

TRANSPORT ENERGY OF SECONDARY SCHOOLS STUDENTS: IMPLICATION FOR LEARNING SCIENCE IN JOS METROPOLIS, PLATEAU STATE, NIGERIA.

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Abstract

This paper examines transport energy of secondary school students and its implication for learning science in Plateau State, Nigeria. It defines science, gives the importance of science, and discusses energy and its impact to education and the role of transport on education. Factors militating against effective learning of science which include transportation cost, poor transportation, inappropriate transport for students, irregular school attendance and unpunctuality of students, time constraint. This paper advocates that learning of science should include the consideration of transport energy. The paper also recommended that government should board public transport fare to a minimal amount, provide school buses and make provision to decongest traffic jams. Road Maintenance Agency should check the roads and make amends where necessary and governments should supervise the workers to make them sit up to their duties.

Keywords: Transport Energy, Implication, Learning Science, Secondary Schools Students, Jos Metropolis.

Introduction

Education remains the key to sustainable development of any nation in the world. It is the process of teaching (cognitive, psychomotor and affective), training (skills) and learning in schools at the basic, post basic and tertiary levels of our educational system (Mankilik, 2019). Education is widely recognized as one of the most essential components for poverty reduction, awareness on how to care for our lives, promotion of social life, reduction of illiteracy. Teaching and learning of science is generally accepted as relating the science that is learned in school to students' everyday life experiences as a means of developing scientific understanding. The teaching and learning of science cannot be done without energy from either the teacher or the learner. Lack of energy at any phase of school therefore creates considerable obstacles towards escaping poverty, and correlates with many factors that contribute directly towards it. Education sector faces major quantitative and qualitative challenges in primary, secondary and higher education particularly the transport sector.

Our reliance on energy-rich sources of fossil fuels has created the underpinnings of modern society enabling mobility, industrial growth, domestic comfort, unprecedented lavish food supply, and economic prosperity. As we move into a future with limited fossil fuels resources and worsening environmental conditions, societies in the developed world are faced with defining new options with respect to energy consumption, energy resources, and a shift towards energy independence (DeWaters & Powers, 2011).

There is a great potential links between energy and education in Nigeria. For instance, access and use of energy, especially transport, have evident impacts on education performance. Transport plays an important part in learning. Access to transport affects attendance to school (both boys and girls). Transportation makes it easier for students to reach their schools earlier, get back home earlier to do their homework in the evening. Access to transportation impacts communication, trade, tricycles, taxes and buses activity. This can also be easier for their parents to help them to and from school. The inability of several countries in Nigeria to reach certain level of education may be linked to the lack or absence of high transportation, both in the urban and rural areas. At the same time, poor science education quality and outcomes especially in secondary education may explain and be explained by the difficult transport energy provision situation.

Empirically, there is growing evidence around the fact that energy use (especially transport access and use) has an impact on education worldwide. In the context of developing countries, which Nigeria is one of these countries. Most of the literature shows a positive link between education outcomes and access to energy

Energy and education

The researchers have identified some main channels through which energy use may impact on science and education general outcomes. They are divided into three categories. The first one is related to the change in the school environment. The second one reflects the home conditions to prepare homework. The third one reflects change in the health of students, which impacts on their education outcomes.

Energy access improves working and learning conditions in schools and other training facilities. Transportation provision (part of energy use) can improve the school attendance by teachers and students. One of the main problems in Nigerian education is the absenteeism of teachers and students due to transportation. It is reported that in some countries this can reach a pick of 65%. Providing transport in schools can increase the teachers' and students' learning.

According to Nwachukwu (2014), Energy can also improve the quality of schools and build connections to surrounding communities. The increase of energy use and transport consumption in Nigeria can change the conditions of the learning experience and help to address its problems in terms of quantity and quality education.

Improvement of condition of education

Access to transport and to energy improves the conditions of working at home. First, children can extend their homework by day and night and will be more able to follow classroom

interactions at any time when the transport is available. Second, some of the time dedicated to trekking made by children from school to their homes will be substituted by learning and education activities' time. This is particularly true for both boys and girls. As energy and transportation provision increases the parents (especially the mothers and siblings) will also be more involved in helping their children for their homework.

Access to energy increases the available time of children for education. At the same time, access to energy can shorten the transport time. It is always reported that children are walking several kilometers before reaching their schools. By doing so they spent a lot of time on transport. As energy use increases, it reflects also an increase availability of transportation and lowering time spent on transport (Babajide, 2016).

Another important impact of transportation is the availability of energy to access of food production and food transportation from the farm to the house and from the house to the market. Food serves as a major life wire to energy. This may improves their learning outcomes if the needed skills are acquired. This is also the case for transportation of food to the market. Some externalities are also reported when neighbors access to energy.

In sum, increasing access to transportation improves the time spent on education, the condition under which the learning is done and the availability of the family for help. Other devices like commitment of both teachers and the students, punctuality, having enough learning materials, knowledge of the teachers can foster the learning process.

The amount of learning time is very crucial to students' achievement because students involve into the learning setting with diverging levels of knowledge. Thus, when learning time is fixed, it is obvious that some students will learn at a high level, some at a moderate level, some at a low level and some will not learn at all due to being late and transport tension as well as tiredness (McKinney, 2005)

The amount of time that the students spent in the classroom has a direct correlation to a student's accesses to education (Babyegeya, 2002). It means that when a student comes late, skips class or is absent for a whole day he or she will face difficulty to access education that lead to achieve the best results. In order to improve education, the government needs to promote public transport operators to transport students at moderated fare but with the absence of any monetary compensation Students transport is very important although there is little attention paid by government which has led to significant impact on transport demands for students during peak hours of classes and examination. According to Lurdes, Didier and Pascal (2003) that free and fair transportation can prevent drop out in schools for children from poor families. Numbers of studies have established that poor student attendance is an important predictor of school failure (Janes, 2009, Kamal & Bener, 2009). Achievement gains in education generally to any serious institutions are determined to a great degree by time-on-task and time allocated for learning. Students who spend more time on task tend to demonstrate more achievement gains than students who spend less time on task (Sanford and Evertson, 2000; McKinney, 2005).

What is Science and its importance?

Science as a discipline is considered as the systematic study of knowledge of man and his environment, which depends on seeing and testing of facts (Mankilik, 2014). The researcher explains further that technology is the practical use of scientific knowledge and techniques to produce goods and services to meet human needs. Science and Technology have been instrumental in shaping and improving the life of humanity. Samba (2010) opined that science is the foundation of sustainable development and a key to national economic growth and prosperity. Through Science and Technology, modern gadgets in all aspects of human endeavors have been invented, like electricity, aircraft, television, computers, medical kits, agricultural machines among others.

What is Energy in Science?

Energy is the capacity to do work. This implies that energy is a more abstract than the concept work. Work is certainly an important manifestation of energy; indeed, the industrial Revolution went into full swing in late eighteen century when breakthroughs were achieved in converting other forms of energy into work. But work is not the only 'palpable' form energy. Heat is another important form of energy; a lot of effort and expense is made by society to remove heat from our homes and offices in the summer and to bring it to them in the winter. And radiation too, for better or for worse, is energy that we can sense.(Ogundele & Jimba (2017).

Factors militating against transportation and learning

Some students in cities want to consume education but transport problems including transportation cost affect where education produced as the result; education becomes expensive commodity for the mass to get it. Poor transport may accelerate lowly student attendance and truancy which are the first signs of deterioration of school and quality education. Thus, it is crucial to the government to do all it can to promote good school attendance habits among its students. Appropriate transport for students to and from schools should be essential precondition for the effective educational system. Through regular school attendance and punctuality students can progress academically hence to lead quality education. These geographical theories will adequately inform this study. Peter, Christopher and Kazumari (2011) in their discussion added that some students beg for help from drivers of pickup and trucks which jeopardized the life of students due to accident as well as the source of early pregnancy for school girls.

Onyango (2012) states that student cannot participate effectively in different school activities which include within and outside the classroom as they come late or depart immediately after school hours in order to attempt to reach home early. This study considered hardship for students to board public buses as well as lateness but failed to identify transport cost which is the obstacle for student school attendance.

Conclusion

The use and importance of transport energy cannot be overemphasized. This makes it imperative that Government should be caution of student's transportation. When efforts are made on the transportation of students in schools, students might do better than today. Transport energy enables students reach the school and back home at appropriate times, help teachers to identify late comers and truants. Transport energy is also effective in some studies

in improving the achievement of students. It also essential in fostering learners' motivation to go to school the next day as they will not trek to make them tired.

Recommendations

The paper recommended that government should board public transport fare to a minimal amount, provide school buses and make provision to decongest traffic jams. Road Maintenance Agency should check the roads and make amends where necessary and governments should supervise the workers to make them sit up to their duties. This paper also advocates that learning of science should include the consideration of transport energy.

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