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THE PHYSICAL AND MANPOWER FACILITIES AND ITS IMPACT ON ACADEMIC ACHIEVMENT: A COMPARATIVE STUDY OF THE GOVERNMENT AND PRIVATE SECONDARY SCHOOLS IN IMPHAL EAST DISTRICT, MANIPUR.

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ABSTRACT

The growing body of research has established that there is a link between physical and manpower facilities conditions and students' academic performance. However, there have been no previous studies into the relationship between government and private secondary schools condition and students' Output in Imphal east district, Manipur. The sample was 17 public and private higher secondary schools from 17 populations. The 5 schools are government and12 forprivate secondary schools. The main objectives of the study were:(1)To compare the physical facilities between private and government secondary schools in imphal east district, Manipur.(2)To compare the outcome between private and government secondary schools in imphal east district, Manipur. (3)To compare the input facilities between private and government secondary schools in imphal east district, Manipur. It has adopted the descriptive method. The total number of score of the output has determined the quality of the school. 5 Government and 12 Private secondary schools and total number of student appeared,and total number of 1st Division, 2th and 3th Division 2020. The total appearedstudentof government secondary schools is 1291, 1st division 172, 2nd division 621, and 3rd division 140 and total passed 933,whole passed percentageof government secondary school is 12.05%. On the other hand the private secondary schools total appeared student is 2607, 1st division 1207, 2nd division 1080 and 3rd division 43 and total passed 2330, whole passed percentage of private secondary schools is 60.75%.The passed percentage of government secondary schools are low and private secondary are high so investigator attempted to produce cause the differentiation them.

1. INTRODUCTION:

Imphal east district is one of the 16 districts of Manipur state in north-eastern India. As of 2011 it is the second most populous district in the state, after Imphal West. This district came into existence on 18 June 1997.The total area of district is 709 km^2 .In 2011 Census, Imphal east had population of 456,113 of which male and female were 226,094 and 230,019.The administration divisions (1) Porompart (2) KeiraoBitra and (3) Sawombung.

The physical and manpower facilities are important role in the educational system in the imphal east district in manipur. Without the physical and manpower facilities education seem to be incomplete. The infrastructure, all essential material and manpower facilities are very much important for higher outcome of the secondary school in imphal east district, manipur. Without proper infrastructure, insufficient equipment are lest outcome.Beynon (1997) citing Heyneman& Jamison (1980) reported that research has provided evidence to support the theory that a low level of learning among children in developing countries can be partly attributed to poor and inadequate facilities. Beynon (1997), also stated that "the overall conclusion, which is being reinforced as new research results come in, is that while school building and furniture do not teach (parents, teachers, textbooks and supplementary learning materials do) soundly built, maintained and adequately furnished and equipped buildings have a profound positive effect on both participation and achievement." (p. 22). Research conducted in Nigeria and India also concluded that facilities like buildings, separate classrooms and student's desk determine the organisation of the teaching/ learning activities and that these factors do influence the learner's achievement. Fuller (1990) also concluded after his review of numerous international researches on environment and building that physical facilities are important. In The United States and United Kingdom previous studies have examined the impact of building condition on students' attainment and behaviour. One such study was done in the United States by Cash (1993) which was replicated at least four times. The results of the studies have shown that poor building conditions affect students' performance. The rationale supporting this thesis was that school buildings that are in good condition should facilitate good academic performance from students. Therefore it is expected that students would perform at a lower standard as the condition of the school building worsens and that poorly maintained buildings are hindering the performance of students. Consequently, I have undertaken this research to determine if the variability in school building conditions in Jamaica is associated with the performance of our students. I have adopted a structural approach in doing this thesis even before 6 exploring the literature.

In addition, inadequate information was found locally relating to the topic of this thesis. The approach taken by this research was employed because of the limited documented evidence of building condition, which includes poorly maintained and modified buildings.Cash (1993) examined the relationship between the condition of school facilities and student achievement and student behaviour using the entire population of forty-seven rural high schools in Virginia, USA. Student achievement was determined by the scores of the Test of Academic Proficiency for grade eleven during the 1991-1992 school years. Cash explained that if a relationship can be found between schools' physical environment and student's outcome, then school leadership can make informed decisions which would potentially affect students' behaviour and achievement.The structural components of a building should assure that the elements required to fulfill its function will stand up (Salvadori, 1990). Osbourn (2002) felt that buildings should reflect contemporary attitudes towards

environmental control, structural concepts and aesthetic excellence. So to Osbourn a modern building is expected to be a life support machine that provides the facilities necessary for human 33 metabolisms such as clean air and water. A modern building should also remove waste produce, control heat and humidity, provide privacy, security, and visual/acoustic comfort and be a source of energy for appliances and provide means for communication with television, telephones and postal services. In addition, a building must be safe from collapse, and from fire, storm and vermin. It must be resistant to the physical forces of snow, rain, wind and earthquakes; must be capable of adaptation to various functions, including external landscaping and internal furniture arrangements. Buildings must allow for easy maintenance, alterations and extensions as well as having a sustainable form of construction which can be adapted to changing trends and legislative requirements. All this must be accomplished in the context of providing a building which has character and aesthetic appeal (Osbourn, 2002).

There are three interrelated facets or performance requirements of a building: physical, functional and financial (Williams, 2003). Physical performance refers to a building's fabric, services and finishes, while, functional performance is a measure of the benefits that the occupier derives from the attributes of a building. "It is, in effect, a measure of a building's utility for those people that use it" (Aronoff& Kaplan, 1995, p. 26). In addition , financial performance refers to the value or worth derived from the existence or use of a building and is "likely to be measured in terms of rental income and market value" (Pinder, 2004, p. 27). Physical, functional, and financial performance are therefore important aspects of buildings that contribute to their overall performance and cannot be easily prioritised. Performance requirements cannot be placed in order of importance, because any one of the features may be more critical than another for a particular element of a building. Priority is normally dictated by the precise function and location of a specific building. In this thesis, the physical and functional performance of the Jamaican school building stock will be assessed to determine if it is 34 associated with students' academic scores. It will be determined if particular elements of school buildings have a more significant impact on student attainment than others. Clements-Croome (1997) believed that buildings should serve people. It should not be the people who are required to adapt to the building. School buildings should therefore be designed to fulfil the needs of the students without necessitating undue and extreme adaptation on the occupants. The building should be the servant, not the master. In this respect several structural and design elements will be addressed in this research. A building is inevitably subject to physical decline resulting from its use (Chanter & Swallow, 1996). It is the loss of the physical capacity of a building to perform the function for which it was designed those results in physical deterioration. According to Trowbridge (1964), "Left unchecked, physical deterioration will continue until the building reaches the end of its physical life—the period after which the building can no longer perform its function because physical deterioration has rendered it useless." (British Standards Institution [BSI], 2000, p. 23). This thesis investigates the effect of

both age and cosmetic elements on student attainment.

1.1 Infrastructure facilities and Indispensable in public and privatesecondary schools:

School infrastructure should be surficial facilities. The institutional building is stared to be of highest importance in charming the guests and more persons. The parents get to appointments to institutes for the admittance of their innocent person, they follow institute constructions. Likewise, they must have proper infrastructure and border barrages. When building of school are, fence and crown covering fittings to secondary schools structure, painting and makings of varnishing and window of opportunity, fitting of maximums and nonmanufacturing industries to organizational livelihoods and fetter of bulwark fences.

1.2 Specific Elements Relating to Overall Building Condition in Schools

Building conditions in schools deals with the actual state of the facility in terms of the age of the building, window presence, window condition, classroom temperature, painting schedule, wall condition, ceiling condition, noisy complex near classroom, cleaning schedule of classroom, bathroom adequacy, bathroom condition, cleaning schedule of bathroom, presence of graffiti, condition of school ground, colour of walls, condition of furniture and the general design of these elements. The condition of a building is very important and requires detailed attention, if only in the interest of human safety as buildings are needed for all aspects of life. Each educational design principle takes as its underlying premise that all learning environment should 35 be learner centred, developmentally and age appropriate, safe, comfortable, accessible, flexible and equitable in addition to being cost effective (Lackney, 2007). Against this background and the importance that these variables have to this research, information specific to each variable is given and the extent to which, if not appropriately designed and located, they could lead to dysfunctional buildings. The specific variables that follow are building age, ventilation, lighting, temperature, painting schedule, graffiti, ceiling, grounds and the condition of furniture.

According to Knapp et al. (2007), the design of school buildings should be done according to the building's immediate climatic, topographic, and cultural surroundings. For example, in hot regions, there should be minimal exposure to the sun, but an "effective shading mechanism" should be considered. Other variables that need to be considered are factors that are associated with the site: surface water runoff, cultural requirements like sanitary conveniences, local traditions and techniques, the attitude and skill of the population. These factors will influence maintenance and upkeep. Knapp et al. (2007) says that factors such as lighting, ventilation, heating, and maintenance friendliness should be taken into account from the early stages of planning when a building is being designed. He uses the example of school fittings and school furniture, explaining that these items are "subjected to extreme operational demands, children are very rough with the equipment they handle and this has to be adequately considered in the design stage." (p. 13). Some of the specific elements of building design fall within two major groups: structural and

cosmetic. Structural elements refer to items such as lighting, window and floor conditions, room temperature, age of building, and adequacy of bathrooms. Cosmetic elements, on the other hand, are those aspects concerning the general appearance of buildings such as painting. Cash (1993) concludes from her findings that student achievement scores were higher in schools with 36 higher quality cosmetic building condition ratings. It is clear, therefore, that although cosmetic elements do not contribute to the functional aspects of a building, they influence the perceived purpose of the building. According to Cash (1993), in reference to school buildings, "It is a physical representation of a public message about the value of education. If students perceive education as something to be done in a poor quality facility, they may also perceive it (education) to be of less value." (p. 77). The cosmetic and structural variables in this thesis will be assessed since they give a measure of the physical representation of the school building in Jamaica.

1.3 Building age.

The term 'building age' simply refers to the age of a building, which is the number of years it has been in existence. As cited in Earthman et al. (1995), Burkhead, Fox, and Holland (1967), Guthrie, Kleindorfer, Levin and Stout (1971), McGuffey and Brown (1978) and Plumley (1978), reported findings showed that building age was significant in reading score regression. Bowers and Burkett (1987) theorized that differences will exist between the new and old schools in achievement, disciplinary actions, health and attendance. Bailey (2009) informs that the age of a building has served as a surrogate for building condition in many research studies and that age in and itself is not a disadvantage. For Bailey, older buildings simply don't have the components newer buildings have. But other academic research explains building age to be much more—a reflection of a combination of the overall condition of the building (McGuffy& Brown, 1978), or a measure of the cumulative effects of the thermal, visual, acoustical and aesthetic environment (Cash, 1993).

1.4 Ventilation

The rate at which air exchange takes place in a building could be termed as ventilation. Ventilation in buildings should be continuous with new air taken from a clean source. A building that impedes this process can be considered defective. The most common defects in schools include insufficient outside air supply to occupied spaces, water leaks, inadequate exhaust air flows, poor air distribution or balance, and poor maintenance of heating and air conditioning (HVAC) system (WargockiWyon, Matysiak&Irgens, 2005). The purpose of ventilation is to ensure the quality of the indoor air without causing a feeling of cold or draught. This was traditionally achieved by opening the external envelope: windows, doors and ventilation stacks (Sebestyen, 1998). Ventilation also serves to remove or otherwise dilute contaminants that can build up inside a building. Such contaminants come from people's breathing, from their skin, clothes, perfumes, shampoos, and deodorants; from building materials, cleaning agents, pathogens, and from a host of other agents that are harmful in sufficient concentrations (Schneider, 2002). Schneider (2002) pointed to the fact that students could not function normally or learn optimally in classrooms that lack

good ventilation.

1.5 Lighting

"Light is energy in the form of electromagnetic radiation, which can be detected by the human sense of sight" McMullan (2002). Lighting quality is hindered or enhanced by window and door types or their absence or presence. If windows are used, that will give 100% ventilation and lighting and there will be less need for artificial lighting. There is a wealth of information on the effects of lighting in the classroom—from daylight to artificial— and research findings which bear conflicting views on which form of lighting is most suitable for the classroom. Research has also shown that controlled day lighting and appropriate lighting improve the performance and health of students and teachers (Woodside, 2008). Students cannot study unless lighting is adequate and there have been many studies reporting optimal lighting levels, as done by Mayron, Ott, Nations, and Mayron (1974), Dunn, Krimsky, Murray and Quinn (1985), Tanner and Jago (1999) and Schneider (2002). The consensus of these studies is that appropriate lighting is associated with higher test scores and plays a significant role in students' achievement. Recently, there has been renewed interest in increasing natural daylight in school buildings (Schneider, 2002).

1.6 Painting schedule, colour of wall, graffiti and ceiling

Cash &Twiford (2010) noted that the cleanliness of the school's walls was important and that the colour of the walls could impact students' attitude and academic performance. Cash (1993) noted a preference for white or pastel colours rather than dark colours in schools.

1.7 Psychological effect of noise

Lemasters (1997) informs that non–instructional noise had adverse impact on the student learner. He explained that noise causes stress: the onset of loud noise can produce effects such as fear, changes in pulse rate, respiration rate, blood pressure, metabolism, acuity of vision and skin electrical resistance. However, most of these seem to disappear rapidly and the subject returns to normal, even if the noise continues, but there is evidence to show that prolonged exposure to excessive loud noise will result in permanently elevated blood pressure. "Excessive environmental noise has been shown to accelerate mental health problems in those predisposed to mental health problems." (Hansen, 2005, p. 78).

1.8 Grounds

The general atmosphere of a campus influences impressions and attitudes Peterman, (1997). For Peterman (1997), the first impressions of the grounds can affect enrolment of students, employment of faculty and staff, and the attitudes of visitors and benefactors. Peterman further explained that ground maintenance operations contend with 49 unpredictable variables, such as living plants, pests and weather. Despite these and other challenges, the purpose of the grounds maintenance organisation is to provide a continually safe and invitingly attractive learning environment. While Peterman was addressing university campus grounds,

the same considerations are also relevant at the secondary school level as it relates to grounds.

1.9 Condition of furniture

According to Beynon (1997), the useable lifecycle of durable furniture is between five and ten years. Furniture that is used for a shorter period of time is usually a result of damaged items that are not repaired. Maintenance of furniture usually involves reattachment or replacement of broken parts. Beynon (1997) noted that in many developing countries school administrations fail to put maintenance plans in place to deal with damaged furniture and he believes that furniture has a direct impact on the comfort of learners and therefore provides strong justification for the allocation of funds to maintain and repair furniture. He further posited that since educational equipment maintenance and replacement is the third most important variable related to learning, that issue should be made a priority by educational technology specialists (Beynon, 1997). This research will address how the condition of furniture impacts student attainment.

1.10 Overcrowded Schools and Student Achievement

An overcrowded building is normally defined in terms of there being more students assigned to the building than it is designed to accommodate. Students' low achievement, high rate of absenteeism among teachers and students, lack of concentration were some of the problems encountered in the overcrowded schools.

1.11 School condition and external walls colour.

Walls are the vertical planes of a building which define and enclose its interior spaces (Ching, 1991). The internal and external walls of a building are normally painted with emulsion or oil-based paint, applied in two or three coats. The private secondary school appeared the cemented wall and differentiation colour and public school mostly in kutcha and same one colour sometime differentcolour.The two different types ofsecondary school and external colour inimphal east district,Manipur.

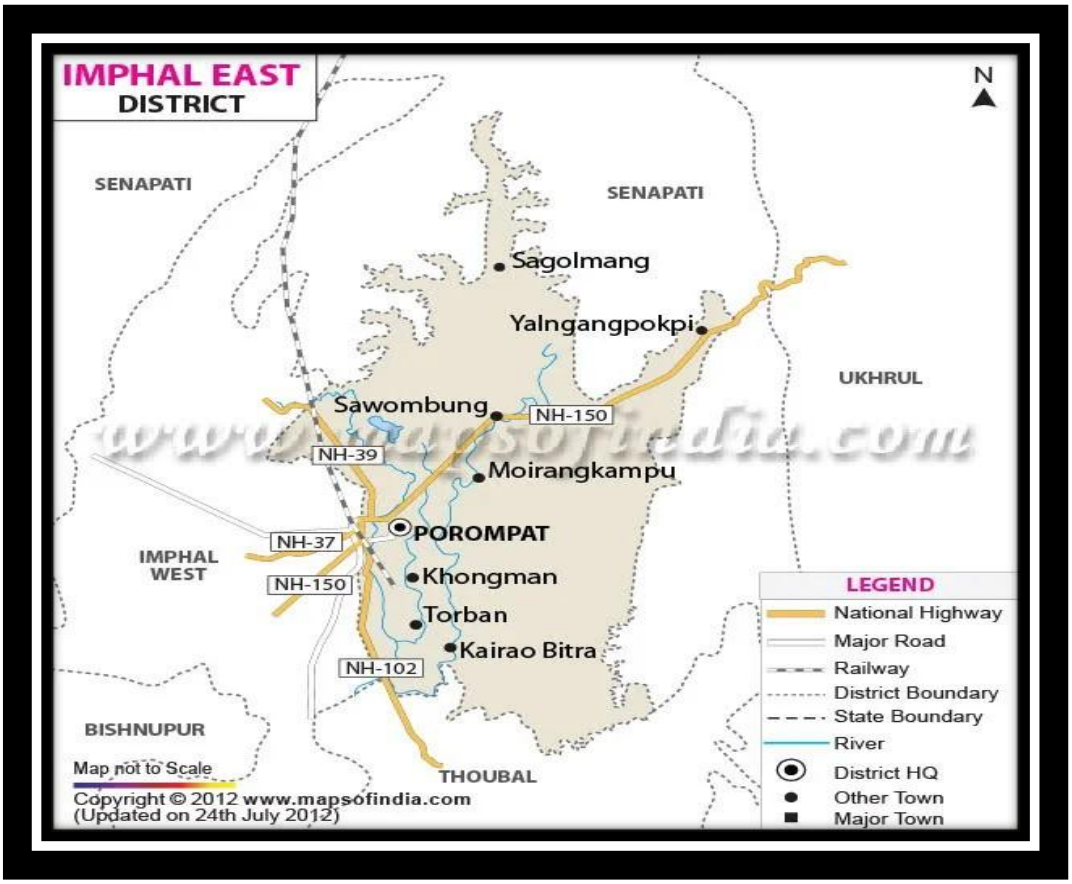
1. Private school external colour

2. Government school external colour

The above photos are the private and government school external colours. But some of government schools external colour are found very smooth and nine with different colour and cemented.

Private school ceiling public school ceiling

The following map has indicated about the areas of the imphal east district locationin Manipur.



The invigilator work inImphal east district Manipur

2. Objective of the study:

(1) To compare the physical facilities between private and government secondary schools in imphal east district, Manipur.
(2) To compare the outcome between private and government secondary schools in imphal east district, Manipur.
(3) To compare the input facilities between private and government secondary schools in imphal east district, Manipur.

3. Significance of the Study

The present paper is exceptionally significant to study the physical and manpower facilities and it impact on academic achievement of secondary students of imphal east district Manipur.The discoveries of the study will get a precious essential of the physical and manpower facility of secondary schools of their impact the students. The researcher wants to discover the best

outcome between private and public secondary schools. Without proper physical and manpower facilities of schools are poor and least output in secondary level exam.The findings of the study will be helpful for educators, planners, and policy makers since it will consider the effectiveness of secondary student output in imphal east district Manipur.

4. Infrastructure facilities and Indispensable in public and private secondary schools

School infrastructure should be surficial facilities. The institutional building is stared to be of highest importance in charming the guests and more persons. The parents get to appointments to institutes for the admittance of their innocent person, they follow institute constructions. Likewise, they must have proper infrastructure and border barrages. When building of school are, fence and crown covering fittings to secondary schools structure, painting and makings of varnishing and window of opportunity, fitting of maximums and nonmanufacturing industries to organizational livelihoods and fetter of bulwark fences.

5. Methodology of the study:

5.1 Population and sample:

5 government, and 12 private secondary schools. Sample was limited by its size,17 secondary schools as the sample of the study in imphal east district, Manipur.

5.2 Delimitations of the Study:

The study was delimited to class XII Grade of government and private secondary schools in imphal east district, Manipur.

5.3 Tools used:

The data were gathered through a check list (***check list***). The check list consisted of physical facilities (**Input)** such as land, building, toilets, classrooms, library, etc., and manpower facilities in terms of number of teachers, enrolment size, etc. The examination results (**Output)** in class XII was obtained from the records maintained by the schools and result out of the COHSEM. The Normative survey was also adopted to verify the check list given by the schools. It is only study of the **output.**

6. Limitations of the Study

The study was not free from certain limitations. Some of the limitations of the study were the following:

1. Out of the three basic parameters of the system (***Output***)was adopted.The sample was limited by its size.
2. The data were mainly quantitative in nature.

7. Operational Definition of Key Terms

- Comparative study refers to the similarities and differences in the available physical and manpower facilities and their effects on the academic achievement of students.
- Secondary schools refer to the Government and Private introducing classes XII.
- Teaching Inputs refer to the physical and manpower facilities.
- Teaching Outputs refer to the scores obtained by the students in class XII final examinations.

8. Data Analysis:

- The data were analysed using the descriptive consisting of percentage, Total appeared, 1st division, 2nd division and 3rd division.

9. Finding of the study:

9.1 Theprivate secondary schools exists enough physical facilities and higher outcome.

9.2 The government schools have not proper input facilities and inadequate infrastructure and lower pass percentages. But some another schools has found enough facilities and higher pass percentage in final exam.

9.3 The private secondary schools adequate input facilities and higher outcome. Government secondary schools are inadequate facilities and low Outcome infinal exam in class XII. But sometime government secondary found in grade score.

YEAR	SCHOOLS	APPEARED	DEVI-I	DEVI-II	DEVI-III	TOTAL PASSED	PASS%
2020	GOVT	1291	172	621	140	933	12.05%
	PVT	2607	1207	1080	43	2330	60.75%

10. The 5 Government and 12 Private secondary schools and total appeared 1st Division, 2th and 3th Division, total passed and percentagein imphal east district Manipurof 2020.

The above table of the final exam of 2020 the government secondary schools student appeared 1291 out of them 1st division 172, 2nd division 621, and 3rd division 140 and total passed 933, total percentage of whole government secondary schools is 12.05%. Ontheother hand the private secondary schools student appeared 2607 out of them 1st division 1207, 2nd division 1080 and 3rd division 43 and total passed 2330, total percentage of whole private secondary

schools is 60.75%.

11. Discussion:

The reason for the investigation was to explore the impacts of physical and manpower facilities and its impact on the academic achievement of secondary schools student in Imphal east district Manipur. The investigator was find out the school facilities between private and public schools and use the percentage of the student passed. Sample subjects were separated into two groups such as government and private secondary schools. The physical facilities i.e., proper arrangement of instructor table; desks and seats; painted walls; whiteboards; models; diagrams, overhead projector; appropriate illumination and ventilation; room radiators; regular power supply; drinking water; cupboard. Besides, the room was extensive too. This investigation was preceded for six months for the completion of treatment. The above has given the school design and colour of private and public schools and enclosed the pass percentage of differentiation among them.

11. Suggestion for further study:

The physical and manpower facilities have importance role in the schools for grade outcome as the investigator attempt to arrange adequate facilities and would like surficial facilities. The input facilities are inseparable of schools. If somebody establishes school should be proper arrange which all requirement There are: thermal quality/temperature, acoustic quality, playground, library, lab, equipment, Teaching-Learning Materials (TLM), Teachers' rooms, office and principal rooms, safety measures, training of safety measures among teachers and students, hall, students' common rooms, electricity, ICTs. Building size, toilet, Safedrinking water, classrooms, class size, classroom density, windows, doors, flooring, ceiling materials, furniture. The infrastructure facilities have major part of the schools and can growth of their outcome. The exam result has most valuable of the secondary schools in the class XII. In the Manipur context especially in imphal east district should be arrange the essential facilities of government and private schools. Without these facilities the outcome will be less and public will not interesting to admission to the schools.

12. Conclusion:

Schools physical and manpower facilities of secondary schools in imphal east district Manipur have a positive effect on students' academic achievement. If we will provide all physical and Manpower facilities like furniture, number of staff, well painted walls, drinking water, electric supply, charts, model, overhead projector etc. then students will take much interest in studies and they will get high marks and grade score. So, Physical and manpower facilities have a deep effect on students' academic achievement whether the students are intelligent or poor. So, it was recommended that an effective, well-managed, vibrant and favourable classroom environment should be ensued so that teaching learning process may take place successfully and effectively. Physical and manpower facilities should be equipped with basic advance facilities to simulate the teaching learning process.The secondary schools of imphal east district Manipur, the infrastructure and facilities of higher outcome are mostly interrelationships. The students have influence the relating facilities and suitable

to management. While student enrolled selected the good infrastructural facilities, and change the schools student's career and motivation for further goals. Some of the public secondary schools of imphal east district Manipur are kutcha infrastructures and lower the enrolment size. There are inadequatewindow and room temperature and lower outcome. The infrastructure has very much essential in the 20th century for higher outcome, it is indispensible material in the schools, and Proper facilities improved the student potential and higher outcome.

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