

Causes of Poor Academic Performance in Chemistry at Primary School Students in Chiro Town, Ethiopia

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doi: <https://doi.org/10.37745/ejedp.2013/vol11n15372>

Published: April 30, 2023

Citation: Bedada T. and Fita K.F. (2023) Causes of Poor Academic Performance in Chemistry at Primary School Students in Chiro Town, Ethiopia, *European Journal of Educational and Development Psychology*, Vol.11, No.1, pp.53-72

ABSTRACT: *The purpose of the study is to assess the Causes of poor academic performance in chemistry at primary school students in Chiro Town, Ethiopia. The study was carried out on 169 students' selected stratified random sampling technique accordingly high achieve, medium achieve and lower achieve classification of students in classes with almost equal proportion of male and female from both grade seven and eight, 2 experienced teachers, 2 school principals, 4 school vice principal and 10 Parent Teacher Association members by using available sampling. Data collected from the field were coded and entered in to the computer for analysis using SPSS version-20 for windows. Reliability of the instrument was computed by using reliability statistics. A Cronbach's alpha of 0.79 was considered high enough to judge the instruments as reliable for the study. The study revealed that even if there is much emphasis on improving students' academic performance, still no considerable progress has been observed in the study area. The finding of this study highlighted that the lack of chemistry laboratories and the school facilities, teacher experience, lack of teachers that used local variable materials for teaching students, students' attitude towards chemistry and parent involvement were found to be a contributing factor for these patterns as well as low achievement levels in primary schools in the study area. Therefore, it was suggested that teacher, Parent should be more practical in this area of improvement.*

KEYWORD: academic performance, parent and teacher related factor, school facilities

INTRODUCTION

The 21st century has been an era marked by rapid advances in various fields, including innovation in science and information technology. The development of information technology has greatly influenced various aspects of human life, specifically in the field of education (Wiyono k., 2015).

In the world of education, the most complex activity seems to be the process of teaching and learning. As its complexity is more than we think, the problem it faces is also more complex than one thinks. The quality of students' performance remains at top priority for educators. It is meant for making a difference locally, regionally, nationally and globally. Educators and trainers have long been interested in exploring variables contributing effectively for quality of performance of learners. These variables are inside and outside school that affect students' quality of academic performance. These factors may be termed as student factors, family factors, school factors and peer factors (Crosnoe R, *et.al.* 2004). Quality education primarily depends on teachers and their capacity to improve the teaching and learning process and is widely recognized that quality of teachers and teaching lies at the heart of all schooling systems intending to offer quality education. Desai S. *et. al.*, (2008) stated both school and family as a source of students lower achievement and dropping out of schools by saying that at the individual level, poor academic performance, retention, lack of teacher support and guidance, disliking school or teachers, and taking on adult responsibilities such as work and childcare have been found to contribute to lower achievement and dropping out of school.

According to Johnstone A. (2006) 'Chemistry' is a difficult subject for students. The difficulties may lie in the capabilities of human learning as well as in nature of the subject." Chiu H. (2006) believes that "Chemistry is a world filled with interesting phenomena, appealing experimental activities, and fruitful knowledge for understanding the natural and manufactured world. However, it is complex." As a result of the difficult and complex nature of chemistry and also the fact that it is one of the most conceptually difficult subjects on the school and higher institution curricula, it is of major importance that anyone teaching chemistry is aware of the areas of difficulty in the subject.

In Chiro town primary Schools during practicum IV, I recognized that students' low academic performance in chemistry and their success in examinations, including classroom tests, is not as much as expected in Hunde Gudina and Killiso primary school. These are the underlining reasons that initiate the researcher to conduct this study.

Statement of the Problem

The increased participation in primary education was not accompanied by quality learning outcomes. Graduates of primary education lack competence which requires integration of knowledge, skills and the necessary values. The focus seems on factual knowledge, and good proportion children fail to master basic skills of leaning at the completion of primary school (MOE, 2018).

The education and training policy applied in Ethiopia in 1994 have to a lesser degree, addressed a number of issues of which the introduction of standardized students achievement is one. An academic achievement of students is a reflection of their level of conceptual understanding and

retention of concepts. According to Omolade O. (2008), in order for students to have higher academic achievement, they must have deeper understanding of basic concepts of the subject. The students' conceptual understanding of science in turn depends on how their teachers teach science. It is also indicated that achievement in education is directly related to knowledge retention (Agaba K., 2013).

Research's on chemistry education has examined several different aspects of chemistry performance, including the importance of practical laboratory work (Hofstein & Lunetta, 2004; Abrahams I, 2009; Toplis R, 2012). Perception of Students on Causes of Poor Performance in Chemistry in External Examinations and the role of instructional materials in academic performance of chemistry by Ojukwu M. (2016). The students' negative attitude towards the chemistry subject affected their performance (Hassan A. *et al.*, 2015).

The continued poor performance in Chemistry have been attributed to a number of factors including students' attitude towards Chemistry, teachers' attitude towards students' abilities, inadequate teaching and learning resources, and poor teaching methodologies. However, it is not clear which of these factors are responsible for the poor performance of Chemistry in chiro town. Therefore, this study will fill this gap by assessing the causes of low academic performance of primary school students in chemistry related to the teacher related factors and students related factors in 'Killiso and Hundee Guddinaa' primary schools

Objective of the Study

The main objective of the study was to analyze the causes of poor academic performance in chemistry at primary school students in Chiro Town.

Specific Objectives

- To identify the availability of chemistry facilities and their bearing on performance of chemistry
- To examine students attitude towards chemistry
- To identify the teacher related factors contributions to the low academic performance of students in chemistry,
- To identify the parents related factors contribute to the low academic performance of students in chemistry?

Basic Research Questions were:

1. Does availability of facilities and resources have any bearing in the performance of chemistry in primary schools?
2. Does students' attitude towards the subject chemistry affect a students' performance?
3. What teacher's related factors contribute to the low academic performance of chemistry subject?
4. What are parent's related factors that contribute to the low academic performance of chemistry?

Scope of the study

Research Design and Methodology

Description of Study Area

The study is conducted in Chiro Town from October, 2022 to June, 2022, West Hararghe zone, Oromia Regional State in Ethiopia. It is located 326 km from the capital city of Ethiopia, Addis Ababa. The city is Located in the Ahmara Mountain, it has a latitude and longitude of 9°05'N 40°52'E / 9.083°N40.867°E and an altitude of 1826 meters above sea level. It is the administrative center of the West Hararghe Zone. Based on the population projection value (2018) report, West Hararghe has a population of 1,951,706, an increase of 47.16% over the 1994 census, of whom 989,861 are men and 961,845 women; with an area of 15,065.86 square kilometers, the zone has a population density of 124.23. The majority of the inhabitants were Muslim; with 49.88% of the population reporting they observed this belief, while 43.34% of the population practiced Ethiopian Orthodox Christianity and 5.33% of the population were Protestant (CSA, 2007)

Research Design

The study employed cross-sectional mixed methods in which both quantitative and qualitative methods were used concurrently. Creswell (2014) states that mixed design incorporates elements of both qualitative and quantitative approaches. The core assumption of this kind of investigation is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone

Sample and Sampling Techniques

The population of this study consisted of students of class seven and eight were selected Stratified random sampling technique accordingly high achieve, medium achieve and lower achieve classification of students in classes with almost equal proportion of male and female from both the classes were selected, and two experienced chemistry teachers teaching in this classes from two elementary schools, two principals, four vice- principals and ten Parent Teacher Association (PTA) are included, in the sample by using availability sampling technique, because their number were easily manageable.

Table 1 Sample size and sampling techniques of schools

Schools	Grade 7th and 8th of the sampled students			Teachers			Principals			Vice Principals			PTA		
	P	S	%	P	S	%	P	S	%	P	S	%	P	S	%
Hunde Gudina	293	88	97	1	1	100	1	1	100	2	2	100	5	5	80
Qilliso	269	81	95.7	1	1	100	1	1	100	2	2	100	5	5	100
Total	562	169	96.35	2	2	100	2	2	100	4	4	100	10	10	90
	Stratified random			Available sampling			Available sampling			Available sampling			Available sampling		

Source: From documents of the sampled schools in 2022

Where, P = population, s = sample, % = percentage, PTA = parent teacher association

Data Collection Methods and Instruments

The researcher used various instruments to capture information for the purpose of the study. This includes questionnaire, classroom observation, and interview and document analysis as discussed below.

Questionnaires

A list of structured questions was given to the respondents to answer. There were two categories of questionnaires; the questionnaires for students and the questionnaires for teachers. The questionnaire for the teachers and the students were based on the 4-point Likert-type scale of strongly agrees, agree, disagree and strongly disagree. The questionnaire for teachers was used to explore teachers' opinions about how the school factors (availability of laboratory resources, schools facilities), teachers' factors (teaching pedagogy employed by the teacher to teach and teachers' knowledge of the chemistry subject) and the students' factors (student's attitudes towards chemistry) low performance of chemistry influence the teaching of chemistry in class seven and eight.

Interview

For this study, the semi-structured interview was used as it allows covering various issues concerning the study. The semi-structured interview is a more flexible version of the structured interview in which the researcher prepares the limited number of questions in advance and plans to ask follow-up questions to the interviewee during the interview (Rubin H. and Rubin I., 2012).

Classroom observation

Observation helps researchers to obtain a valid and credible picture of phenomena being studied (Kothari C., 2004). The class observation in addition to questionnaire and interview was used as a tool to gather information since it enabled the researcher to capture information from the actual settings. Classroom observations as an instrument for the data collection for the study was used to observe teaching pedagogy used by the teachers during their lesson delivery and observe the class size and its effects in teaching chemistry. During observation the researcher assumed the role of non-participant observer, using eyes to observe and record events of relevance to the study.

Document analysis

For the purpose of crosschecking and supplementing data obtained through document were examined relevant data of students for the past three years from (2011-2013 E.C) exam result in chemistry subjects of grade seven and eight students' performance. The document assessing enabled the researcher to triangulate the data collected through the other tools.

Reliability of Research Instruments

According to Orodho A. (2004) reliability in research concerns the degree to which a particular measuring procedure gives similar results over a number of repeated trials. In order to test the reliability of the instruments the researcher used the pilot test method. Accordingly, a pilot test the total participants were involved 10% of simple size was conducted in one primary school of students in grade seven and eight that are not included in the actual samples. Based on the pilot, reliability coefficient (alpha) the average of the reliability result was found to be 0.79, that is the instrument was found to be reliable as statistical literature recommended a test result of 0.70-0.90 reliable (Muganda, O. & Mugenda, A. (2003).

Data Collection Procedure and Analysis

For the purpose of the data collection, the researcher sought permission from the chiro town authority and school principals and informed them about the proposed study. The purpose of the study was explained to the respondents prior to the data collection. The questionnaires were administered to the selected teachers and students after school hours without interfering with the school normal schedule. Quantitative data analysis was based on descriptive statistics. Data analysis began by coding the data according to the research questions. The data was then entered into the computer using the Statistical Package for Social Sciences (SPSS version 20) program for analysis. Furthermore, the data were presented using tables, mean, and standard deviations and were interpreted inductively based on research objectives. The response of the interviewees was transcribed, coded and the data were categorized under specific themes and analyzed using content analysis technique. This approach essentially involves a thorough and repeated reading of all the responses of each respondent, underlying the main ideas and then extracting the core meaning under each theme. The data were presented by using summaries, explanations, descriptions and deductively interpreted based on research objectives

RESULTS AND DISCUSSION

Demographic Characteristics of Study Participants

As can be seen from figure 2 the total respondents most were within the age range of 12- 15 (74.0%) and between 16-20 range were (26.0%). Regarding the religious affiliation of the participants, majority of the respondents 90 (53%) was follower Muslim religion, and followed by orthodox 45 (27%). The protestant followers were 30 (18%), and 1(0.59%) were followers of catholic while 3 (1.77) % were followers of ‘other religion’.

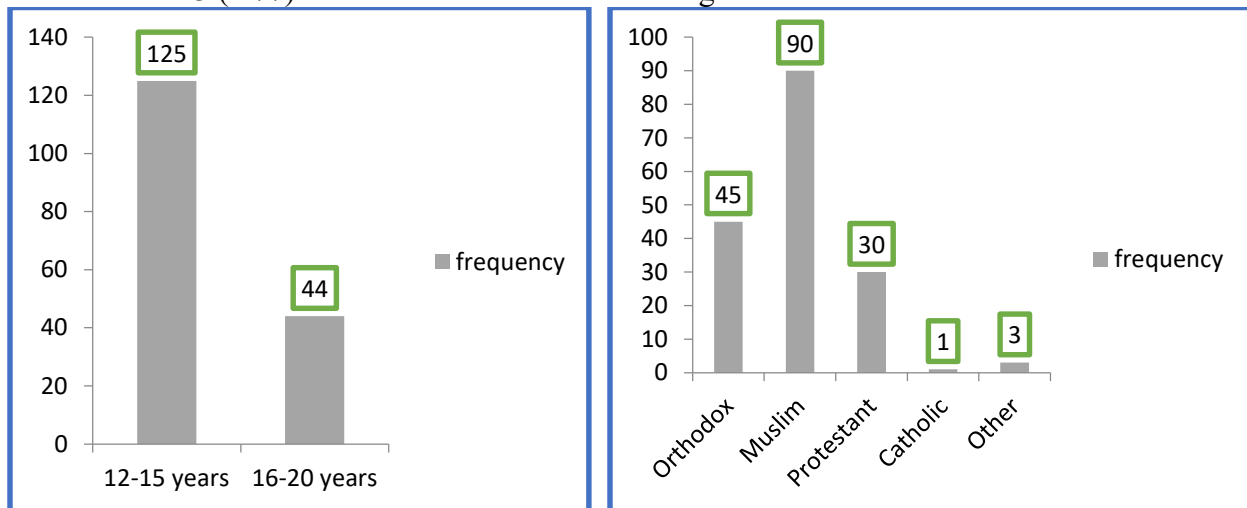


Figure 2 Religion and Ages of students

Demographic Background of Teachers and principals

As can be seen from figure 3 from the total respondents were within the age range of 21- 30 1(17.0%) and most were within the age range between 31-35 range were 3(50.0%), between 36-40 range were 2(17%) and above 40 years was 1(17%). Regarding the religious affiliation of the participants, majority of the respondents 3(53%) was followers of Orthodox religion, and followed by Muslim 2 (33%). 1 (17) % were followers of ‘protestant religion’.

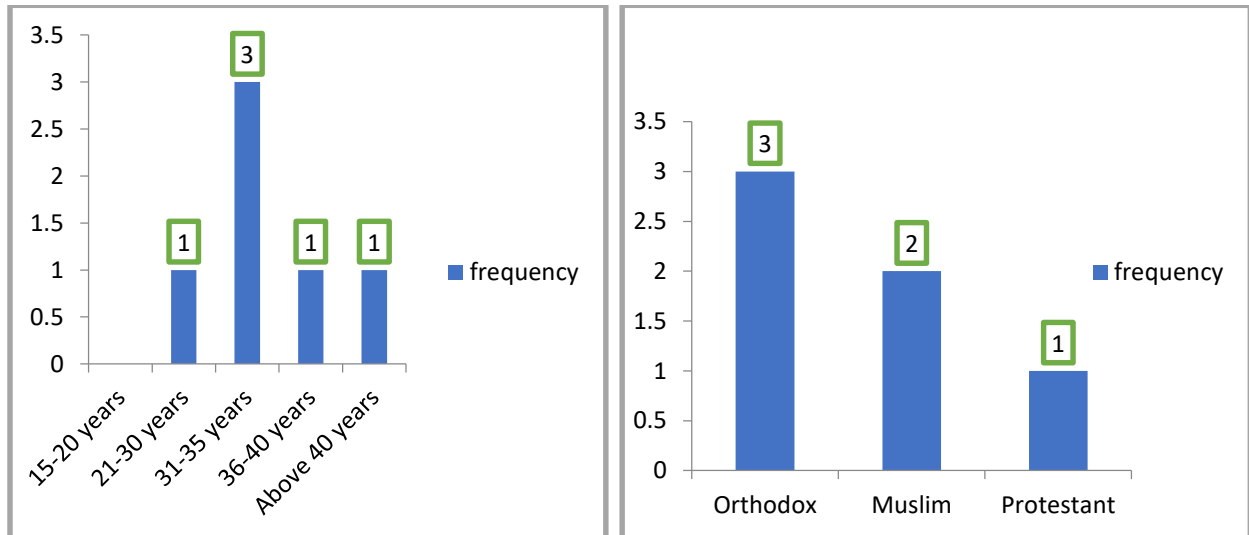


Figure 3 Religion and Ages of Teachers and principals

Socio-Demographic Characteristics of Teachers educational status and experience

As it can be noted from Figure 4, the academic qualification of teachers, 1 (12.5 %) of the teachers were first diploma holders and 7(87.5%) of teachers had first degrees. Related to the respondents' experience above, the majority teachers 4(50 %) who served 16-20 years of experiences in teaching. According to Ogembo (2005), the more the years of teaching experience, the better the quality of a teacher and hence the higher the academic achievement of students.

During the interview sessions, all of the school principals and vice - principals said that *“Experienced teachers have a richer background of experience to draw from and can contribute insight and ideas to the course of teaching and learning, are open to correction and are less dictatorial in classroom. Teachers’ experience and student achievement was that students taught by more experienced teachers achieve at a higher level, because their teachers have mastered the content and acquired classroom management skills to deal with different types of classroom problems.”*

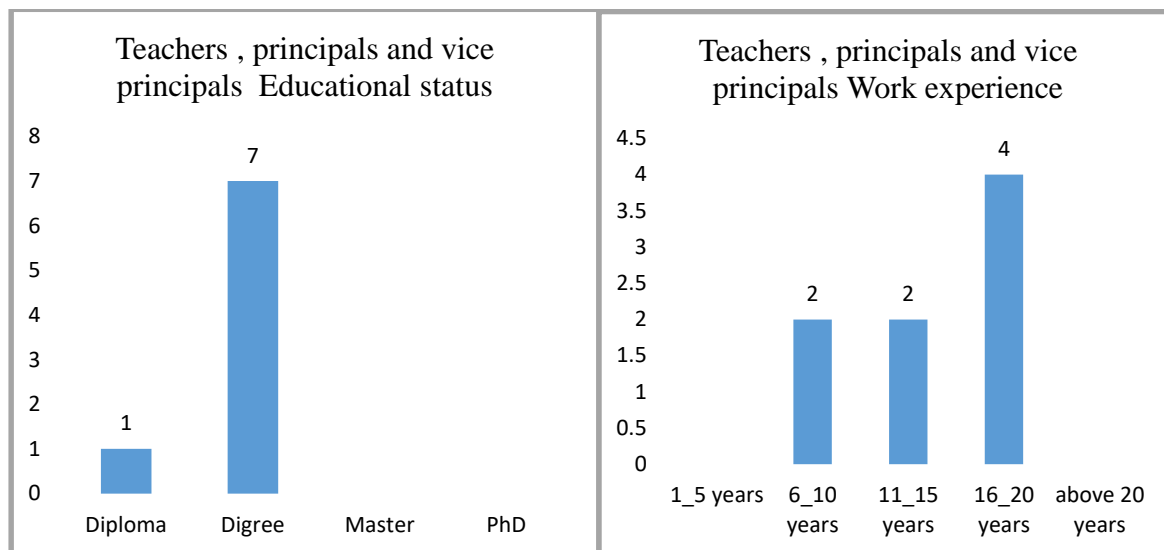


Figure 4 Teacher Experience and work status

Students Living Conditions and Tutors

According to Figure 5 indicates that the students living condition, most of the students 79 (47%) were lived with mother and father together. As shown in the same table the majority 78 (46%) of students did not have tutor. According to Charles T. & O’Quinn S. (2001), they also found that providing one-on-one tutoring gave students the necessary support to help them catch up and learn the necessary study skills required to learn on their own.

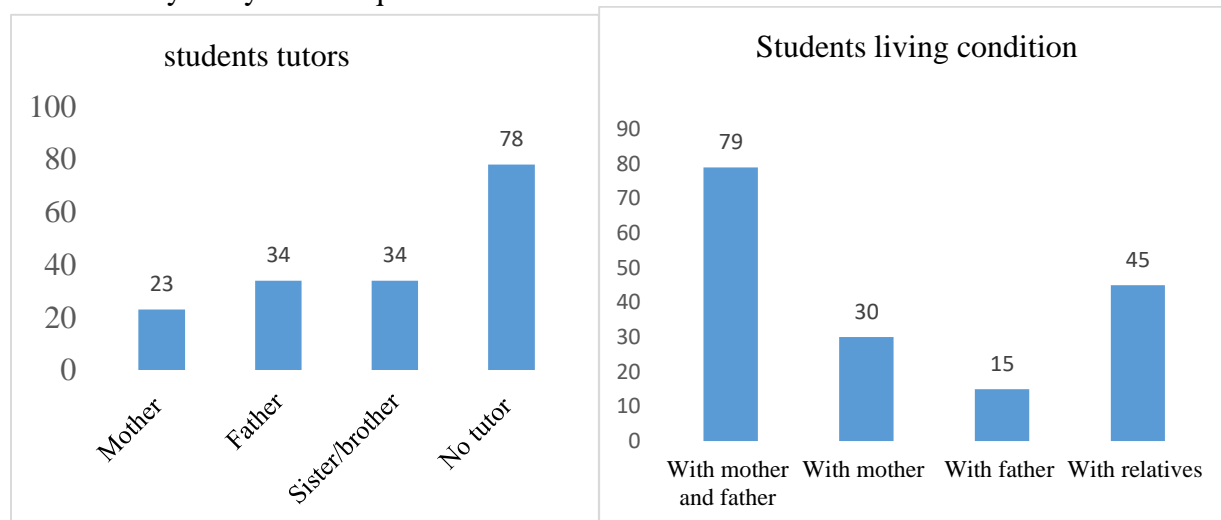


Figure 5 Students living condition and students tutors

School Laboratory Resources

Table 2 Responses’ rating on availability of chemistry laboratory resources (N= 175)

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S/N	Items	Yes		No		Total	
		f	%	f	%	f	%
1	The school have separate chemistry, Physics and Biology laboratory	2	1.14	173	98.86	175	100
2	The apparatus and chemicals in the laboratory are adequate for chemistry lessons.			175	100	175	100

f= frequency, % percentage

The analysis of respondents overall rating on the availability of laboratory resources in their school is very low with a score of 175(100%). as reflected on Table 2. However, in terms of the availability of separate chemistry laboratory, the rating is low with the score of 173(98.86%). This indicated that there was no separate laboratory in the schools.

The analysis of respondents' interviews to showed that *“two the schools did not have separate chemistry laboratories, even general laboratories. The apparatus and chemicals are also inadequate. The lack of separate chemistry laboratory and inadequate apparatus and chemical was the reason why teachers skip practical lessons and this has hindered student's learning in chemistry.*

Due to the lack of a separate chemistry laboratory, the practical lessons cannot be conducted which leads to children poor understanding of chemistry concepts and low level of motivation for learning. It was also evident in most of the lessons observed by the researcher that the practical lessons were conducted in the classroom in the form of demonstration. Students sitting at the back were not able to see the teacher demonstration and they did not pay much attention to the teacher. Therefore, demonstration of experiments was not as effective as it would have been if the students were actively engaged in individual experiments in the laboratory.

Previous, findings to this were also reported in the study Dhaba T and Anbeawb M (2016) in Afar region in Ethiopia; Neji H. *et. al.* (2014) in Nigeria and Sherpa D.(2013) in Bhutan that the absence of separate and well equipped laboratory for science hinders the carrying out of practical activities in science. The findings from this study also suggest that the implication of not carrying out the practical lessons has led to student's poor understanding of chemistry concepts. This is consistent with the study conducted by Dahar M. (2011) in Punjab who concluded that the learning and understanding level of students in science improves when they are involved in practical works in the laboratory. Similarly, the study by Kurbanoglu N and Akim A. (2010) in Turkey pointed that the use of laboratories has the potential to enhance students' achievement, conceptual understanding and their positive attitudes. Further, the study by Mudulia A. (2012); Neji H *et. a l.*

(2014) showed that the lack of separate chemistry laboratories in schools hinders students' effective learning of chemistry.

Student's Attitude towards Chemistry

Table 3. Students attitude towards chemistry (N=169)

S/N	Items	SA(4)	A(3)	D(2)	SD(1)	Mean	St.D
1	I think chemistry is an easy subject compared to other subjects	19	18	94	38	2.1	0.86
2	I enjoy learning chemistry	34	41	61	33	2.4	1.04
3	I am willing to spend more time reading chemistry books	25	38	68	40	2.33	1.31
4	The concepts, theories and formulas of chemistry are easy to understand as compared to other science subjects	25	34	45	65	2.07	1.08

Where, SA= strong agree, S=Agree, D= Disagree, SD = Strong disagree and St.D = standard deviation

As presented on Table 3 the statement "I think chemistry is an easy subject compared to other subjects" the student answered with mean 2.1 and Standard deviation 0.86. In a similar way, "I am willing to spend more time reading chemistry books" the students said with mean value 2.4 and 1.0 Standard deviation. Item 4 discusses about "the concepts, theories and formulas of chemistry are easy to understand as compared to other science subjects" students said with mean 2.07 and 1.08 Standard deviation.

The finding of this study shows that the students' attitude towards chemistry is negative. So to minimized student's altitude toward chemistry problems teacher and student relationship is very important. The teacher's role is very important in developing student interest through student oriented learning and connecting concepts with real life. Students also need to develop interest through increasing curiosity, creating a classroom atmosphere, and having a high willingness to attend chemistry learning and are committed to science when they understand more and want to keep reading about science. Cigdemoglu C and Geban O. (2015) concluded that students' interest can be increased because of the impact of contextual teaching and learning in chemistry by including real-world contexts so that learning becomes more beneficial for them.

Table 4. Teachers and principals response to the attitude towards chemistry (N=8)

S/N	Items	SA(4)	A(3)	D(2)	SD(1)	Mean	St.D
6	Students' loss of interest in chemistry retards effective chemistry teaching	5	2	1	0	3	1.26
7	Students have psychological fear of chemistry.	2		4	2	2.33	1.37
8	Students easily get discouraged by the poor outcome of their results	2		1	5	2.03	1.03

When asked “students’ loss of interest in chemistry retards effective chemistry teaching” the result of Table 4 indicate that 5 and 2 ‘strongly agree and agree’ respectively. Nearly 1 of the respondents "disagrees". The mean value 3.0 indicates that the respondents strong agree to Students’ loss of interest in chemistry retards effective chemistry teaching. Cigdemoglu C and Geban O. (2015) conclude that students’ interest can be increased when; the impact of contextual teaching and learning in chemistry by including real-world contexts so that learning becomes more beneficial for them.

Therefore, form the above respondents' response and literature that can understand Students’ loss of interest in chemistry retards effective chemistry teaching has its own negative effect on student s' academic performance.

Similarly, in the interview, two teachers too revealed that the students find chemistry difficult and this has resulted in the development of negative attitude towards the subject. For instance, T1 expressed that:

“...Student have negative attitude towards chemistry. They usually find the subject difficult and as a result they develop fear in the subject. And because they lack interest in the subject they fail to do well in chemistry”.

The students’ poor attitude to the subject has de-motivated the teachers from working hard. For instance, T1 and T2 expressed that;

“...the students’ negative attitude towards the subject de-motivates to teach while their positive attitude motivates us to work hard”.

Table 5. Student Related factors Contributions to the low academic performance of students (N=169)

Items	R	N	Very High		High		Low		Very low	
			f	%	f	%	f	%	f	%
			1. Students' self-motivation	S	169	18	11%	24	14%	93
	T	6					5	83%	1	17%
2. Absence of regular school attendance	S	169	23	17%	34	20%	67	40%	45	27%
	T	6					5	83%	1	17%
3. Not positive relation with other schoolmates	S	169			12	7%	112	66%	45	27%
	T	6			5	83%	1	17%		
4. Less amount of time invested on Educational activities	S	170			45	27%	125	74%		
	T	6					5	83%	1	17%
5. Inability to become well study planned and organized	S	169	34	20%	89	53%	45	27%	1	1%
	T	6	1	17%	5	83%				

Where, T= teacher, S= students, f= frequency, %= percentage

As presented on Table 5, 93(55%) of student participants forwarded that there were low self-motivation. In a similar way, 2(100%) of the teachers identified that there was low self-motivation of students for achieving academically better. Item 2 discusses about absence of regular school attendance. All of teachers' respondents 2(100%) indicated that student absenteeism was low. The same was true regarding students' respondents. Around 93(55%) of them realized that student did attend their class regularly.

According to item 3 and 4 participants realized students have a low degree of relation with their teachers and schoolmates. Accordingly, 66%, 27% of respondents' rate students' relation with their teachers as low and very low respectively. The respondents were asked to evaluate the time students invest in educational activities. Concerning this 125(74%) of students responded that they spend lesser time in educational activities. Higher percentage of teachers' participants 2(100%) realized that they spend less time in educational activities the same thing as mentioned. Only 27% are confidentially responded student spend enough time on study.

Concerning the options forwarded on "Inability to become well planned and organized", 89(53%) of the respondents high and the rest 45(27%) of the respondents low with the given item. item 7, is raised to evaluate self-confidence of students in education. While the majority of the respondents

124(73%) said they lack self-confidence, the rest participants 34(20%) forwarded that students are confident for their academic performance.

Table. 6 Student Related factors contributions to the low academic performance (n=169)

Items	Yes		No		Total	
	F	%	f	%	F	%
1. Do you understand the teaching language very well?	93	55%	76	45%	169	100%
2. Are you always on time?	89	53%	80	47%	169	100%
3. When you don't understand the teacher do you ask?	45	27%	124	73%	169	100%
4. Do you have access material like references books at your home place?	56	33%	104	62%	160	100%

Item 1 of Table 6 indicates the majority of students 93 (55%) mentioned, understand the teaching language. This indicates to the ability to understand the language through which the teaching and learning Process takes place. Here, when the students understand the language very well, the better they performs in their education Item 2 of the same table indicates the majority of students 89 (53%) responded on time without anybody's pressure. This indicates that moderately students arrives school on time without anybody's pressure. In the same table item 3 indicates the majority of students 124 (73%) responded that often did homework without anybody's help. This Indicate that moderately students did homework without anybody's help. During the interview sessions, all of the school principals and vice - principals said that:

“...Some student's lack of the ability to understand or are embarrassed about their lack of schooling. We should realize that not all students are able to read homework or assignments. We must not depend on the written word as the only form of communication with the home. Home visit, phone calls, one-on-one meeting, and other personalized contacts with students”

Table 7 Teachers Related factors contributions to the low academic performance of students (N=175)

Items	SA(4)	A(3)	D(2)	SD(1)	Mean	St.D
1. Teachers' interactions with students have effect on academic performance	88	46	13	28	3.4	0.99
2. Teachers' teaching methodologies have a great effect on academic performance	125	35	10	5	3.4	0.99
3. Teachers' professional qualifications have effect on academic performance.	98	43	18	16	3.2	1.22

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4. The use of recent and relevant materials to teach students have effect on academic performance	123	35	10	7	3.5	0.95
5. The readiness of teachers have effect on academic performance	89	78	6	2	3.2	1.21
6. Attitude of teachers have effect on academic performance	78	67	14	16	3.23	0.93

Where, SA= strong agree, S=Agree, D= Disagree, SD = Strong disagree and St.D = standard deviation

When asked “Teachers’ interactions with students have effect on academic performance” the result of Table 7 indicate that 88 and 46 ‘strongly agree and agree’ respectively. Nearly 13 and 28 of the respondents “disagree and strongly disagree” respectively. The mean value 3.4 indicates that the respondents agree to teachers’ interactions with students have effect on academic performance. Academic performance is affected by their level of interaction with their teachers. This result implies that the level of interaction increases or become high, the academic performance of students increases. The findings of this study are related with previous study reported that students who have strong beliefs towards their teachers as well as positive relationship with their teachers tend to be more self-regulated and persistent in their learning (Nugent T., 2009).

Therefore, form the above respondents' response and literature that can understand Teachers’ interactions with students have effect on academic performance has its own positively effect on student s' academic performance.

Regard to ‘teachers’ teaching methodologies have a great effect on academic performance’, the result of table 9 indicates that 125 and 35 ‘strongly agree and agree’ respectively. Nearly 10 and 5 of the respondents “disagree and strongly disagree” respectively. The mean value 3.4 indicates that the respondents agree to teachers’ teaching methodologies have a great effect on academic performance.

According to Isa, S. (2020) teaching method has a great effect on students’ academic performance and the analysis shows that the discussion and demonstration teaching methods greatly improve the students’ academic performance than the lecture method which was passive and teacher centered. Teaching methods are patterns of teacher behavior that occur either simultaneously or in sequence in a verified way.

Therefore, form the above respondents' response and literature that can understand teachers have skill gap in practical activities, inability to conceptualize to the real environment, the issue of utilizing locally available materials for laboratory and teaching aid students

Regard to ‘the use of recent and relevant materials to teach students have effect on academic performance’ the result of table 9 indicates that 123 and 35 ‘strongly agree and agree’ respectively. Nearly 10 and 7 of the respondents "disagree and strongly disagree" respectively. The mean value 3.5 indicates that the respondents agree to use of recent and relevant materials to teach students have effect on academic performance.

Therefore, from the above suggestions, one can conclude about the use of recent and relevant materials to teach students have effect on academic performance.

When asked ‘Attitude of teachers have effect on academic performance’ the result of table— indicate that 78 and 67 ‘strongly agree and agree’ respectively. Nearly 14 and 16 of the respondents "disagree and strongly disagree" respectively. The mean value 3.25 indicates that the respondents agree to ‘attitude of teachers have effect on academic performance. The findings of this study are related with previous study Olubukola J. (2017), reported that, teachers should adopt effective verbal communication altitudes while teaching the students in class so as bring about improved students’ performance.

Therefore, form the above respondents' response and literature that ‘attitude of teachers have effect on academic performance’ has its own negative effect on student s' academic performance.

Table 8 Parents’ Involvement in School Participation

Items	5		4		3		2		1		mean
	F	%	f	%	F	%	f	%	F	%	
1. My parents provided educational materials for me	50	30%	75	44%	30	18%	11	7%	3	2%	3.67
1. My parents help me to do my homework on time	43	25%	23	14%	67	40%	16	9%	20	12%	3.37
2. My parents communicate with teachers about my academic progress	12	7%	34	20%	60	36%	50	30%	13	8%	3.71
3. Many parents involve in school- parents’ teacher conferences	35	21%	67	40%	56	33%	11	7%		0%	3.95

Where – 5 = Always, 4 = Often, 3 = Sometimes, 2 = rarely, 1 = Never, T-teachers, S- students, N = Number, % = Percent, R= respondents

Item 1 of Table 8 indicates the majority of students 75 (44%) and mean score 3.67 mentioned, often their parents provided educational materials and sometimes that all parents discussed the academic progress of their children. This indicates that school parent above average provided educational materials to their children academic progress and all parents discussed the academic

progress of their children. Item 2 of the same table shows that the majority of students 67(40%) responded that often their parents help to do homework on time and rarely all parents attended the school meetings. This indicates that school parent above average help to do homework on time and all parents attended the school meetings.

In the same table of item 3 the majority of student respondents 60 (36%) responded that often school parents communicate with their teachers about academic progress and sometimes at the beginning of each term, holding ‘academic clinics’ with parents of students. This indicates that above average school parents communicate with their teachers about academic progress of students and at the beginning of each term, holding ‘academic clinics’ with parents of students. Item 4 of the same table shows that the majority of students 56 (33%) and teachers 3 (450%) responded that often parents involved in school- parents’ teacher conferences and sometimes advising students on home environment factors that promoted learning of their children. The mean score were 3.95 and 3.05. This indicates that above average parents involved in school- parents’ teacher conference and advising students on home environment factors that promoted learning of their children. During the interview sessions, all of the school principals and vice - principals said that:

... “It is difficult to get parents to be involved in the school matters due to different reasons. For example, time constraints, lack of interest and lack of motivational activities from the school. If we tried to ask parents to apply the school advice and participate in their children’s education they were not volunteer to come to school by mentioning lack of time as a reason”.

According to (Henderson & Mapp, 2002), the role of parental involvement in children’s education has become a central issue in educational policy and research. Research findings support the existence of a positive relationship between parental involvement and educational success. Parents play a crucial role in both the home and school environments. In general, parental involvement is associated with children’s higher achievements in science especially, chemistry.

CONCLUSION

The study was conducted in two government primary schools that were taken by purposely sampling technique. The study sample consisted of 169 students, 2 teachers teaching grade (7th - 8th), 2 principals, 4 vice- principals and 10 Parent Teacher Association (PTA). Information was obtained from the sampled respondents through questionnaires’, interviews and document analysis was employed for data collection. Data collected from the field were coded and entered in to the computer for analysis using SPSS version-20 for windows. Descriptive and inferential statistics were applied for data analysis. Reliability of the instrument was computed by using reliability statistics.

Based on the findings, it has been found that comparing factors that affect students' academic performance was a complex issue which was multidimensional. This had been indicated from the findings in terms of, percentage, standard deviation of the independent variables among each other. The two schools did not have separate chemistry laboratories, even general laboratories. The apparatus and chemicals are also inadequate. The lack of separate chemistry laboratory and inadequate apparatus and chemical was the reason why teachers skip practical lessons and this has hindered student's learning in chemistry students' loss of interest in chemistry has affected the effective teaching of chemistry as the student's negative attitudes toward the subject de-motivate the teachers. Student attitudes towards science affect students' participation in science subjects and impacts in science. The students living conditions and tutor most of the students were lived with mother and father together and the majority of students did not have tutor respectively

Recommendations

Based on the major findings of the study and conclusions drawn, the following recommendations are made.

Parents

- Attracting parents' teacher association (PTA) to school can bring parents and school together to work jointly for child's education and parents can improve their knowledge and skills on how to involve in their child's education as they communicate with their child's teachers.
- Parents should give more attention and proper monitoring to their children education

Teachers

- Teachers are expected to encourage parents and students to approach the school and the school administration also to facilitate things for the tight relationship of parents and teachers.
- Teachers should employ various teaching strategies as well as the teaching must be from known to unknown, from simple too complex for better understanding of their students. Teachers should develop positive attitude towards the students under his/her control to ensure effective learning and better performance of their students.

Principals

- Principals should be all means make use of recent and relevant teaching materials such as textbooks, charts in the teaching, learning process to ensure better understanding and performance of students.

Acknowledgement

We would like to thank Chiro Town Education Officers and Principals of the schools for granting permission for us to carry out the data collection process. In addition, we also offer our heartfelt thanks to all the participants for your contribution for this study. Thank you one and all.

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