tokyo, it was compulsory for all the institutions to admit children with multiple disabilities. The School Education Law was partially amended and enacted in FY2007 (Fiscal Year 2007). Under the new “School for Special Needs Education System”, one particular institution could accept children with several types of disabilities.

• In Kolkata, it was found that the total number of children to be admitted in a class was 16, whereas in Tokyo it was only 6. In Kolkata none of the institutions had any provision of dividing the class into sections, in case the maximum number of children exceeded during the time of admission. But, in Tokyo, if the maximum number of children exceeded then, either the class was divided into 2 sections or two teachers were appointed for that particular class.
Interpretation

- Provision of extra years of schooling was available in both Kolkata and Tokyo. However, in Kolkata, children could receive only one year of extra schooling if they desired but in only two of the institutions. On the other hand, in Tokyo, children could receive three years of extra schooling, if they so desired, in all the three institutions.
- Regarding the age and the rules of admission, it was the same scenario in both Kolkata and Tokyo.
- In case of admission, whether at the beginning of the session or at the middle of the session or transfer from one institution to another (from one special institution for the blind to another or from a general school to a special institution for the blind) Kolkata and Tokyo presented a completely different picture. In Kolkata, in spite of being government sponsored the institutions could follow their own criteria of admission. They could exercise their freedom of choice. But, in Tokyo, that was not allowed. The institutions under the Metropolitan Government were not given the freedom to admit blind children according to their own discretion.
- In Tokyo, at least two institutions allowed the blind children to start their studies in the middle of the session. But in the institutions of Kolkata, blind children did not get this opportunity.
- The study highlighted a big difference among the special institutions for the blind in Kolkata and Tokyo with regard to admission of children with other disabilities like hearing impairment or mental retardation along with blindness.
It can be concluded that, in the institutions of Tokyo, it was easier for the teachers to pay attention to the needs of individual children. But, in Kolkata, it was difficult because the number of children was more.

Objective III

Findings

CLASS IV

- The conducted study showed that in the institutions of Kolkata, the blind children of class IV were taught Bengali as their mother-tongue. In Bengali, they were taught short stories, poems and essays. The blind children of class IV in the institutions of Tokyo were taught Japanese as their mother-tongue. The study of Japanese included simple traditional poems, stories, haiku (short poems), meaning and usage of idioms and proverbs. Children were also taught ways of using the dictionary, constructing sentences, and writing thank-you letters.

In both the places emphasis was on developing reading, writing and speaking abilities. However, in the institutions of Kolkata, children were made to read poems and stories as prescribed in the course of study. Teachers emphasized more on discussing questions and answers from the text, which the children had to listen and repeat orally and then write down as dictated by the teachers. But, in the institutions of Tokyo, the teachers emphasized more on imagination, creative and independent thinking, and developing the ability of the children to convey their ideas. Children were made to select a topic,
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study matters related to their chosen topic and then speak and write on that topic. Discussions in the class were encouraged.

• In the institutions of Kolkata, the blind children of class IV were also taught English which included correct pronunciations, difference between ‘here’ and ‘there’, and ‘has’ and ‘have’, and prepositions. But, in the institutions of Tokyo, English was not taught to the blind children in class IV. It was introduced in class V as a Foreign Language.

• It was seen that while in the institutions of Kolkata, the subjects History and Geography were taught as separate disciplines, in the institutions of Tokyo, instructions were imparted in an integrated way as a subject called Society which had a historic realm and a geographic realm.

In History, the blind children of class IV, in the institutions of Kolkata were taught about the ancient history of India, arrival of civilizations and contribution of the medieval civilization, different dynasties, intellectual people, factories and industries, and education and culture. In the institutions of Tokyo, the blind children were made to study the chronological tables. They were also taught about the state of living from ancient days to the present time, their culture, and contribution of predecessors for the development of different regions.

For the blind children of class IV, the study of Geography in the institutions of Kolkata, included lessons about West Bengal– its location, importance, administration, and education system, physical features, financial aspects); Resources (minerals, energy, industrial); transport and communication system; important places; livelihood – concept, meaning, need and significance, different means; and social
and cultural environment. In the institutions of Tokyo, on the other hand, the blind children of class IV were taught about the geographical location, physical features of the prefectures; important industries; particular area- its features, aspects of land use, important public facilities, working conditions, transport facilities, traffic conditions; means of livelihood, relation between work, sales, and production; necessity of drinking water, gas, electricity, garbage processing; measures to deal with natural calamities.

- In Science, the blind children in the institutions of Kolkata were taught about the classification of plants and animals along with examples. They were taught about the physiological structure of vertebrates and invertebrates, and flowering and non-flowering plants. While studying about plants, children were also given information about germination of seeds and the necessity of preserving trees and forests. They were made aware of the interdependence of plants and animals. In the institutions of Tokyo, as well, children were taught about plants and animals. But, they were taught about the relationship between different seasons and animal activities and plant growth. In the institutions of Kolkata, children were only given theoretical information. At the most, they were made to touch the leaves and flowers of different plants (if available) to get an idea. But, in the institutions of Tokyo, children were made to grow potted plants and understand the changes in their growth in each season.

Again, while teaching Energy, Force, and Work, children in the institutions of Kolkata were taught about the interrelationship between these; the different kinds of energy; and gravity. But, these topics were not taught in the institutions of Tokyo.
In the institutions of Kolkata, children were taught about the effect of heat on different objects; and in the institutions of Tokyo, children were taught about the effect of heat on metals, water, and air. Functions of electricity were taught to the children in the institutions of Tokyo, but those were not taught in the institutions of Kolkata. Again, in Kolkata, children were taught about the thermometer, but in Tokyo, they were not.

In the institutions of Kolkata, blind children were taught about the water cycle (water-clouds, and rain-water cycle). In the institutions of Tokyo as well, children were taught about condensation and the relationship between water and vapour.

In the institutions of Kolkata, in class IV, children were taught about the sun, the moon, the planets and the stars. But, in the institutions of Tokyo, in class IV, the children were taught only about the moon and stars. The rest of the topics were taught in class III.

The blind children, in the institutions of Kolkata, were taught about various seasons, but in the institutions of Tokyo no such lessons were imparted.

In the institutions of both Kolkata and Tokyo, children were taught about the mechanisms of the human body. However, while in Kolkata, they were taught about respiration, basic mechanism, and nutrition and growth; in Tokyo, they were taught about the relationship between structure and movement of human body along with the functions of bones and muscles.

Topics like General principles of security, traffic regulations, and precautions to be taken while using electrical appliances, climbing elevated land, or entering water bodies were taught only in the
institutions of Kolkata. In the institutions of Tokyo, these topics were taught during mobility training.

- The study showed that in the institutions of both Kolkata and Tokyo, in Arithmetic, the blind children of class IV were taught about Fractions - their meaning, addition, subtraction; Decimals - addition, subtraction, multiplication, and division; and rules of multiplication and division along with the relationship between dividend, quotient, divisor, and remainder. In the institutions of Kolkata, children were also taught about positions of numbers (Units, Tens, and Thousands) in class IV. But, in the institutions of Tokyo, these were taught in Classes II and III. Unitary method, Highest Common Factor and Lowest Common Multiple were taught to the blind children in the institutions of Kolkata. But, these were not taught in the institutions of Tokyo. On the other hand, importance of parentheses and to calculate accordingly, Units of Area (centimetre, metre, kilometre), and ways of determining areas of squares, and rectangles were taught only in the institutions of Tokyo.

In Geometry, the children in the institutions of Kolkata were only introduced to the concepts of square, triangle, simple line, cube, and cylinder. But, in the institutions of Tokyo they were taught about parallel and perpendicular lines, parallelograms, rhombus, and trapezoid.

- In Music, in one of the institutions of Kolkata (LFB) blind children of class IV were taught about ‘Srutis’, ‘Raagas’, and ‘Svaras’. In CBS, the children were taught ‘Rabindrasangeet’, ‘Kantageeti’, and ‘Raagas’. In BBA as well, children were taught ‘Rabindrasangeet’ along with songs dedicated to Swami Vivekananda. In all the three
institutions of Kolkata, children were taught to play musical instruments (Tabla, Harmonium, and Sitar). They were taught to sing individually as well as in groups. In all the three institutions of Tokyo, children were taught traditional Japanese songs like, ‘Sakura Sakura’. They were taught to sing individually as well as in groups. They were also taught to play musical instruments like drums, synthesizer and piano.

- Instructions in Craft were provided in 2 of the institutions (BBA and CBS) of Kolkata. In BBA, children were taught chair caning (beading of ropes and attaching those to the frame), basket making, book binding, and scribbling pad making. While teaching book binding, the children were taught sewing, fixing the cloth, and stapling papers equally. In CBS, children were taught to make doormats, and stitch gunny bags (holding big needles properly and stitching). The third institute (LFB) in Kolkata did not provide any training in craft work to the children in class IV. In all the three institutions of Tokyo, in Craft, children were taught to create things conceived on the basis of familiar materials. They were taught modeling, fitting things of different shapes together, cutting, joining shapes, and creating new products.

- While providing lessons in Physical Education, in only 1 of the institutions of Kolkata (LFB) children were taught free-hand exercises, skipping, and exercise with dumbbells. But, in Tokyo in all the 3 institutions, children were taught light and rhythmic free hand exercises to make them aware of the changes in the body. They were also taught how to keep balance while exercising. Similarly, basic gymnastic skills, aerobics and drill were taught only in 1 institution (CBS) in Kolkata. But, in Tokyo, in all the 3
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Institutions children were taught gymnastics which included basic turning skills and handstands, aerobics, and drill. Wrestling and Judo were taught only in 1 institution (BBA) in Kolkata. These were taught neither in any of the 3 institutions of Tokyo, nor in the other 2 institutions of Kolkata.

- Again, in 2 institutions of Kolkata (BBA and CBS), in athletics children were made to participate in race, long jump, short put, javelin, and discuss throw. Children were also taught swimming (Freestyle, Backstroke, Butterfly stroke, and Breast stroke). The third institution in Kolkata (LFB), due to lack of a ground and a swimming pool, could not provide regular training in athletics and swimming to the blind children. However, sometimes children of this institution were taken to the nearest ground and the nearest lake and made to run and swim. But this was not done regularly. In Tokyo, in all the three institutions, blind children were made to run relay races, small hurdle races, and participate in long jump and high jump. But, they were not taught discuss throw and javelin throw. Swimming (Floating activities, different strokes, and swimming while breathing) was taught in all the institutions of Tokyo.

- With regard to sports, children in all the institutions of Kolkata were made to play cricket, and football with sound balls. In all the institutions of Tokyo, children were made to play basket ball, volley ball, and fielding type games including kicking, hitting, catching, and throwing. Yoga was taught in all the institutions of Kolkata. But it was not taught in any of the institutions of Tokyo.

In two of the institutions of Kolkata (LFB and CBS), children were also made to participate in recreational activities like recitation and drama. In the third institution of Kolkata (BBA), as well children
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were made to participate in dramas but those were not considered as a part of Physical Education. In all the institutions of Tokyo, in recreational activities, children were taught folk dances and rhythm dances.

In one of the institutions of Kolkata (LFB), children were also taught about First-Aid. The other two institutions of Kolkata as well as the three institutions of Tokyo did not provide any lessons in First-Aid in class IV. However, in the institutions of Tokyo, lessons in First-aid were provided in class V.

Instructions in Health Education were also imparted in all the three institutions of Tokyo. Children were made aware of the changes in the body with age. They were informed that individual differences affect one’s development; the necessity to have a balanced diet and participate in appropriate exercises along with taking proper rest. But, in the institutions of Kolkata, no such lessons were imparted.

- In 1 institution of Kolkata (BBA) children were given training in Industrial Arts. In Industrial Arts, children were made to construct different structures with building blocks and they were also taught clay modeling in which they had to touch various models and reconstruct those with clay. In the other two institutions (CBS and LFB) of Kolkata, training in Industrial Arts was provided only till class II. On the other hand, in Tokyo, training in Industrial Arts was provided in all the 3 institutions as long as the children needed. They were made to discriminate shapes and sizes, and play with beads and rubber fittings (inserting rubbers in proper places).

- It was also seen that in 1 institution of Kolkata (BBA) a separate class period was allotted for the study of Culture. In Culture, children were taught about the Ramayana. No such lessons were imparted in the
other two institutions of Kolkata (CBS and LFB). In all the three institutions of Tokyo as well, children were not provided any separate instruction on Japanese culture. Instead, information about Japanese heritage and culture were included in the study of Society.

- In all the 3 institutions of Tokyo, children were given instructions in Moral Education, in which they were taught to be honest, kind, trustworthy and cheerful, have the courage to do things, treat elders with respect, follow the rules of the society, and develop a sense of public morality, love and respect family members, and understand the importance of tradition and develop a love for history. But, in Kolkata no such moral education were provided in any of the institutions.

- In only 1 institution of Kolkata (BBA), children of class IV were provided instructions in General Knowledge. Children were made aware of the ruling government of West Bengal, Tripura, Chief Ministers and other ministers of various states, members of the Parliament and Legislative Assemblies, the Chief Justice, national leaders, and recipients of the Nehru Award. In the other two institutions of Kolkata (CBS and LFB), no such lessons in General Knowledge were provided to the children. In all the three institutions of Tokyo, as well there was no separate class period for General Knowledge. Instead, a separate class period was assigned for Comprehensive Study Time, in which children were given information about their government, culture, music and jobs. Queries of the children were also answered. Sometimes, children were taken out for field trips and made to participate in community service activities like cleaning the road.

- In the institutions of Tokyo, it was seen that one class period was allotted for Special Activities, in which children were made to
participate in various activities like basket ball, base ball, tennis, chess, music, dance, etc. In the institutions of Kolkata, as well, children were made to participate in dramas and debates. But participation was not compulsory.

**Interpretation**

- In the institutions of Kolkata, the study of mother–tongue was more syllabus oriented. But, in the institutions of Tokyo, emphasis was more on developing the ability to think independently and critically. Also, in the institutions of Kolkata, children got the opportunity to learn English for a year more.

- It was evident that the nature of the course of study in History was quite similar in both Kolkata and Tokyo. But, regarding study of Geography it was seen that while in the institutions of Kolkata, emphasis was given on knowing about West Bengal; in the institutions of Tokyo children were made to understand the differences between the different regions. Also, in the institutions of Tokyo all the topics were taught with emphasis on their relationship with the society and the existence of individuals.

- By letting blind children grow potted plants while teaching topics like plants and animals, they were given first–hand knowledge in the institutions of Tokyo. But, in the institutions of Kolkata emphasis was more on imparting theoretical knowledge. The course of study of Science was much vaster in the institutions of Kolkata than in the institutions of Tokyo. The topic ‘Heat’ was taught in the institutions of both the places, but the content of the topic was different. In some cases topics had different names in the
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institutions of both the places, but the content was similar (for example ‘water cycle’).

- Some of the topics which were taught in class IV in the institutions of Kolkata were completed in classes II and III in the institutions of Tokyo (for example Units, Tens, and Thousands). Otherwise, the course of study for Arithmetic was quite similar in both the places only with a few differences. But, in Geometry, the course of study was quite different.

- It was seen that the course of study for music was similar in all the institutions of Tokyo. Similar songs were taught in all the institutions of Tokyo. But, in the institutions of Kolkata, all the three institutions taught different kinds of songs. Otherwise, the nature of course of study in music (which included songs, playing different instruments, singing individually as well as in groups) was similar in Kolkata and Tokyo.

- In the institutions of Kolkata, the emphasis was more on improving the finger dexterity of the blind children and developing their idea about how to hold the needle and use it. This was done to prepare the blind children to pursue related jobs. But, in the institutions of Tokyo, the emphasis was more on developing the aesthetic and creative abilities of the children. Children were encouraged to express themselves and their ideas by creating things out of their imagination and appreciating those.

- In case of Physical Education, all the blind children studying in different special institutions for the blind in Tokyo got the same opportunity for learning various exercises, gymnastics, and drills. But, in Kolkata, only those children studying in the LFB received training in free hand exercises and those studying in the CBS learnt
gymnastics and drill. Also, the various activities taught in athletics and swimming were different in the institutions of Kolkata and Tokyo. It was evident from the study that in Kolkata while some of the activities were taught in all the institutions; some were taught only in one or two of the institutions, whereas in Tokyo, in all the three institutions same activities were taught. Children got the same learning opportunities in all the institutions of Tokyo. But in Kolkata, learning opportunities were not same in all the institutions. Also, an important topic like Health Education was not included in the course of study in the institutions of Kolkata.

- In Kolkata, a child could receive training in Industrial Arts only till class IV that too only in one institution; but in Tokyo a child could receive such training as long as they needed it.

- The blind children in the institutions of Tokyo were taught about their culture though not as a separate subject of study. But, in Kolkata, children were taught about their culture only in one institution.

- In the institutions of Kolkata, moral education was not included at all in the course of study.

- Thus, in Kolkata, children of only one institution received instructions on General Knowledge, and even the course of study was oriented more towards political information. But, in Tokyo children of all the three institutions got an opportunity to clarify their doubts. Information provided during the Comprehensive Study Time covered various aspects of life and was not only politically oriented. Children were made to participate in community service which developed qualities of citizenship in them.
Findings and Interpretation

- In the institutions of Tokyo, it was compulsory for the children to participate in some activities like basket ball etc. But in the institutions of Kolkata it was not compulsory for the children to participate in these activities.

Findings

Class V

- In Bengali (mother-tongue), blind children in the institutions of Kolkata were taught some prose pieces, poems, and drama. In Japanese, blind children in the institutions of Tokyo were made familiar with the content of Japanese literature, views of people in the previous era, differences between spoken and written language, and differences in the language in older generations. In the institutions of Kolkata, the emphasis was on enabling the children to recite with expressions, to take dictations, to understand debates and discussions, and to understand instructions while working in a group. Children in the institutions of Kolkata mainly had to learn questions and answers from their prescribed course of study. But, in the institutions of Tokyo, emphasis was on developing the ability of the children to think creatively and originally. Children were encouraged to select a theme and speak and write on that. Children were taught how to use the library and do reference work. Children were also encouraged to write poems based on their imagination and their experiences.

- In English, blind children in the institutions of Kolkata were taught about the days and months of a calendar, articles and auxiliary verbs. They were also taught short stories and essays followed by a practice
in pronunciations. In the institutions of Tokyo, on the other hand, English was introduced in class V as a Foreign Language. Children were taught to actively listen and speak in English and also the importance of verbal communications. They were also taught the sounds and rhythms of the language and its difference from the Japanese language. Basic expressions in English and different ways of greetings, and self-introduction, etc. were taught.

- In Geography, blind children in the institutions of Kolkata were taught about the continents and oceans of the world followed by location of India in the world, its borders, physical features, and climate and vegetation of different regions. The children were also taught about the various resources of India (agriculture, fisheries, mines, energy, and industries); export-import and communication system; India’s social and cultural environment; and geographic details, social, and cultural environment of India’s neighbouring countries (Nepal, Bhutan, Bangladesh, Myanmar, Pakistan, Afghanistan, and Sri Lanka). In the Institutions of Tokyo, as well, the blind children were taught about the continents and oceans of the world; followed by Japan’s location, its territories and the climate, and how the climate of different regions affect the lives of the people; importance of protecting public life and environment from pollution. Children were taught about Industries and Farming and also about the ingenuity of the people engaged in food production and the efforts of people engaged in selling industrial products. They were also taught about the transportation and information network and development of information technology.

- In History, blind children in the institutions of Kolkata were taught about geographical discoveries and how these discoveries helped in
the expansion of trade; contribution of science and technology in the invention of hydroelectricity, electricity, and medicines; expansion of agriculture and industry; advancements made in the field of communication; different arms and ammunitions used during wars and how different nations waged wars in order to expand their dominions; revolutions in different countries for independence and equal rights; struggle for independence in different countries; independence movement in India; responsibilities of the citizens of India; and a brief picture of the local government. In Tokyo, history was not taught in class V.

- In Science, blind children in the institutions of Kolkata were taught about the different parts of a plant (root, stem, leaves, flowers); life-cycle of animals (frog, butterfly, honey bee); energy (solar, electric, magnetic); measurement (mass, weight, length, and liquid); sun, moon, and earth (solar and lunar eclipse, high and low tide, stars, and planets); rocks, types of soil and minerals; mechanisms of human body (blood circulation, and excretory system); Pollution (meaning, causes, measures to overcome pollution); conservation of the environment (forests, wildlife); contribution of science in various aspects of human life (agriculture, industry, transport, medical science); and some inventions made by famous scientists. In the institutions of Tokyo, children were taught about plants (germination, growth and fruition); animals (life cycle of fish); energy (concept of solubility, movement of pendulums, function of electricity); function of running water (how it cuts into the ground, transports and piles up pebbles and soil, how the flow of the water affects the shapes and sizes of pebbles, and how the amount of running water change the state of ground); and weather change (how it can be forecast using
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meteorological information, and how the volume and movement of clouds are related to changes in weather).

- In Arithmetic, children of class V in the institutions of Kolkata were taught about Fractions (addition, subtraction, multiplication, division, and expressing fractions into decimals); Unitary Method; Ratio and Proportion; and Percentage. In the institutions of Tokyo also, the course of study included Fractions (addition and subtraction with different denominators, multiplication, and division); Integers; Decimals (multiplication and division); Ratio and Proportion; and Percentage.

- In Geometry, children in the institutions of Kolkata, were taught about straight lines and perpendicularity of straight lines; angles; triangle, quadrangle, and circle; and calculation of area of squares and rectangles. In the institutions of Tokyo, on the other hand, the concept of angles; calculation of area of squares and rectangles were taught to the children in class IV. In class V, children were taught to determine the area of triangles, parallelograms, rhombus, and trapezoids and the volume of cubes and rectangular parallelepiped. They were also taught to recognize polygons; and understand the congruence of geometrical figures, and the ratio of circumference of a circle to its diameter.

- In the institutions of Tokyo, children were also given a preliminary idea about algebraic expressions which represented relationship between numbers/quantities. But, in the institutions of Kolkata, no such idea was given to the children.

- In Music, the children of class V in the institutions of Kolkata were taught about various Raagas, Svaras, and Srutis followed by songs of
Rabindranath Tagore and songs by Atul Prasad. Along with singing individually as well as in groups, children were also taught to play various musical instruments like Tabla, Sitar, and Harmonium. In one institute (BBA) in Kolkata, children were also taught to play the Synthesizer. In the institutions of Tokyo, the children were taught Japanese traditional songs like ‘Koinobori’. Children were trained to sing individually as well as in groups. They were also taught to play simple tunes and percussion instruments. Children were also given opportunity to play the piano and the drums.

- It was also seen that in the institutions of Tokyo, children were given instructions in a subject called Home Economics. In Home Economics, the children were taught about the importance of family. They were made aware of various household chores; the role and importance of daily meals; and the nutrients essential for their body and their functions. Children were also given basic lessons in cooking, washing, cutting vegetables, serving meals, cleaning table and kitchen. Ways of wearing clothes in a comfortable manner; wearing clothes according to the different seasons; sewing; stitching; washing clothes were also taught to the children. The children were also made aware of the importance of money and how to use it in a planned manner along with making purchases properly. But in the institutions of Kolkata, no such lessons were imparted.

- Regarding Craft/ Manual work, it was seen that in 2 of the institutions of Kolkata (BBA and CBS) the blind children were taught to make different types of door mats (square, round, etc.). Along with the doormats, children in BBA were also taught chair caning, flower vase and basket making, and book binding. In the third institution in Kolkata (LFB) children were only taught book binding (putting thread
into the needle, cutting paper, and making exercise books). On the other hand, in Tokyo, in all the 3 institutions the blind children were encouraged to create something out of their own imagination. Children were given training in recreating artifacts with clay/porcelain. They were taught to understand shapes, movement, as well as depth through their sensory abilities.

- In 1 institution of Kolkata (BBA), blind children of class V were taught computers (as a regular school-teaching subject). They were taught to switch on the computer. Then they were acquainted with the position of the alphabets and the functions of other keys. Children were also taught how to save and open a file. However, in the other 2 institutions (CBS and LFB) computers were not taught class V. In Tokyo, it was seen that in all the 3 institutions computers were not taught as a separate school-teaching subject. Instead children were given training in computers as a part of Independent Activity.

- While providing lessons in Physical Education, blind children in only 1 institution of Kolkata (LFB) were taught Free-hand exercises, skipping, and exercise with dumbbells. But, in Tokyo in all the 3 institutions, children were taught light and rhythmic free hand exercises to make them aware of the changes in the body. They were also taught exercises to improve physical fitness. Similarly, basic gymnastic skills, aerobics and drill were taught only in 1 institution (CBS) in Kolkata. But, in Tokyo, in all the 3 institutions children were taught gymnastics which included basic turning skills and handstand skills, basic mounting skills, hip circle skills, jumping off skills, and vaulting box activities. Wrestling and Judo were taught only in 1 institution (BBA) in Kolkata. These were
taught neither in any of the 3 institutions of Tokyo, nor in the other two institutions of Kolkata.

- Again, in 2 institutions of Kolkata (BBA and CBS), in athletics children were made to participate in race, long jump, short put, javelin, and discuss throw. Children in these two institutions were also taught swimming. The third institution in Kolkata (LFB), due to lack of a play ground and a swimming pool, could not provide regular training in athletics and swimming to the blind children. However, sometimes children of this institution were taken to the nearest ground and the nearest lake and made to run and swim. But this was not done regularly. In Tokyo, in all the 3 institutions, blind children were made to participate in athletics (run relay races, short distance races, and hurdle races, along with running at full speed for a fixed distance). Children were also made to participate in long jump and high jump. But, they were not taught discuss throw and javelin throw. Swimming was taught in all the institutions of Tokyo.

- With regard to Sports, children in all the institutions of Kolkata were made to play cricket, and football. In all the institutions of Tokyo, children were made to play basket ball, soccer, volley ball. Yoga was taught in all the institutions of Kolkata. But it was not taught in any of the institutions of Tokyo. In two of the institutions of Kolkata (LFB and CBS), children were also made to participate in recreational activities like recitation, singing, and drama. In the third institute of Kolkata (BBA), as well children were made to participate in dramas but that was not considered a part of Physical Education. In all the institutions of Tokyo, in recreational activities, children were taught folk dances and rhythm dances.
Instructions in Health Education were also imparted in all the three institutions of Tokyo. In health education, children were also taught about injury prevention and first aid. But, in the institutions of Kolkata, no such lessons were imparted.

- It was also seen that in 1 institution of Kolkata (BBA) a separate class period was allotted for the study of Culture. In Culture, the blind children of class V were taught about the Mahabharata, and Paramhansa Deb. No such lessons were imparted in the other two institutions of Kolkata (CBS and LFB). In all the 3 institutions of Tokyo as well, the blind children of class V were not provided any separate instruction on Japanese culture. Instead, information about Japanese heritage and culture were included in the study of Society.

- In all the 3 institutions of Tokyo, children were also given instructions in Moral Education, in which they were taught the value of freedom and discipline. Children were taught to be trustworthy, polite, sincere, compassionate, open-minded, and friendly to others. They were taught to be worthy members of the society. But, in Kolkata no such moral education were provided in any of the institutions.

- In only 1 (33.33%) institute of Kolkata (BBA), children of class V were provided instructions in General Knowledge. Children were made aware of their country, national anthem and national song, West Bengal and its districts, the population of each district, Kolkata and similar topics. In the other two institutions of Kolkata (CBS and LFB), no such lessons in General Knowledge were provided to the children. In all the three institutions of Tokyo, as well there was no separate class period for General Knowledge. Instead, a separate class period was assigned for Comprehensive
Study Time, in which children were given information about their government, culture, music and jobs. Queries of the children were also answered. Sometimes, children were taken out for field trips and made to participate in community service activities like cleaning the road.

- In the institutions of Tokyo, it was seen that one class period was allotted for Special Activities, in which children were made to participate in various activities like basket ball, base ball, tennis, chess, music, dance, etc. In the institutions of Kolkata, as well, children were made to participate in dramas and debates. But these were organized after the institution hours.

**Interpretation**

- The course of study of mother–tongue in the institutions of Kolkata emphasized more on understanding and memorization but in the institutions of Tokyo, the emphasis was more on originality and independent thinking.

- In the institutions of Kolkata, English was taught as a main language but in the institutions of Tokyo, English was taught only as a Foreign Language. Therefore, in the institutions of Kolkata, children were taught about the various aspects of English grammar and literature, but in the institutions of Tokyo, children were only introduced to the language.

- The nature of the course of study of Geography was almost similar in the institutions of both Kolkata and Tokyo. However, topics covered in the institutions of Kolkata were more than those covered in the institutions of Tokyo.
While in the institutions of Kolkata, the emphasis was more on providing knowledge about various industries and resources, but on the other hand in the institutions of Tokyo, the emphasis was more on linking knowledge about the development of the industries and trade with the contribution of the people. In the institutions of Tokyo, all the topics were taught in relation to their effect on the lives of the people.

In the institutions of Kolkata, blind children were taught History and Geography separately. But, in the institutions of Tokyo, History and Geography were not taught separately. Instead children were taught a subject called Society, which had a historic and a geographic realm.

While in the institutions of Kolkata, children got the knowledge of both history and geography of their country in class V, in Tokyo, they only got the knowledge of geography in class V. They learnt about history only in class VI.

However, it can also be said that in Kolkata, children were burdened with knowledge, but in Tokyo, they were allowed to learn slowly and steadily.

Differences in the content of Science taught in the institutions of Kolkata and Tokyo were quite evident. The number of topics covered was much more in the institutions of Kolkata than in the institutions of Tokyo. Most of the topics taught in the institutions of both the places were completely different.

However, a few topics like Plants and Animals were included in the course of study of Science in both the places. Though the names of these topics were similar; yet the content was absolutely different. While in the institutions of Kolkata, children were only taught about
the various parts of a plant and their functions; in the institutions of Tokyo, the children were taught about the process of germination and how sunlight affects the growth of plants and animals. Also, in Animals, children in Kolkata were taught about the life cycle of frogs and butterflies, but in Tokyo, children were taught about the life cycle of fish.

- Some of the topics like mechanisms of human body, types of soil, rocks, and minerals which were taught in class V in the institutions of Kolkata, were taught in class VI in the institutions of Tokyo.

- In Arithmetic, the topics taught in the institutions of both the places were quite similar only with a few differences. Integers and decimals were taught in the institutions of Tokyo but these were not taught in the institutions of Kolkata. Similarly, unitary method was taught in the institutions of Kolkata, but it was not taught in the institutions of Tokyo.

- In case of Geometry, it was seen that the course of study followed in the institutions of Tokyo was much more advanced than that followed in the institutions of Kolkata.

- The nature of the course of study in music followed in the institutions of both Kolkata and Tokyo was quite similar.

- It was also observed that instructions in Home Economics helped in training boys and girls in matters related to family life so that they were prepared to become worthy members of the family as well as the society. Instruction in this subject helped in the development of the daily living skills of the blind children. Thus, in a way instruction in Home Economics complemented instructions in Daily Living Skills and children in the institutions of Tokyo got more
opportunity to improve their daily living skills. But, in Kolkata, such opportunity was not available at all.

- It was evident that, in the institutions of Kolkata, the emphasis was more on developing the ability of the children to make articles of daily use which prepared them to take up related jobs later in their lives. However, all the institutions in Kolkata did not provide the same learning opportunity. But, in the institutions of Tokyo, children were encouraged to imagine and give expression to their thoughts. Training in craft enabled them to enhance their creative abilities.

- In Kolkata children in only one institution could get familiar with Computers in class V. Those studying in the other two institutions did not get such an opportunity. Thus, a difference in learning opportunity was evident. But, in the special institutions for the blind in Tokyo no such difference in learning opportunity was noted.

- Regarding Physical Education, a difference in learning opportunity was noted within the institutions of Kolkata. But, in the institutions of Tokyo same activities were taught in all the 3 special institutions for the blind. Blind children were made to participate in different kinds of sport in both Kolkata and Tokyo. But, the nature of sports varied in these two places.

- In Kolkata children of only one institution were made aware of their culture. In the other two institutions children were deprived of such knowledge. In Tokyo, children were also taught about their culture though not as a separate subject. Again, children in the institutions of Kolkata were not given any training in Moral Education but in Tokyo, such training was available in all the institutions.
Findings and Interpretation

- In Kolkata, children of only one institution received instructions in General Knowledge, and even the course of study was oriented more towards political information. But, in Tokyo children of all the three institutions got an opportunity to clarify their doubts. Information provided during the Comprehensive Study Time covered various aspects of life and was not only politically oriented. Children were made to participate in community service which developed in them qualities of citizenship.

Findings

Plus Curriculum/Independent Activity

- Along with the general subjects, the Special Institutions for the Blind in both Kolkata and Tokyo provided training in Braille, Mobility, and Daily Living Skills to the children. In the institutions of Kolkata, these were classified as Plus Curriculum, but in the institutions of Tokyo, these were classified as Independent Activity.
- In the institutions of both Kolkata and Tokyo, training in Braille began with the concept of right and left followed by recognition of the placement of six dots. The blind children were then taught to recognize the alphabets represented by the different position of the six dots. Once, they could recognize the alphabets, they were taught to write those and gradually they were introduced to words and sentences.
- While providing training in Mobility, as well children in the institutions of both Kolkata and Tokyo were first made aware of their surroundings within the institution. They were taught to walk
in trail, follow cues, and walk in a straight line within the classroom. Then the children were taught to move up and down the stairs. In the institutions of Kolkata, they were taught to hold the wall, but in the institutions of Tokyo, they were taught to hold the hand rails. Once the student became proficient in moving from one place to another within the institute, then gradually they were trained to walk outside the institution building. While walking outdoors, they were trained in using their walking sticks. In the institutions of Tokyo, while providing mobility training, the children were made aware of the traffic rules and regulations and sometimes they were also taken from one city to another. But, in the institutions of Kolkata, the traffic regulations were taught to the children in class IV as a topic in Science and they were only trained to walk on the streets. They were not taken to any other city or locality.

- While teaching Daily Living Skills, in the institutions of both Kolkata and Tokyo children were taught all the things (starting from things like toileting, brushing, eating, changing and folding clothes, to recognizing money) necessary to lead their daily lives. Blind children were even taken to the nearest market and encouraged to buy things themselves.

- It was seen that in the institutions of both Kolkata and Tokyo, there was no prescribed syllabus for training in Braille, Mobility, or Daily Living Skills. Teachers in both the places taught these subjects according to the needs, abilities, and conditions of blind children.

- In addition to these subjects, children in the institutions of Tokyo were also given training in computers as a part of Independent Activity. In computers they were taught the basic skills required to
use the computers and follow the continuous information that was being read out by a one-dimensional sound. But, in the institutions of Kolkata, training in computers was provided in 2 institutions (BBA and LFB) as a regular school teaching subject. In LFB, computer was taught only in classes VIII and IX and in BBA, it was taught from class VI. In the 3rd institution (CBS), children were not provided any training in computer.

- Also, in the institutions of Kolkata, training in Braille was provided till class V. But, training in Mobility was provided till class V only in two institutions (BBA and CBS). In the other institution (LFB), Mobility training was provided till class IV. Daily Living Skills were taught till class III in all the institutions. On the other hand, in Tokyo, it was found that all the institutions provided training in all the subjects of Independent Activity from class I till class IX.

**Interpretation**

- The course of study for Braille, Mobility Training and Daily Living Skills was similar in both Kolkata and Tokyo. While teaching these subjects the idea of letting the children learn at their own pace was common in both Kolkata and Tokyo.
- Study of computers was completely different in the institutions of both the places. The differences in the learning opportunities provided in Kolkata and Tokyo, were evident. In Tokyo, all the institutions followed a uniform system and provided training in Independent Activity till class IX. So, the children received practice in these subjects for a longer period of time. But, in Kolkata the amount of time that a student got to learn a subject of the Plus Curriculum depended on the institution he/she was enrolled in.
Objective IV

Findings

The conducted study showed that both in Kolkata and Tokyo, the method used for teaching the blind children was called Audio-Tactile Method. In this method, the children’s tactile and hearing abilities were utilized to facilitate learning. In order to teach them the methods of tactile stimulation, speaking and listening, and explanation through models were used. It was also observed that in the institutions of both Kolkata and Tokyo, the methods were not adopted right from the beginning. Tactile Stimulation, as a method of teaching the blind children, was adopted from Class I. It was learnt that for blind children, their fingertips were like their eyeballs. Enhancing the usability of the fingers had a major impact on their concept formation. With this end in view, blind children in the institutions of Kolkata, were given training in clay modeling. They were made to touch an object, for example, a fruit, and then they were asked to recreate that object with clay. They were also made to touch objects of various shapes and sizes. This helped in improving their tactile sensation and also in the development of their finger dexterity, concept formation, and head-hand co-ordination. In Tokyo, also, it was seen that the institutions helped the blind children in developing their finger dexterity with the help of beads, peg feed, screw drivers, rubber fittings (in which, the children had to insert the rubbers in the proper places). Children were also taught to fasten and unfasten buttons to improve the coordination of their hands and fingers. In order to help in concept formation through tactile stimulation, the
blind children were taught to discriminate between different shapes and objects of various sizes and create objects with porcelain.

Speaking and listening, as a method of teaching, were also introduced by the institutions in both Kolkata and Tokyo from the very beginning (Class I). Teachers spoke and explained various things and the children listened to them. In the institutions of both the places, the teachers read out a part of the lesson and the children repeated that. Then, the children were checked for the spellings and pronunciations. This practice was mainly adopted for children of classes I to IV. Class V onwards, children were taught mainly with Braille books. Whenever, Braille books were not available, audio books were used. It was also seen that in the institutions of both the places, teachers dictated notes, and the children took those down in Braille. In the institutions of Tokyo, the children were allowed to record the lessons taught in the class. But no such provision was made in the institutions of Kolkata.

Children in the institutions of both the places were also taught with models. There was no specific class for the adoption of this method. Models were used wherever possible. Daily Living Skills were taught with the help of models from Class I. Social Science subjects like History and Geography were also taught with the help of models depending on their availability.

While teaching Mathematics, in the institutions of Kolkata, Taylor Frame with lead types were used. In a Taylor Frame, the lead types were placed in different positions and each of these positions represented the numbers from one to nine. The lead types were movable. Their position could be changed.
children were taught to touch the lead types and recognize the numbers. But in the institutions of Tokyo, Taylor Frame was not used. Instead, the children were given blocks where the numbers were inscribed in the form of Braille dots.

- Regarding reading and writing in Braille, it was observed that in the institutions of Kolkata, children were first given the concept of six dots and their arrangement. Then they were introduced to marble board and trained in moving their fingers to recognize the position of the dots. Children had to realize that the different arrangements of the dots represented different alphabets. In this way the children were taught to read and recognize the alphabets in Braille. Once they could read, they were taught how to write. First, they were told that while writing they had to move from right to left. Then they were made familiar with the Braille apparatus—Braille slate, stylus, and guide. Children were trained in holding and placing the guide and recognizing the holes. Next, they were taught to hold the stylus and press it properly to form the impression on the paper. As the children learnt to read and write in Braille, they were gradually introduced to Braille books. Braille was mainly taught to the children from class I to class IV. As they became proficient in using the Braille slate, they were allowed to use the Brailler. Yet, preference was given to using Braille slates because those were more affordable.

In the institutions of Tokyo, teaching of Braille began with explaining the children the concept of left and right and then of rivets (metal pins). Using those rivets, the children were taught the arrangement and organization of the six dots. This was followed by the training of proper movement. Children were trained to use...
both their hands while reading. This in a way also improved their sense of coordination. Then, they were taught the hand movement along the horizontal line, which was similar to the movement required for writing from right to left. For writing in Braille, children initially used Pakinsubureta (similar to Brailer/Braille Embosser) and Braille dictionary. This acquainted the children with the method of reading and writing in Braille. Gradually the children were introduced to Braille slate, stylus, and guide. Children were taught to hold the stylus exactly vertically while writing to form the impressions.

- For mobility training, in the institutions of Kolkata, children were made to walk both indoors as well as outdoors. While moving indoors they were trained in Trailing (walking while holding the wall), sound localization, identifying landmarks, and recognizing cues. They were also taught upper/lower arm techniques to prevent them from colliding. Also, while moving up and down the stairs, children were first taught to hold the wall and move. As they became accustomed to the place, they could move around freely. While moving outdoors, children were taught to use the walking sticks. They were taken around the campus and were taught how to hold the stick and then place it. They were taught the sighted guide technique (following a sighted person while walking).

In the institutions of Tokyo, mobility training began in the classroom. Children were trained to walk in a straight line and follow one another. In all the institutions, there were Braille lines inscribed on the floor and handrails along the walls. Children were
made to follow those Braille lines, and use the handrails while moving up and down the stairs. Initially the partially sighted children helped their blind peers in reaching their classrooms. But, as the blind children were taught to identify landmarks and recognize cues, they could reach their classrooms on their own. Exactly opposite the door of each classroom, a thread was tied at the handrail. As the children reached that thread, they knew that they have reached their classroom. The name/number of the classroom was also inscribed in Braille just outside the classroom. The floor within the institution was made of different material especially where the stairs began and ended. This was done, so that blind children, by listening to the sounds produced on stamping on the floor, would realize where they were standing and would move accordingly. They were also taught sound localization along with recognizing cues. As the children learnt to walk freely within the institution, they were taken outside the campus. Children were informed about their surroundings, the traffic rules, and then taught how to use the sticks while moving on the streets. Sometimes children were also taken to other cities.

- Daily Living Skills included each and everything beginning from brushing, toileting, changing and folding clothes, to looking after oneself. In the institutions of Kolkata and Tokyo, these were taught mainly using models. In the institutions of Kolkata, the models mainly explained how to tie shoe laces, how to fasten and unfasten buttons, etc. In the institutions of Tokyo, models of toothbrush, handkerchief, fan, etc. were provided. In the institutions of Tokyo, cooperation of the parents was sought in
providing training in Daily Living Skills. The Daily Living Skill instructor together with the parents helped the children in developing habits of cleanliness, tidiness, etc. In the institutions of Kolkata, the hostel wardens also cooperated with the Daily Living Skill instructor in training the children. In case, children were not using the residential facility, then the help of the parents was sought.

- Regarding training in computers, there existed a stark difference in the institutions of Kolkata and Tokyo. In Kolkata, one institution (CBS) did not provide any training in computer because computer was not regarded as a regular school teaching subject. In another institution (LFB), computer was taught only to children of classes VIII and IX. A software and Key Board developed by WEBEL was used in this institution. A mask was placed on the keyboard and on that mask Dot 1 to Dot 6 was indicated. Children, by the time they reached class VIII knew the dots which indicated the various alphabets. As they typed the required characters using the dots, those got transcribed into Braille. This was accompanied by screen-reading software and in case of any error in typing; it announced “hash character”. As the children of this institution moved to class IX, they were given a layout of the entire keyboard which they had to memorize and then the mask was removed from the keyboard. In the third institution (BBA) in Kolkata, it was seen that, children were first given training in type writing. Then they were introduced to the keyboard. This institution used the JAWS screen reading software which made an announcement of whatever was being written and also in case of any mistake.
However in Tokyo, it was seen that all the institutions used Braille keyboards and the PC Talker screen reading software. The children had to hear carefully, the continuous information that was being read out, and in case of any mistake, they had to rectify that.

- In the institutions of both Kolkata and Tokyo, children were taught class wise. In the institutions of Kolkata, the maximum number of children to be accommodated was 16 whereas in the institutions of Tokyo, it was 6.
- Remedial classes were provided to the slow learners in all the institutions of both Kolkata and Tokyo. In the institutions of both the places, it was seen that the slow learners were allowed to learn at their own pace. They were taught the same thing repeatedly.

**Interpretation**

- The method of teaching the blind children was similar for most of the subjects in the special institutions for the blind in both Kolkata and Tokyo.
- Only, the method of teaching Mathematics was different in both the places. It was easier in the institutions of Tokyo, because the dots were inscribed on blocks and children only had to feel those and understand the number they represented. But, in the institutions of Kolkata, children had to feel the lead types and understand their positions. The lead types were movable, so there were chances of them being moved from their position due to human error. This could lead to error in calculation.
- The similarities and differences in the institutions of Kolkata and Tokyo regarding reading and writing in Braille were quite evident.
While in the institutions of Kolkata, lessons in Braille began with marble board, in the institutions of Tokyo, it began with metal rivets. Again in the institutions of Kolkata, writing in Braille began with Braille slate, stylus and guide but in the institutions of Tokyo, it began with the Pakinsubureta.

There were some similarities as well. Just as in the institutions of Kolkata, likewise in the institutions of Tokyo, reading preceded writing. The way of teaching was also similar in both the places. As the children became proficient in reading and writing in Braille, they were gradually introduced to Braille books.

Children in the institutions of both the places were allowed to learn at their own pace.

The way of teaching mobility skills to the blind children was similar in both the places. In the institutions of both Kolkata and Tokyo, children were taught to understand cues, follow one another, and use the wall or handrail while walking.

However, there were some differences as well. For example: In the institutions of Tokyo, there were handrails, so the children were taught to use those. But, in Kolkata, there were no provision of handrails. So, the children were taught to hold the wall while walking. Also, in Tokyo, throughout the city, Braille lines were inscribed not only on the roads but also in every railway stations and other public areas. So, in the institutions of Tokyo, children were taught to follow the Braille lines inscribed on the floor. But, in Kolkata, this was not done. Thus the differences were mainly due to the discrepancies in the facilities available.
Findings and Interpretation

- The method of teaching Daily Living Skills was also similar in the institutions of both Kolkata and Tokyo. The differences were mainly in the kinds of models used during teaching.

- Learning computers was made much easier in the institutions of Tokyo than in the institutions of Kolkata because of the availability of Braille keyboards, but somehow the children in the institutions of Tokyo were dependant on those specially designed keyboards. On the other hand, in Kolkata, children could operate the normal keyboards as they were gradually taught to use those.

- In Kolkata, those children studying in CBS did not get the opportunity to learn computers. But, in Tokyo all the children studying in different institutions got the same opportunity of learning computers.

- For slow learners, the method of teaching was same in the institutions of both the places.

Objective V

Findings

- The study revealed that in Kolkata 1 institution (CBS) conducted half-yearly and annual examinations and the other 2 institutions (BBA and LFB) conducted monthly tutorials followed by annual examination. In Tokyo all the 3 (100%) institutions conducted 2 to 3 examinations in each semester. The entire session was divided into 3 semesters and the number of examinations (whether 2 or 3) to be held in each semester, depended on the teachers.

- It was seen that, in 1 (33.33%) institution (LFB) of Kolkata, children were examined orally in all the subjects (History, Geography,
Mathematics, Science), except English and Bengali till class IX. For English and Bengali, children had to appear for a written examination along with a viva. For subjects like Arithmetic and Algebra, they did their calculation with the help of the Taylor Frame and conveyed the answer orally to the examiner; in Geometry the blind children had to explain the theorems orally. For subjects like, Physical Education, Music, Art and Craft theoretical as well as practical examinations were conducted in all the classes. In this institution, study of computers was introduced only in Class VIII and children were examined through theoretical and practical examination. In institution of Kolkata (CBS), till class VIII only half yearly and annual examinations were conducted. Till class III children were examined orally in all the subjects. Class IV onwards, for subjects like, English, Bengali, History, Geography, Science, and Mathematics, written examinations along with viva were conducted. For subjects like, Music, Art and Craft, and Physical Education, theoretical as well as practical examinations were conducted. In the third institution (BBA) of Kolkata, unit tests were conducted followed by annual examination. It was seen that till class III, only oral examinations were conducted for all the subjects. But, from class IV during annual examination, written tests along with Viva were conducted for all the subjects. However, during the unit tests the kind of examination (whether written or oral) depended upon the discretion of the teacher. For subjects like Industrial Art, only practical examinations were conducted once in a year. Also, for subjects like General Knowledge and Indian Culture, only written examinations were conducted once a year. Practical examinations were conducted for Physical Education. In case of Music and Computers, children had to appear for both practical and oral examinations.
In Tokyo, in all the institutions no formal examinations were conducted at the Elementary Stage (Class I to Class VI). Children’s level of learning was checked at the end of each semester. At the Junior High School Stage (Classes VII to IX) written examinations were conducted for all the subjects. In all the three institutions of Tokyo, for subjects like, Physical Education, Music, and Home Economics, written as well as practical examinations were conducted. For Art and Craft, and Industrial Arts, only practical examinations were conducted.

- For the subjects of Plus Curriculum/ Independent Study (Braille, Daily Living Skills, Orientation and Mobility Training), in all the three institutions of Kolkata, practical as well as theoretical examinations were conducted. But, in Tokyo, in all the three institutions, the progress of the children was only observed.

- The survey conducted showed that till Class VIII children had to write in Braille during their examination in all the 3 institutions of Kolkata. In classes IX and X, they had to take the help of scribe (writers) during the examination. The writers were appointed by the institutions. In case, children wanted to arrange the writers themselves, then the institutions provided financial assistance for that purpose. But, in Tokyo, in all the 3 institutions, during examination children had to write in Braille in all the classes. However, in case children were not proficient in Braille, then 1 institution (Katsushika) allowed the children to appear for oral examination. 1 institution (Hachioji) allowed the children to record their answers and then those recordings were examined by the teachers. In this institution, sometimes the class teachers acted as the writers for the blind child who was not proficient in Braille.

- In all the 3 (100%) institutions of both Kolkata and Tokyo, children were awarded marks for their performances during examinations. The
full marks during the annual examination was 100. All the institutions in Kolkata had a strict pass/fail criterion. Children had to score a minimum of 25-30% of the total marks to pass. Passing in Braille was compulsory. In one institution (BBA) passing in Physical Education was also compulsory. But in Tokyo, in all the institutions there was no strict pass/fail criterion. However, much importance was attached to attendance. Education, being free and compulsory from class I (one) to class IX (nine) in Tokyo, all the children had to enroll themselves in class I and finish the compulsory school going stage. The semester examinations were mainly conducted to see how much the children have been able to understand and also to identify the slow learners.

In the institutions of Kolkata, it was seen that a student was allowed to continue in the same class for two consecutive years. In case, of repeated failure in the same class, they were given transfer certificates. But, in the institutions of Tokyo, there was no strict pass/fail criterion. So, if a student was unable to cope with the standard of a particular class, then he was taught according to his ability. All the children had to complete the stage of compulsory education (Classes I to IX).

- The study showed that in the institutions of both Kolkata and Tokyo, examinations were held within the institutions, and children were examined by the teachers of the institutions. There was no provision of external examiners. Regarding the way of examination, it was seen that in Kolkata, all the 3 institutions followed their own way of examination only till class VIII. For classes IX and X, they followed the system of examination prescribed by the West Bengal Board of Education. But, in Tokyo, all the 3 institutions followed the system of examination recommended by the MEXT (Ministry of Education, Culture, Sports, Science and Technology).
In all the 3 institutions of both Kolkata and Tokyo, children were provided with certificates of passing. In Tokyo, the certificates were provided by MEXT. In Kolkata, till class IX, children were provided with progress reports by the institutions, and in class X the West Bengal Board of Education provided the certificate of passing to the children.

**Interpretation**

- All the institutions in Tokyo followed a uniform system of examining the children. So, even if a student moved from one institution to another, he did not face any problem in adjusting with the system of examination. But, in Kolkata, the system of examination was not uniform and in case a child shifted from one institution to another he had to get himself accustomed to the system of examination followed in that particular institution.
- It was seen that the nature of examination was quite different in Kolkata and Tokyo. In the institutions of Tokyo, there was no formal system of examination till class VI (six). But, in the institutions of Kolkata, examinations were compulsory. While in the institutions of Kolkata both oral and written examinations were prevalent, in the institutions of Tokyo written examinations were mainly held. All the three institutions in Kolkata followed their own system of examination till class VIII. But, in Tokyo, all the institutions had the same system of examination.
- However, the method of examination for subjects like Physical Education and Craft (written and practical examination) was similar in both the places.
- There was no system of theoretical or practical examination for the subjects of Independent Activity in the institutions of Tokyo. But in
Findings and Interpretation

the institutions of Kolkata examinations were held for the different subjects of Plus Curriculum.

- It was noticed that the system of taking the help of scribes was not much prevalent in Tokyo. Teachers sometimes helped the blind children only if they were not proficient in writing in Braille. But, in Kolkata it was compulsory for the blind children to take the help of scribes in classes IX (nine) and X (ten).

- In the institutions of Tokyo, blind children were saved from the burden of examinations.

- In Kolkata, the institutions had the independence to examine the children according to their own rules at least in some classes. But in Tokyo, the institutions did not have this independence.

Objective VI

Findings

- The study showed that in order to teach reading in Braille, Word Maker, Marble Board, Peg Board and Tin/Plastic Board were used in the institutions of Kolkata. With Word Maker the children learnt to recognize different alphabets. Marble Board was used to develop the concept of right and left and understand how the different positions of the 6 (six) dots represented different alphabets and numbers. Peg Board was also used for the same purpose. In a Tin/Plastic Board alphabets were all inscribed in Braille. But all these teaching aids were available in only 1 institution (BBA) of Kolkata. In the other 2 institutions all the teaching equipments were not equally available. Word Maker and Peg Board were available in CBS. Marble Board
Findings and Interpretation

was available in LFB. Tin/Plastic Board was neither available in CBS nor in LFB.

In Tokyo, it was seen that none of these equipments were available in any of the 3 institutions. Instead, in all the 3 institutions instructions were given with models of Braille (six pins on a wooden block) were given to the blind children. Then they were made to touch the Rivets (metal pins) to develop the concept of 6 (six) dots and how the different positions of the dots represented different Japanese characters. Models to explain the concept of direction (to move from right to left and left to right) were also used.

- To teach the blind children writing in Braille, in the institutions of both Kolkata and Tokyo, Braille Apparatus (which included a Braille slate, stylus, guide) and Embosser (also known as Pakinsubureta) were available. However, in the institutions of Kolkata, the slate, stylus and guide were more widely used because of their affordability, but in the institutions of Tokyo, the embosser was more widely used.

- Models for Daily Living Skills (for example, models showing how to tie laces and shoe laces, buttoning of shirts, etc.) were used in all the 3 institutions of Kolkata. In Tokyo, as well, models were used in all the 3 institutions. But, there the models included articles of daily use like handkerchief, toothbrush, hairbrush, hand fan etc. with Braille inscriptions on them.

- Models for concept formation and finger dexterity (example: discriminating shapes and sizes, building blocks etc.) were available in the institutions of both Kolkata and Tokyo.

- Mobility maps, to provide an overview of the surroundings were available but not usable in only 1 institution (BBA) of Kolkata. In the
Findings and Interpretation

other 2 institutions (CBS and LFB) mobility maps were not available. However, in Tokyo, in all the 3 institutions mobility maps were available.

- Walking Sticks were available in all the 3 institutions of both Kolkata and Tokyo.

- For teaching general subjects (like Languages, History, Geography, Social Sciences, and Science) Braille books were available in all the 3 institutions of both Kolkata and Tokyo. Audio books were also available in all the classes of all the 3 institutions of Tokyo and especially for those blind children who could not follow Braille. In Kolkata, as well, audio books were available in all the 3 institutions, but those were used mainly from class IX. In junior classes, audio books were used only when Braille books were unavailable.

- CD/Floppy covers with Braille inscriptions were available in all the institutions of Tokyo. But, these were not available in the institutions of Kolkata.

- Relief Charts and maps, Tactile maps and Tactile Globes were available in all the 3 institutions of both Kolkata and Tokyo. But, while in Kolkata all the institutions had only one or two such globes; in Tokyo, all the institutions had around 10-12 such globes.

- Models for teaching Social Science subjects (History and Geography and Society) were available in the institutions of both Kolkata and Tokyo.

- Detachable Devices (devices which could be fragmented into pieces and then again assimilated) were available in 2 institutions of Kolkata. These were not available in 1 institute of Kolkata. But in Tokyo, these were not available in any of the 3 institutions.
In all the 3 institutions of Kolkata, Taylor Frame was available. Taylor Frame was used to make the children recognize the numbers and also for counting. In Tokyo, Taylor Frame was not available in any of the 3 institutions. Instead, to enable the blind children to recognize numbers Braille inscribed blocks for counting from 1-100 were used. Abacus was available in all the 3 institutions of both Kolkata and Tokyo. Geo-board, used for representing different geometric shapes was available in all the 3 institutions of Kolkata. But it was not available in any of the institutions of Tokyo. However, models of Geometric shapes were available in all the 3 institutions of both Kolkata and Tokyo.

Embossed Drawings for Science subjects were available in 2 institutions of Kolkata. These were not available in 1 institution of Kolkata. But, in the institutions of Tokyo, these were not available in any of the 3 institutions. Models for Science subjects, on the other hand, were available in all the 3 institutions of both Kolkata and Tokyo. Light Probe Meter (which emitted different kinds of sounds on being brought near different colors) was available in the all the 3 institutions of Tokyo. These were used to help blind children in identifying colors. This instrument was mainly used during the Chemistry classes to enable children to identify chemicals of different colors. This teaching aid was not available in any of the 3 institutions of Kolkata. Similarly, another teaching aid, Color Talk, which announced the color of the object on which it was placed, was available in all the 3 institutions of Tokyo. But, this aid was not available in any of the 3 institutions of Kolkata. Temperature Announcer was also available in all the 3 institutions of Tokyo. This instrument was mainly used for assessing the temperature of chemical
Findings and Interpretation

reactions. But, in the institutions of Kolkata, this instrument was not available in any of the 3 institutions. Ammeters with Braille inscriptions were available in all the 3 institutions of Tokyo. In the institutions of Kolkata, this teaching aid was not available in any of the 3 institutions.

- Musical instruments and CD/Cassette Player were available in all the 3 institutions of both Kolkata and Tokyo.
- Tactile Chess Board was available in all the 3 institutions of Kolkata. But, in Tokyo, it was not available in any of the 3 institutions.
- Sound Ball was available in all the 3 (100%) institutions of both Kolkata and Tokyo.
- Instruments for exercising were available in all the institutions of Tokyo. But, these were not available in any of the institutions of Kolkata.
- Text-Reader machine was available in 2 institutions of Kolkata. But, it was usable only in 1 institution. In the third institution in Kolkata, it was not available. In Tokyo, on the other hand, it was not available in any of the 3 institutions.
- Screen reading software for teaching Computers was available in 2 institutions of Kolkata. It was not available in the third institution. But, in Tokyo, screen reading software was available in all the 3 institutions. Also, in Kolkata, only 1 institution used specially designed keyboard to teach computers. But, in Tokyo, all the 3 institutions had Braille keyboards to teach computers. Braille printers were available in 2 institutions of Kolkata. But, in Tokyo, Braille printers were available in all the 3 institutions.
Findings and Interpretation

- Thermoform machine, which produced tactile photocopies, was available in 1 (33.33%) institution of Kolkata, but it was not usable. In the other 2 (66.66%) institutions, it was not available. In Tokyo, on the other hand, thermoform machine was available and usable in all the 3 (100%) institutions.

Interpretation

- The equipments used in the institutions of Kolkata and Tokyo for making blind children read in Braille were completely different.
- Also, the similar teaching equipments were used in all the institutions of Tokyo. But, in the Kolkata, similar equipments were not available in all the institutions.
- To teach writing in Braille similar equipments were used in the institutions of both Kolkata and Tokyo.
- Though the concept of teaching Daily Living Skills through models of things of daily use was similar in the institutions of both the places, yet the types of the models provided in the institutions of the two places were different.
- In case of concept formation and enhancing finger dexterity, the models used in the institutions of both the places were similar.
- A difference in the availability of the mobility maps in the institutions of both the places was evident.
- Regarding the subjects of Plus Curriculum (Braille, Daily Living Skills, Concept Formation and finger dexterity and Training in Mobility), it was seen that some of the teaching equipments used in the institutions of Kolkata and Tokyo were almost similar and some were absolutely different.
Findings and Interpretation

- It was thus seen that the usability of audio books in the institutions of Kolkata was dependent on the availability of Braille books. In Tokyo, these audio books could be used in all the classes, but in Kolkata, the usage of the audio books was restricted to specific classes.

- The availability of aids like Relief Charts and maps, Tactile maps and Tactile Globes was much more in the institutions of Tokyo than in the institutions of Kolkata.

- In Tokyo, there was complete unawareness about devices like Detachable Devices.

- It was evident that people were completely unaware about the existence of Taylor Frame and Geo-board in the institutions of Tokyo.

- Some teaching aids (like Abacus, Braille ruler, models of geometric shapes) used in both the places (Kolkata and Tokyo) were similar. But, some teaching aids (like Taylor Frame, Braille inscribed blocks and Geo-board) were absolutely different.

- The number of teaching aids used to teach the science subjects were more in the institutions of Tokyo than in the institutions of Kolkata. It was also seen that some of the aids ((like light probe model, color talk, temperature announcer, ammeter with speakers) used in the institutions of Tokyo were completely unheard of in the institutions of Kolkata. Embossed drawings, however, were not used at all in any of the institutions of Tokyo.

- With the availability of more aids (like light probe model, color talk, temperature announcer) understanding Chemistry was easier for the children in the institutions of Tokyo. They could easily use these aids and understand the changes in color or temperature.
during the course of any experiment. But, in the institutions of Kolkata, due to unavailability of these aids, the blind children had to ask their low-vision peers about the changes in the color during the course of a chemical reaction. The blind children were thus dependant on their low-vision peers. But, in the institutions of Tokyo, the blind children could conduct the experiments, especially in Chemistry, independently.

- There was a difference in the type of musical instruments which were available in the institutions of Kolkata and Tokyo. In the institutions of Kolkata tabla and harmonium were mainly available while in the institutions of Tokyo drums and piano were available. Synthesizer was available only in 1 institution of Kolkata but in Tokyo it was available in all the institutions.

- The unavailability of chess board in the institutions of Tokyo was probably because over there children were not taught to play chess.

- The unavailability of instruments for exercising was perhaps because in the institutions of Kolkata children were not taught to exercise with instruments. They were only taught free hand exercises.

- Text-reader machine was usable at least in 1 institution of Kolkata. But, in Tokyo it was not available at all.

- There was a lot of difference regarding the availability of teaching aids for Computers in the institutions of Kolkata and Tokyo. It was again observed that there was a difference in the availability of teaching aids within the institutions of Kolkata. The two institutions which taught computers did not provide similar teaching equipment. On the other hand the institutions of Tokyo maintained uniformity. Regarding the screen reading software, it was seen that in the
institutions of Kolkata JAWS software was used and in the institutions of Tokyo PC TALKER software was used.

- While in Tokyo all the institutions had thermoform machines, in Kolkata only 1 institution had it but could not use it. In the other 2 institutions of Kolkata it was not available at all.

**Objective VII**

**Findings**

- The study revealed that both in Kolkata and Tokyo, there was awareness about the system of inclusion.

- In Kolkata, all the general schools (whether government or government-aided) followed the system of inclusion. They could not deny admission to a child with special needs. But, in case of private schools, admitting a child with special needs depended on the school’s policy. In Tokyo providing admission to a child with special needs in a general school (whether private or government) depended entirely on the school’s policy and the wish of the principal.

In Kolkata, there existed a specific rule for inclusion. The rule for inclusion stated, “According to the Government of West Bengal’s Notification (NO. 846-SS (PRY), Cal. The 12th Aug. ’98) 3% seats of all new admissions shall be kept reserved for persons with disabilities in all Government Educational Institutions and the Educational Institutions receiving aid from the Government with effect from 1st day of September 1998 or with effect from the next academic session, whichever is earlier”.

But in Tokyo there was no such rule.
The survey showed that both in Kolkata and Tokyo, the Government provided assistance to the general schools for providing education to the blind children.

In Kolkata, the government provided assistance in the following ways:

i. Provided area based Resource Room [4 already functioning and some under construction].

ii. Arranging 128 special educators for the 141 wards in Kolkata, roughly 1 special educator per ward.

iii. Arranging training programmes for the teachers.

iv. Foundation Course for 3 months was organized to provide the basic knowledge to teachers to deal with children having special needs. Further, these teachers, whenever required, could consult the special educators for meeting the needs of the blind children and also for construction of the curriculum.

v. Efforts were made to provide training to almost all the teachers at the Primary level. At the Upper Primary level 1/2 teacher(s) per institution were provided training to deal with the needs of the blind children.

vi. At the Primary level, child based programmes were implemented. For example: If there were 4 blind children in a particular institution/class, then Braille books and other aids like Braille slate, Taylor Frame, Walking Sticks, etc. were provided to those children by the Government.
In Tokyo, the government provided assistance, mainly through Support Centres, in the following ways:

i. Provisions were made so that teachers from the schools for the blind could go to normal schools and teach the blind children. These teachers also helped the teachers of the general schools by explaining them how to use the various teaching materials meant for providing education to the blind children.

ii. Training programmes were also organized for the teachers of the general schools.

iii. Provisions were made so that a blind child studying in a general school could go to a special school for the blind and receive training in reading and writing in Braille for 8 hours per week.

iv. Counselors were also appointed for the blind children studying in general schools.

v. In a class in a general school the total number of children to be accommodated was 40. But, in case a blind child was also studying in that class, then the total number of children was reduced to 16.

- It was also seen that both in Kolkata and Tokyo, the Government provided assistance to the blind children mainly in the form of scholarships.

In Kolkata, scholarships were open to all children and those were advertised on television; some of the scholarships were provided to the children on the basis of their socio-economic condition and the recommendation of the institute. The academic performances of the
Findings and Interpretation

children were also taken into consideration while providing the scholarships.
In Tokyo, education was free from Class I (one) to Class IX (nine). Scholarships were, thus, provided to the children mainly after the completion of Class IX (nine). These scholarships were provided on the basis of the student’s academic performance and his/her socio-economic condition.

Interpretation

- In Kolkata it was compulsory for the government schools to follow the system of inclusion and provide admission to children with special needs, but in Tokyo no such compulsion was made for the general schools. However, the private schools in both the places were given the independence to grant or refuse admission to children with special needs.
- The nature of the help provided to the general schools by the government was quite similar both in Kolkata and Tokyo. However, the provision of reducing the class strength was not available in the schools of Kolkata.
- In both Kolkata and Tokyo, the government was concerned about the education of the blind children and tried to provide all kinds of assistance (both in terms of finances as well as facilities to the schools) for their education.