

Domestic Child Labor Students and Mathematics Learning

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Abstract: This study portrays the extent of Domestic Child Labour (DCL) Students and mathematics learning at primary level mathematics. It concentrates on the specific themes of emerging research questions such as situation of learning environment to the DCL students, and influencing factors that affect the learning of DCL students in learning mathematics. In dealing with these research questions, I used qualitative design and interpretive paradigm. I explored that they took mathematics as a difficult subject in comparison to others. They were more interested in mathematics than non DCL students but felt difficulty in learning due to the lack of pre-knowledge and less time to practise at home. They felt more comfortable in school than at home. Non DCL students were co-operative to DCL students in class. Questions and responses were common among students and teachers. There was equal participation in class work, group discussion but were irregular in home work. DCL students faced more difficulties in homework than in class work. The major factors affecting the learning of DCL students were: economic condition of the family, size of family, bad attitude of house owner, heavy work load, unavailability of books and stationeries, discipline of the class, different traditions and cultures and pre- knowledge.

Key words; Domestic child labour, Factor, Achievement

I. Background of the Study

Mathematics is the heart of many successful lives (National Council of Teachers of Mathematics [NCTM], 1998). Mathematics is considered a key subject of study in the school curricula especially of the primary level throughout the world. It has been considered a main subject for basic literacy, a tool of communication in everyday life. At primary level, mathematics is often called backbone of primary education and fundamental component of literacy. Overall teaching learning process has a major role to build students' confidence to raise their ability to learn and to enjoy learning mathematics. Regarding the method of learning mathematics, NCTM (1998) has mentioned that students must be engaged in exploring, conjecturing, and thinking rather than only in rote learning of rule and procedures. Pointing to the importance of learning process of mathematics, Burns (1992) mentioned that not only it is important to consider the content of the mathematics curriculum; it is equally important to know about how people learn mathematics. In fact of continuous process of education, mathematics is an essential subject, has been given a significant place, second to language at all level. In this context, the NESP mathematics curriculum (1971) states the importance of mathematics in the following words. "Mathematics, like language is a basic tool of communication. Daily transactions and communication involve the frequent use of mathematical concept. Thus, it is quite natural mathematics is given a very important place, second to language in school education"

Children are the beginner of each new generation. We cannot imagine harmonious society in future unless the children, at present, are provided with better fundamental facilities such as basic needs: food, clothes, shelter, fair social environment and parental care and love. These are the fundamental rights of each and every children living in this world. But it is unfortunate that in Nepal the large numbers of children are found to be engaged indifferent types work and deprived of its fundamental rights mentioned above (UNICEF, 1996).

The term Child Labor is used for employment of children below a certain age, which is considered illegal by law and custom. The stipulated age varies from country to country and government to government. Child labour is a world phenomenon which is considered exploitative and inhumane by many international organizations.

UNICEF (2009) defines child labour as work that exceeds a minimum number of hours, depending on the age of a child and on the type of work. Such work is considered harmful to the child and should therefore be eliminated. Internationally domestic child labours is defined as children working in employer's house with or without wage Domestic Child Labour are basically employed to perform domestic chores such as washing dishes cooking, cleaning the house, looking after young children and any other household related activities. The domestic child labourer may consider as a helping hand in the various activities.

In most definition of DCL [Domestic child labour] a child is usually considered to be below 16 years of age.

Yet as the new ILO convention stipulate that any reform under the age of 18 years to be protected from employment on the worst form of child labour. These studies consider any person below 14 years working in an employee's household as a domestic servant. Among a population of 23.4 million in Nepal, 10.7 million are children under 16 yrs of age- almost 44% of the total population . According to a national wide study by Tribhuvan University in 1999, 2.6 million children more than 27% are at work as child labours between the age of 6 and 14 yrs. 1.7 million are economically active and 0.9 million are working without pay. In this context, this study had focused on present conditions of domestic child labour of the study area. Students feel mathematics is a difficult subject. DCL students have poor mathematical performance, so it is necessary to find the cause of difficulty in them. Therefore, the major aim of this paper is to explore the learning environment provided to DCLs and to explore the factors affect the learning of DCL students to learn mathematics.

Research Questions

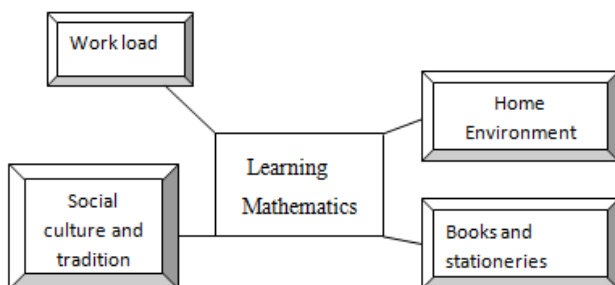
To fulfil this purpose, I have formulated the following research questions

1. What type of learning environment is provided to DCL students?
2. What are the influencing factors that affect the learning of DCL students in mathematics?

II. Conceptual Framework

Theoretically, I have attempted to visualize the issues of learning environment of DCLs students from the theoretical perspectives of social constructivism. The social constructivism, it is assumed more collaboration of learning environment which proposed the effective learning procedure to develop new knowledge for DCLs students. The frame work of the study was as follows:

Figure1. Conceptual Framework of the Study



III. Methodology

My ontology in this study is that there are multiple realities. The epistemology of this study is that knowledge obtain from the mathematics learners is subjective. The

research methodology I have chosen is qualitative. Qualitative technique is a form inquiry that explores phenomena in their natural setting and uses multi-method to interpret, understand and explain and bring meaning for them (Creswell, 2009). The site and sample I have selected purposively are Bidhya Mandir Secondary school old Naikap for my convenience. All DCL and mathematics teachers their children were the sample of the study I asked open ended questions to explore what factors affecting learning difficulties in learning mathematics by mathematics learners. I have analyzed the data and deduced meaning inductively by supporting different theories and literatures.

Learning Environment

In my field work, I understood that there were innumerable problems encountering by domestic child labourers. These problems were the hindering factors for them to create mathematics learning environment.

Continuous Errand. In this regard, Gita as a domestic child labourer expresses;

"As heavy work load; family members are much strict so that I cannot do anything without their permission. I have no time to study. I have no time to do my homework. I go to the bed early as I cannot read due to tiredness. Even, I don't get permission to visit my home in village but my father visits 1-2 times in a year, Sometimes, I cannot go school. Sometimes, it becomes late in school."

The data let me to know that domestic child labourer has been facing continuous errands at home. The excessive work burden has limited them to be away from the learning opportunities at home. Moreover, the physical tiredness has caused to be slept earlier delimiting their reading hours. Again my other participant Kamala expresses her feeling as,

"I do not get enough time to study as well as to do my homework. My employer says that I have to work rather than to study. I am often disturbed from study by asking me to work. I get little time for study which is not sufficient for my study. I sometimes get support from the house in doing my homework. I do not get real love from them. They pretend to love me at home at the time of my father's arrival but I am punished later and threatened me not to send to school".

The data shows that the learning environment for domestic child labourers was unfavourable. The little time for study at home due to undefined household chores has become one of the problems for them to maintain the

performance in school. Mathematics itself as a practical subject needs more time to be engaged by the learners. Therefore, short period of time or sometimes no time to the child domestic labourers has hindered their mathematical knowledge development. She further added;

"The teacher behaves and treats us equally in class. My peer group is friendly. They never discourage me in study and personal life style. I get equal support from them. I feel more comfortable at school than that of home. The teacher loves us and encourages by saying that we have to study. As there is no discrimination, quarrel, prejudices among us, I find their behaviour quite healthy and friendly. There is enough interaction between DCL and teacher regarding subject matter and personal life history. I think the teacher is my real guardian. I share my problems with the teacher and then to the class teacher."

From the above facts, it concluded that home environment of DCL is not favourable and encouraging for study. They have to be busy in household works all the time and psychologically they are insecure from the behaviour of employer. On the other hand, school environment is quite encouraging for them. The teacher plays the role of real guardian and encourages them to study. Here, according to the theory of cultural discontinuity, Ogbu (2000) argued that due to the cultural discontinuity between home and school, children face difficulties in learning mathematics. Environment of home and school affects learning of children. To sum up, the discontinuity between the culture of home and school (home and school environment) does not support the learning of DCL students. At the same time, Vygotskian constructivism theory emphasizes that knowledge is socially constructed. Social interactions influence on the nature of knowledge being constructed. DCL does not get rich social environment, they have no chance to interact with people out of home and even they have less interaction at home. So they are poor in constructing knowledge through their own capacity. As a result, they face problems in learning mathematics. So, home environment, school environment, guardian's behaviour, behaviour of society and teachers play important role for DCL in learning mathematics.

Violence. In addition to this domestic child labourers have been facing violence at employer's house. I understood that the physical and psychological violence to them as another key problem of unfavourable learning environment. In this regard, my participant Dipendra said;

"I have enough rest time and playing games and reading. They allow me to use computer, TV etc. at home. But, they scold me. Sometimes they beat me when I make mistakes. They don't give me money as I require to buy school materials".

The text data let me to realize that the verbal and physical punishment was rampant against them. This situation has created a problem in learning environment.
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Unavailability of Suitable Living Conditions. We understood that the domestic child labourers were in pitiable conditions of sleeping or reading rooms. They have been sharing the same unconditioned room for sleeping or reading. In this regard, Maheshwor said;

"I have to sleep with other person who is working with me. I have no separate reading room. I cannot have books and copies when I need. There is no book keeping rack."

The unfavourable living condition of domestic child labourers has become an obstacle of leaning mathematics at home. They have been facing

No Discrimination Between and DCL and non DCL Students in the School

Jyoti Tamang said;

"To me, maths teacher is good. She teaches well. Students understand well. I have got 3rd position in class. There is no discrimination among students as DCL and non DCL in the class and outside of the class. So the relationship is friendly among students and teacher. The teacher often encourages all students to study well. Sometimes she tries to provide counselling for those who are having home problems. So, I think math teacher is an ideal teacher in the school. I agree that the nature of math is more difficult than other subjects. I practise math less than other subjects. I often face problem in 'Division' in math class. Tamang language does not interfere her learning math as I did not learn it. It is different in spoken form and the way of learning mathematics is same."

School environment is good for study. Her math teacher is an ideal teacher. The teacher provides good learning environment in class. Here, again according to Ogbu theory of discontinuity (2000), there is no difference between home and school culture of DCL. So, learning mathematics results in success. As a result, they have poor performance in learning mathematics satisfying Ogbu's theory of cultural discontinuity (2000).

On the other hand, as my classroom observation, I found that the teacher as usual entered in the class with a greeting and the students responded her. Most of the time, she revised previous lesson before she started the new lesson. She used materials to explain the concept of the lesson. She applied student centred method and kept all students active throughout the period. The students actively took part in answering the questions asked by the teacher. The teacher equally responded the curiosity made by the students. The relationship between the teacher and students

was good. She conducted class discussion on which most of the children took part actively. The involvement of students in class work and home work was satisfactory. She even asked students to practise problem on whiteboard. But the classroom was not controlled well in the sense that discipline was not well maintained. Students often made noise.

In the course of observation, I observed the class on the topics: place value table, subtraction, simplify bar graph, exercise on Currency, multiplication and division of algebraic expressions, measurement of angles. The researcher observed difficulties faced by the students in both class work and home work.

It was seen that difficulty depended up on the level of students and faced differently. Difficulties were comparatively less in class work than that of homework as the students had access to talk with their friends and also got teacher's guidance in class work. Among the respondent children, jyoti Lama had to face minimum difficulties where as the rest of the students faced all problems mentioned above. Home environment and pre-knowledge greatly affected their study.

Factors Affecting Mathematics Learning of DCL Students

From the total involvement in the field, I interviewed students and their teacher, and observed students' activities in and out of class and found out that there were many influencing factors that affected learning mathematics of DCL students. I had identified such factors related to the environment of their own home, classroom, teachers' view and their individual interests and capacities. The factors are described below which affect their study including learning mathematics.

Economic Condition of the Family

In Nepal there is a vast gap between rich and poor people. The gap is getting expanded because of the fact that rich are being rich and poor are being poor. In Nepal 31% people are living in poverty. In Nepal domestic child labour is practised in most cities. One of the respondent student said,

"My home economic condition is poor. My parents work as a day labour. I left home as per my father's suggestions- Gita Chaulagain"

Similarly, another participant said,

"My family income is not sufficient for the family. My parents' occupation is agriculture. So I left home to study as per my will."

It shows that economic condition was one of the pushing factors to become DCL. As a result, they could not

carry out their study normally as they were supposed to work at home and only little time could be used in study.

Bad attitude of the house owner.

It is said that home is the first school and mother is the first teacher of a child. But DCLs were living in a different world where they lacked own home and parents. Psychologically, they felt insecure towards their existence. They became more helpless and miserable if they were treated badly by their employer. Study in such a situation was almost nothing. One of my respondents said,

"I am harassed both physically by beating and going with out food and mentally by threatening. It happens to me almost daily. I want to leave the place- Gita ." other response said, *"I can not carry out my study with working. The employer does not love me really. I am often disturbed in study by asking to do some kind of work. I am often scolded for minor mistakes- Maheshwor ."*

It shows that DCLs had to be suffered from the bad behaviour of the house owner which badly influenced their study.

Heavy work load

DCLs were employed at home primarily to work, then to study. Those who wanted to study with working were spoilt by heavy duty of the house. Most of the time, they were working. They hardly got rest time. They were often disturbed while studying by asking to work. One of the respondents said,

"I have to work rather than to study. I work 10 hrs a day. I have to work in sickness and injuries. I am often asked to work whenever I start reading at home- Gita."

Similarly, my other participant said,

"I have no sufficient time to study. I am not given specific time to study."

The math teacher, Bimala, said,

"They have less time to study at home and they also do homework irregularly."

So, due to the heavy work, they have no enough time to practise and do homework. It also affected their learning.

Unavailability of books and stationeries

Books and other instruments were necessary to start learning of any subject for school children. Its importance was higher in mathematics. To start and

understand their lesson, students must have sufficient books and stationeries in proper time. In DCL students' case, they were supposed to work at home and instead the employer paid for their study and books and stationeries. But unfortunately DCL were not getting it in time. According to Gita Chaulagain, "*I do not get books and stationeries in time sufficiently*", Similarly, Maheshwor says, "*I have no sufficient books and stationeries.*" This fact was further supported by their peer groups and they said, "*We give pencils, erasers to DCL students.*" It shows that DCL often lacked books and stationeries which affected their learning.

Findings

Continuous errand and violence, unavailability of suitable living conditions were the main problems of DCL children to learn mathematics. Poor economical condition and large size of family forced the children to work as a DCL. The home environment was not favourable for them to study. The attitude of house owner was not kind, loving and encouraging for study. They had to be victim of physical punishment and mental tortures. They often lacked books and stationeries, clothes and good food. They were given heavy duty so that they got very little time to study. Their study time was not fixed and often disturbed by asking to do some kind of work. They felt more comfortable in school than at home. Comparatively, they looked more tired than non DCL children.

Discipline of the class

Discipline plays a vital role in teaching learning activity. It is equally important for both teachers and students and must be maintained in class by each. In one hand, a teacher always wants discipline from his students. On the other hand, it teaches students to speak truth and follow rules and regulations. So, it is a key to success. But the respondents said,

" Students often make noise in class. It disturbs us from hearing the teacher." On the other hand, the teacher says, "My class is on last period. Students look tired and hungry as DCL students do not bring breakfast from home. They want to go back home rather than to study. I can not concentrate their full attention."

The teacher further agreed with the point that her class was much disturbed and uncontrolled which was one of the affecting factors in learning mathematics.

There was healthy relationship among all students and teachers; no discrimination had been found so far. They liked mathematics teacher very much. The major factors affecting the learning of DCL students were: economic condition of the family, size of family, bad attitude of house owner, heavy work load, unavailability of books and stationeries.

IV. Conclusion

The major findings of the study show that DCLs are having unfavourable home environment but feeling more comfortable at school. They have difficulties in learning mathematics connected to home environment and school. To make equal opportunity to learn mathematics in the class as well as home then it will be social justice. The major factors affecting the learning of DCL students were: economic condition of the family, size of family, bad attitude of house owner, heavy work load, unavailability of books and stationeries, discipline of the class, so these conditions of the child should be remove and make comfortable to learn.

Pre-Knowledge

Regarding the children's learning, Cognitivist believes that sense impression is the primary source of knowledge. It becomes knowledge only when the mind systematizes it. So, intellect is taken as the prime source of knowledge. They further believe that pre- knowledge is a pre- requisite to effective learning. According to the respondent student,

"Mathematics is difficult subject. The nature of mathematics is tough. The problems of mathematics are difficult." On the other hand, the teacher says, "The students come from different background and often lack pre- knowledge. So, teaching is difficult."

Also the nature of difficulties faced in the classroom showed that learning math was difficult in this class due to the lack of pre- knowledge

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