Original Research Article

Enhancing class IX Students participants in group work in chemistry

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ABSTRACT

This action research has investigated ways to enhance students' participation in group work in chemistry. It is observed that Bhutanese students participate minimally in group activities especially in science. Most Bhutanese students shy away from participating or interacting in the classroom. To enhance participation and interaction, the curriculum experts developed the curriculum considering the need of every students in Bhutan in science. Research in Bhutan found out that heterogeneous grouping is an effective way to maximize students' success and collaborative learning is effective for meaningful learning and in solving problems. Some researchers found that in Bhutan science subjects are seen as difficult for both students and teachers. Through our experience of being science student, we saw that many students do not like to study Chemistry because they believe it is a difficult subject.

Aim of this study is to identify effectiveness strategies that teacher can use to enhance students' participation in group work in Chemistry. This study was carried out with class IX students of Taktse Central School. We collected our data through observation and questionnaire. A tally was used to record their participation in the group such as the frequency volunteering to do presentation and taking initiatives in the group work. The data collection also involved survey questionnaire which consist of open ended questions. Baseline data was collected and analyzed after which intervention strategies, such as allocation of group members and cooperative-learning methods was applied.After two months of the intervention process, post-intervention data was collected, analyzed and compared with the baseline data. The findings from this two sources reveal that students are more open for discussion and participation after the intervention process, and their initiative, contribution and understanding of contents increased. We were impressed by some student, who were usually quiet, shy and unsociable themselves to the teacher, became so close with us toward the end of our academic session.

Keywords:Group work, Action research, Interaction, Cooperative learning, Taktse School.

1. INTRODUCTION

The purpose of the research is to inform action especially when it comes to an educational institution and the lack of research could hamper the process of getting excellent quality of education. To always have useful and positive result, the Bhutanese education system should keep on encouraging and enhancing pupils to work on research. Because in educational field action research provide systematic analysis and

improving practice in both educators and learners.According to Johnson [5], action research is an approach to introducing problem identification, action planning, implementation, evaluation and reflection into teaching. Action research is spiral in nature. It is the cycle of finding solution to the problem by planning, observation and reflection.

The action research requires thorough reconnaissance. Reconnaissance is derived from the French word reconnoiter and it means to "look at"[10]. According to Maxwell [10], reconnaissance consist of three parts namely situational analysis, competence and literature.In this globalized world, the ascent of learning and understanding have become major component in education. The work done in collaboration added more learning and understanding ability. According to Raja [11], Group work are techniques for collaborative teaching that provide a chance for social interaction. Group work is a class management strategy and the role the teacher has to play while teaching is of a facilitator. Teacher's role in group work is very difficult and at the same time it is very important role too. Groups that are focused are a temporary clustering of students within a single class session. As Raja [11], explain"in a traditional classroom, the teacher controls the class with authority, there is no active role of students during teaching-learning process". Contrary to this, group work makes students autonomous learners who work collaboratively for their own learning. With evolution, it was found that different grouping arrangements can affect pupils' learning, attitudes and interactions with teachers and peers in various ways.According to Johnson [5], there is no student who cannot learn classroom lesson in group work. Students built a good relation among themselves which ultimately developed the habits of learning from peers. Many students in our country cringe and groan when told that they will need to work in group[17]. However, going through the numbers of literatures, researcher found that, group work has been found to be good for students and also good for teacher. The purpose of this research is to encourage students to participate and take active role in group work. Many students in Bhutan remain introvert and they don't speak out what they felt and consequently only few students participate and do the works. From our personal experiences and from our general observation from peers, we found out that there should be some finding to resolve this issue in our school and also in the whole country.

2. OBJECTIVES

- Provide effective strategies for the active participation in group.

- Disseminate results and recommendations on effective group-work skills to academic.

3.RECONNAISSANCE

Reconnaissance is a French word "reconnoiter" meaning to look at. The primary objectives of reconnaissance is to produce a research

question that will lead to the improvement. According to Maxwell [10], reconnaissance consist of three parts namely situational analysis, competence and literature.

3.1. Situational Analysis

The situational analysis is divided into three components; country, education system, school and class.

3.1.1.Country

Bhutan is a small landlocked country in South Asia, located at the eastern end of the Himalayas and bordered to the south, east and west by India and to the north by China with unique culture and traditions. Bhutan is separated from Nepal to the west by Sikkim and from Bangladesh to the south by West Bengal. After centuries of absolute monarchy, Bhutan held its first democratic elections in March24, 2008. Bhutan is a member of the United Nations and the South Asian Association for Regional Cooperation (SAARC). Education system in Bhutan is growing very slow and the curriculum expert were developing according to the need of every individuals.

3.1.2 Education System in Bhutan

Tracing back to the education system in Bhutan before 1950s, few Hindi schools existed with the exception of the monastic education. It was only after emerging out from the isolation in 1960s that western education came in our country with only some basic necessities assisted by India but monastic education continued. Western education has brought tremendous developmental changes in the country and within a period of four decades, the government has been able to expand the modern education system tremendously and it is still growing and addresses the educational needs such as conducive learning environment, qualified teachers and peers support.

Basic education extends from class PP to class X and is available to every citizen in the country. Promotion from one class to the next is based on continuous assessment, attendance and examinations. All the institutes and the schools in our country focus on learning by doing in order to increase student's participation and interactions. To enhance participation and interaction, the curriculum experts develop the curriculum considering the needs of all individuals. In order to promote interactions among students, the school organizes co-curricular and extra-curricular activities at the schools, *Dzongkhag*, and regional land national level. In our country, deductive learning process have subjugated for many years in educational field. With change in learning and knowledge ethic all around the world, being as a citizen we should be responsible for nation to find a way for improvement in educational and I felt unease with the quality of education that our future youth acquire. Which gave me platform to work on this research.

3.1.3 Our School and class

Taktse Central School is a central school established in 2004. The school is located just

above the Trongsa-Gelephu high-way (18 km from Trongsa) in the heart of three villages namely; Taktse, Tashidingkha and Eusa covering 35 acres of land. To strive for perfection in the field of education by proving education that is relevant and qualitative; nurturing and infusing each child with insight, loyalty dedication and determination.

The research sample was the class IX students of Taktse central School. The total strength of the class was thirty-nine wide-ranging of nineteen boys and twenty-four boys. Even though the researcher was teaching Chemistry they apprehended the importance of participation in group work as it physiques confidence and makes ones participative. Moreover, during the teaching learning process very less, participation occurred amongst the learners and almost 75% of them were unsuccessful in chemistry in mid - term result.

3.2 Competence

Mr. Galey Wangchuk is English teacher and he was teaching for more than 10 years at Taktse Central School. Mr Lam Dorji is also senior most biology teacher and also active member of Himalayan environmental rhythm observation and evaluation system. Mr. Sangay Dorji and Mrs. ChokiWangmo is also the senior Teacher at Taktse central school. Mr Dorji Penjor is in first year of teaching and major in chemistry. During his college days, he worked as researcher on Ethno botanical wealth and agro diversity in subsistence farming: A case study of home-gardens inTshokhorling*gewog,* Tsirang*, Bhutan*, and Under Sherubtse college research grant.

3.3. Literature review

Rossin and Hyland [13] describe group work that is project focused as significant in developing social and personal skills, in addition to the other skills that are more vocationally oriented.Mahenthiran and Rouse [9], also described the use of group work as a cooperative learning approach which positively contributes to student learning. Academic views on the purpose of group work may differ but in the 20th century, Raja [11] andWangmo[17] supports the use of group works and students participating is the best way to learn, because it improve learning, develop social skills, develop empathy, and improve test score and retention.

Raja [11] found out that some teacher refused possibility of success of group work because of the lack of resources, lack of trained teachers, and pattern of final exam does not support group work, lengthy syllabus, and discipline problem due to noise generated during group activities.Being in the adolescence period, it is full of turmoil and conflict in students. They try to have more liberty to develop their own potentialities. Children sit in group but rarely interacts and work as group. Instead pupil work individually or selectively that does not support productive group work. In UK Bennet[1], has shown that both teachers and pupils have difficulties implementing peer and interactive group work in class-room. Teachers and pupils rarely received training that would facilitate effective group working skill. Anactive participation and enthusiasm in group activity always have a success in learning process.

According to Bennet[1], in the early 20th century, a growing swell of research seemed to support the use of group work as one of the best ways to learn. Shyer students often open up in a small group where students who explain the material to one another better understand the material and students practice working collaboratively and learning from one another [2].Students often learn more when they work together and also get gets motivated when their fellow group member perform well and get rewards.

There is always flaw for the classroom success in every school or institute, therefore it is important that teachers smile at times, show enthusiasm through hard works and new strategies to improve participation of every individual in group work. The focus here is on strategies that facilitate group membership and dynamics, and full participation.

Kriflik and Mullan[7] proposes various methods for the allocation of group members like student's self-selection, selective appointment, random selection and selection of topic choice. The approach encouraged learning from the others in the group. This significant variation provides a further alternative for consideration in the formation of groups. An area for exploration as an impact on group formation is the extent to which such friend pairing may assist cooperation between students of diverse cultural backgrounds.

Friedman [4], proposed "speak up" strategies that found effective in preparing students participation in the class activity. Teachers are supposed to share their guidelines and expectation to the students through encouraging words and instruction. In the class, teacher should encourage students to at least speak and share their thoughts and feeling to their friends. This will help in building self-confidence and improve in long term learning.

Cooperative learning is grounded by Vygotsky works and states that social interaction as mechanism for cognitive development using different learning tools[15, 16]. Vygotsky [15], also stated that use of group discussion in class room would help to reduce the pupil's zone of proximal development or the gap between where he or she could be and his or her current state of learning. What a child can do today in cooperation, tomorrow he will be able to do his own.

Cooperative learning model is important aspect of classroom behavior that teachers use to foster classroom participation. It is a separate strategy that encompasses a boarder range of group interaction such as developing specific learning and social interaction. Wangmo [17], suggested that group of learner co-construct more powerful understanding then individual do alone. Several strategies were adopted to assist students in comprehending the value of group work and to support them in resolving any group issues that arose.

Eggen and Kaunchak[3] and Seifert and Sutton[14],proposes jigsaw I, II and STAD (Student-Teams Achievement Divisions) as useful strategies for effective group work. In Jigsaw I and II strategies individual become expert on subsection of a topic and the expert groups disband to teach others members and again the original general groups reform to learn what the expert students can now add to their general understanding. In STAD, students work

together to improve their performance from group learning. This strategies helps students becoming individual expert on subsection of a topic and teach to other in their group. Kounin[6] emphasized maintaining group focus. It means using classroom organization strategies and question techniques that ensure that all students in the group stay involved in the activity. He proposed that the degree to which teacher holds the children accountable and responsible for their task performance and group alerting where it include questioning strategy. After using all different strategies for active participation, teacher main role here is to go around the group and pay attention and guide the activity.

It was proven that the potential of group work is to improve learning and participation. Unfortunately,has also shown that this potential is not always being realized in UK schools. Pupils often sit in groups, but they only occasionally interact and work as groups. Children are rarely trained for group work, while teachers can lack effective strategies for setting up and managing such work. They can also be skeptical about its value and therefore tend to rely heavily on whole-class teaching and individual work [18]. The main goal of the action research was to address this wide gap between the potential of group work and its participation in chemistry class. This one month research has two aims: first to work within myself to develop strategies which would enhance the quality of group and paired work, and second to evaluate whether these strategies would result in an improvement in pupils' attainment and learning chemistry using participation assessment tools.

Kriflik[8] emphasized that,in most of thewestern countries students are more motivated to engage in communication when they have more opportunities to speak. But Researchers observed that Asian students are not trained to speak up, they prefer other people to take the limelight [9]. "In some cultures, students are very anxious about making mistakes in front of others" [10]. Friedman [4] claimed that group work allows students to work in a conducing and facilitating environment. Group work claims a number of advantages as Rossin[13] has noted that it stimulates the learners' experience of various types of interaction and helps to generate a more relaxed and cooperative classroom atmosphere.

According to Rinchen[12], in Bhutan science subject has been always thought to be difficulty for both the students and teachers. Especially many students do not like to study chemistry because they have old and inbuilt believe and thinking of difficulties in learning chemistry. Thorough my own experience, we found that many girls they don't like to study science subjects as their career. Rinchen[12] attributed many factors that influence girl's attitude to science subject and as a researcher the causes needs to be investigated thoroughly. Nevertheless, many strategies were input to resolve the issue and found many improvement in it. Hereby we as a researcher want to interest my students to make them see the application and values of science (chemistry) in their career with cooperate learning in the class.

According Wangmo [17], grouping of students was found to be an effective strategy to become successful learner by dividing students in

different group with different ability to learn from each other's. She found out that collaborative learning can accomplished meaningful learning and solve problems better than any individual who work alone.

In others country, Most of the teachers failed to explain the procedure of group work. Teachers need to think about the purpose of the task, particularly as it relates to the overall curriculum goals [9]. Many educators used different strategies to enhance the participation and success in group work. In our country there are some literature talking about the importance of group work and class room interaction by some scholar. From our previous school and college, we have experience some strategies like mixed ability grouping and random selection from group to present in class which we felt there wasn't much impacts on my learning. Presently we experiencing more group works and different strategies like mixed ability grouping, random selection, jigsaw II and peers discussion which we felt positive effects on my learning. This changes within ourselves and interest us to take this as our research during my teaching practice periods.Therefore, based on the above literature and situational analysis we put forward the following question.

4.ACTION RESEARCH QUESTION

"How can we enhance student'sparticipation in group work?"

5. SIGNIFICANCE OF THE STUDY

The study aimed to improve classroom interaction, cooperation amongst students and to improve their active participation. In addition, the study will look at the relationship between every students and their outcomes from any type of group work. This finding will also let others teacher to follow the same strategies used by researcher during the intervention period to improve their learning and to have effective group activities.

6. METHODOLOGY

6.1 Data collection

Data was mainly gathered through observations and questionnaire. Students were observed during the usual classes by giving activity and was marked a tick against their name or groups whenever they participated. The pre-observation was collection without informing them in order to get authentic observable result. Questionnaire was also used to collect baseline data and the participation for the survey was based on voluntary for all students. The same procedure of post data collection was followed after the intervention process to get final data. Intervention process were Jigsaw I, Jigsaw II, STAD, learning together and Random selection which was discussed detail in literature review. To analysis data collections, we used excel and SPSS to get ethical and accurate findings.

6. FINDINGS OF THE RESEARCH

6.1 Pre- Data Collection

The data was collected using two different methods. The first method was without informing them to observe how student behaved and interacted during presentations and conferences

in group. This method of data collection intricate recording a tally of evidence in our diary which was used during the whole action research cycle. A tally was used to record the frequency of number of student's participation and contribution to groups, volunteering to do presentation. These pre- observations were the principal source of data and other post-data were compared to this eventually. Baseline data are used as a proportional, standard for data collected during and after the intervention. During the month observation, twenty students participated in the discussion and presentation (fourteen females and six males). The frequency of their participation was only once for most of the participants. Students were nervous and lacked eye contact and speaking skills. Students occasionally volunteered to participate unless requested. They kept their heads down during questions.The tabulated observation pre -data observed in the strength of 39 students in class ix (*Table.1*).

From the above table we concluded that out of 39 students only half of the students participated in two month long classes and interesting was that more females were participating in any class discussion.

The second methods that we used to collect the baseline data was questionnaire consisting of twelve questions which mainly asked open ended questions and Likert structure questions concerning the group participation. The open ended questions asks students to give their opinion on the effects of learning chemistry through group work. The response showed 58% of students were not interested in learning chemistry and doing group works which directly convinced that they do not felt any effects in learning chemistry through group activities. In another way the response showed 10 % of students interested in learning chemistry and 16% were interested in doing group works and participation. The response also showed 16% of students both interested in learning chemistry and group work (*fig.1*)

To collect the pre data information, we used 9 Likert structure questionnaires before intervention process to collect their views. After doing some sorting out with questions, we have compiled and reduce to five questions because they somehow represent similar meaning. The baseline data Response shows that 98 % of the students strongly agree with the important of group work. There was only 4% of students who strongly disagree with the first question where it asks about whether they learn more from friend or not (*Fig 2*).Though group activities are always implied in the school for classroom discussion by teachers, it was still left ineffective and students are not enthusiast to work in the group.

Table 1: Observed on 1st– 30thAugust 2018, Frequency of Students participating in group activities (pre-data).

For the first method,to calculate the Mean/

Days	Female		Male		Days	Female		Male	
	Tally	In number	Tally	In number		Tally	In Number	Tally	In Number
Day 1	*I*	1	*0*	0	Day 9	I	1	0	0
Day 2	*I*	1	*0*	0	Day 10	I	1	I	1
Day 3	*I*	1	*I*	1	Day 11	II	2	0	0
Day 4	*II*	2	*I*	1	Day 12	I	1	0	0
Day 5	*II*	2	*0*	0	Day 13	0	0	0	0
Day 6	*0*	0	*I*	1	Day 14	0	0	0	0
Day 7	*I*	1	*0*	0	Day 15	0	0	I	1
Day 8	*I*	1	*0*	0	Day 16	0	0	0	0
Total	***9***	**9**	***3***	**3**		***5***	**5**	***2***	**2**

Average of student's participation (SP) in group works we used following formula.

Mean = SP / No. of students

= 19/ 39.

Therefore mean participation rate of the class after intervention =0.48.From the above table we concluded that out of 39 students, in the course of per-data collection only 19 students participated.

Now the next step in action research is to implement the strategies and theories proposed by different writers in above literature and increase the student's participation in the group work.

6. 2 Intervention Programmes

The two base line data discovered that the student's attitude towards chemistry and participating in group activities was poor.85% of the students preferred to be in silence they don't participate class discussion. (Most of the students disagree about group works).After collecting the baseline data, we made a countless effort to implement strategies in the second and third week of our teaching practice.

We used the following strategies anticipated above literatures.

- Jigsaw I (Random selection)

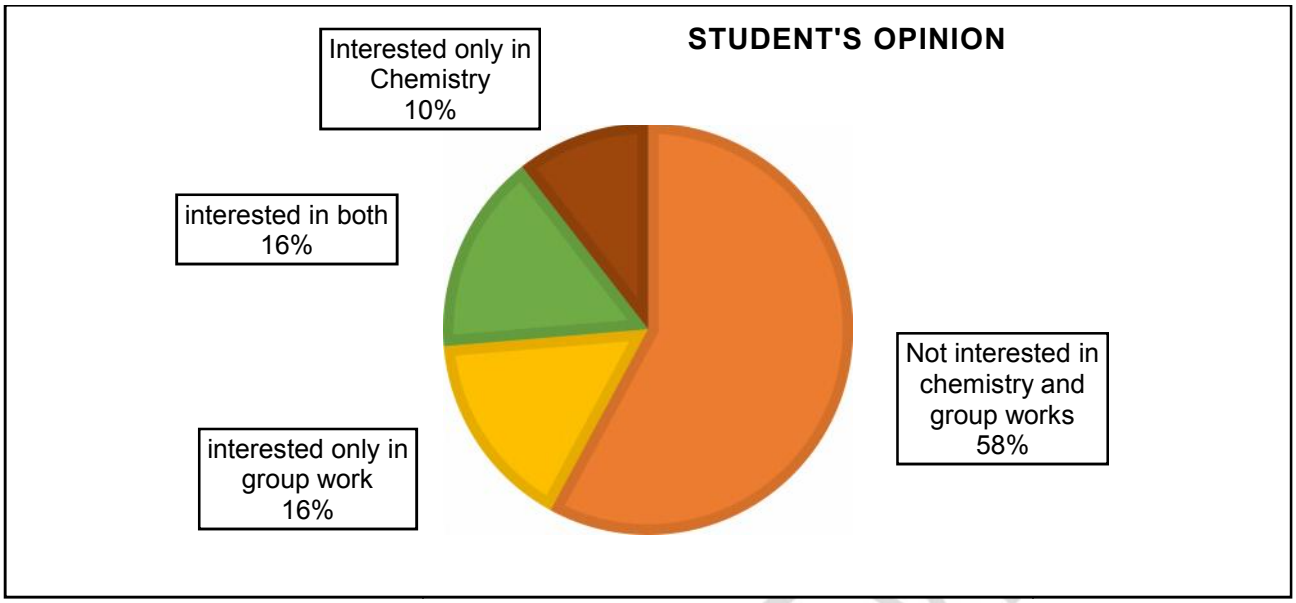

Fig 1: Shows student's average response in open ended questions for pre-data.

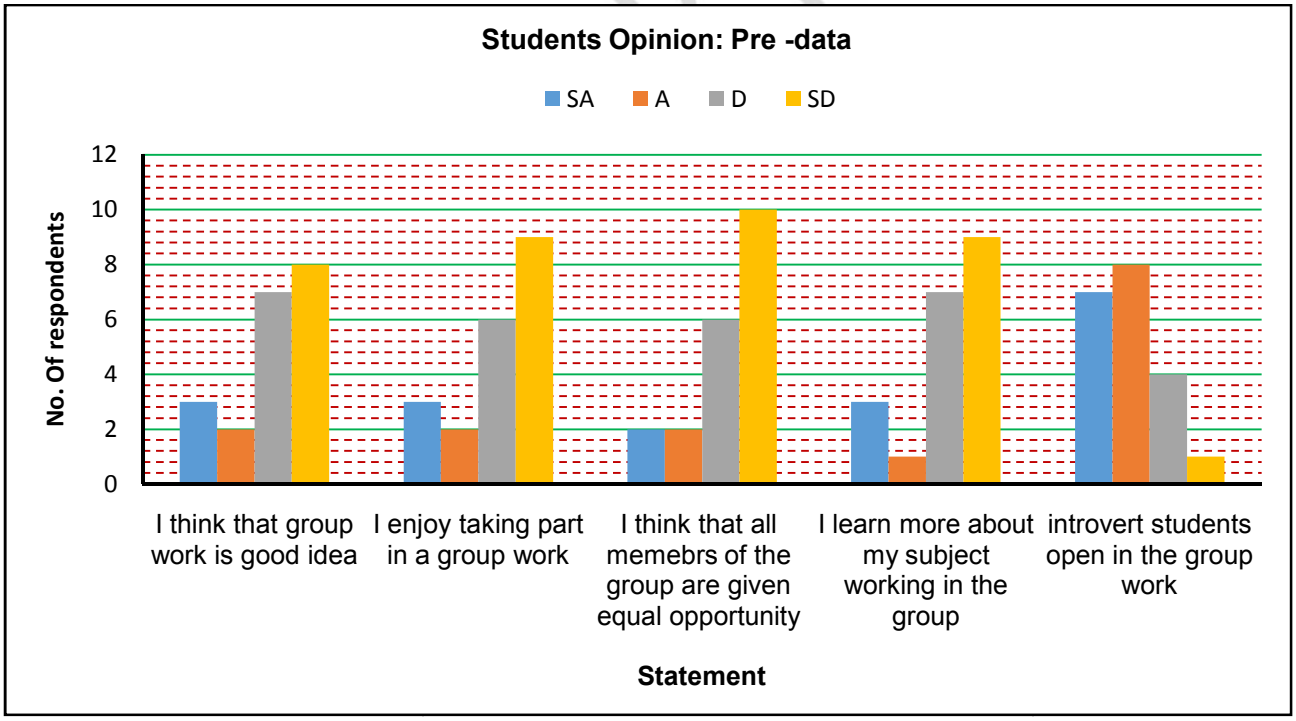

Fig. 2. Student's opinion on group work participation in chemistry (Pre-data)

- Jigsaw II (Home and expert group)
- STAD,
- Learning together
- Using varied reinforcement technique and
- Giving inspiring and encouraging advice.

Before starting my lesson we always gave encouraging and inspiring talk about the importance of participation. We also used various verbal reinforcement such as excellent, very good, well tried, keep it up. The positive reinforcement encourages and motivates the students' learning. Therefore, the skill of reinforcement is to be used appropriately in the teaching learning situations. In some group presentations we gave some rewards as a price for the winner. For any group presentation, we used random selection home and expert grouping strategies to make all the students participate in group works.

6.3 Post-Data Collection

The same methods of data collection for post-data were used after the action plan was implemented so that any improvement made could easily be identified. The post- data was gathered in October by administering the same tools used in collecting pre-data. The survey questionnaires were circulated to the class

Before accomplishment of the plan commenced, we were bit worried that improvements in our students may not be evident in a short period of time but the response was indeed good. In the first method, the class was divided into eight groups and the researchers provided the group activity to discuss on the Chapter Seven as mass presentation for observation and students were also observed during class hours. A tally was recorded based on their participation and effectiveness of learning chemistry.

From the above table we concluded that out of 39 students 103 students participated in month and interesting part was that again more numbers of females were participating in any class discussion (*Table 2*). Compared to the baseline mean, the mean after intervention process was four time greater. It was unexpected response from our students where we have seen a lot of improvement in them. It was not for the first time that they experiences to do group works in many subjects but they claimed that it wasn't effective in many of the subjects. We also questioned ourself "why do some student's success and some fail"?

In the second method of post data collection again the questionnaire consist of twelve questions which mainly asked open ended questions and Likert structure questions concerning the group participation was used. The open ended questions asks students to give their opinion on the effects of learning chemistry through group work. The response showed 81% of students interested in learning chemistry and doing group work. It is evident from the above findings student's participation improved drastically after the intervention process (*Fig 3*).

To collect the post data information, we again used 9 Likert structure questionnaires after intervention process to collect their views. After sorting out with some questions, we have compiled and reduce to five questions.

Table 2: Observed on 1st – 29th October 2018, Frequency of Students participating in group activities (post-data).

Days	Female		Male		Days	Female		Male	
	Tally	In number	Tally	In number		Tally	In Number	Tally	In Number
Day 1	//	2	/	1	Day 9	//	2	//	2
Day 2	/	1	0	0	Day 10	/////	5	///	3
Day 3	///	3	///	3	Day 11	/////	5	//	4
Day 4	///	3	////	4	Day 12	///	3	/////	5
Day 5	////	4	///	3	Day 13	///	3	/////	5
Day 6	///	3	/////	5	Day 14	////	4	///	3
Day 7	//////	6	///	3	Day 15	//	2	//	2
Day 8	/////	5	//	2	Day 16	////	4	//	2
Total	***27***	**27**	***21***	**21**		***29***	**29**	***26***	**26**

For first method, to calculate the Mean/ Average of student's participation (SP) in group works we used followingformula.

Mean = SP / No. of students

= 103 / 39

= therefore mean participation rate of the class after intervention =2.6

From the above table we concluded that out of 39 students 103 students participated. The mean participation rate of the class is 2.6.

Compared to the baseline mean, the mean after intervention process was four time greater. It was unexpected response from our students where we have seena lot of improvement in them. It was not for the first time that they experiences to do groupworks in many subjects but they claimed that it wasn't effective in many of the subjects. We alsoquestioned ourself "why do some student's success and some fail"?

From second method, response shows that 81 % of the students strongly agree with the important of group work and its participation. 18% of students also agree with the group works and its participation. There was only 4% of students who strongly disagreewith the first question where it asks about whether they learn more from friend or not (*Fig.4*).

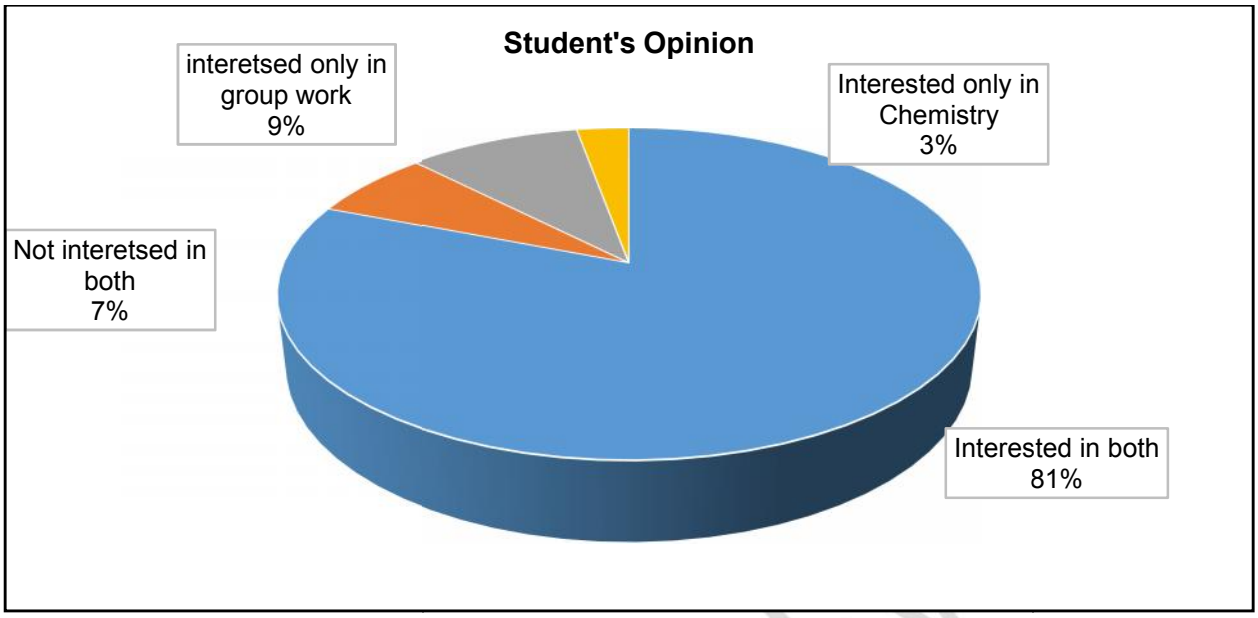

Fig. 3. Shows student's average response in open ended questions for post-data.

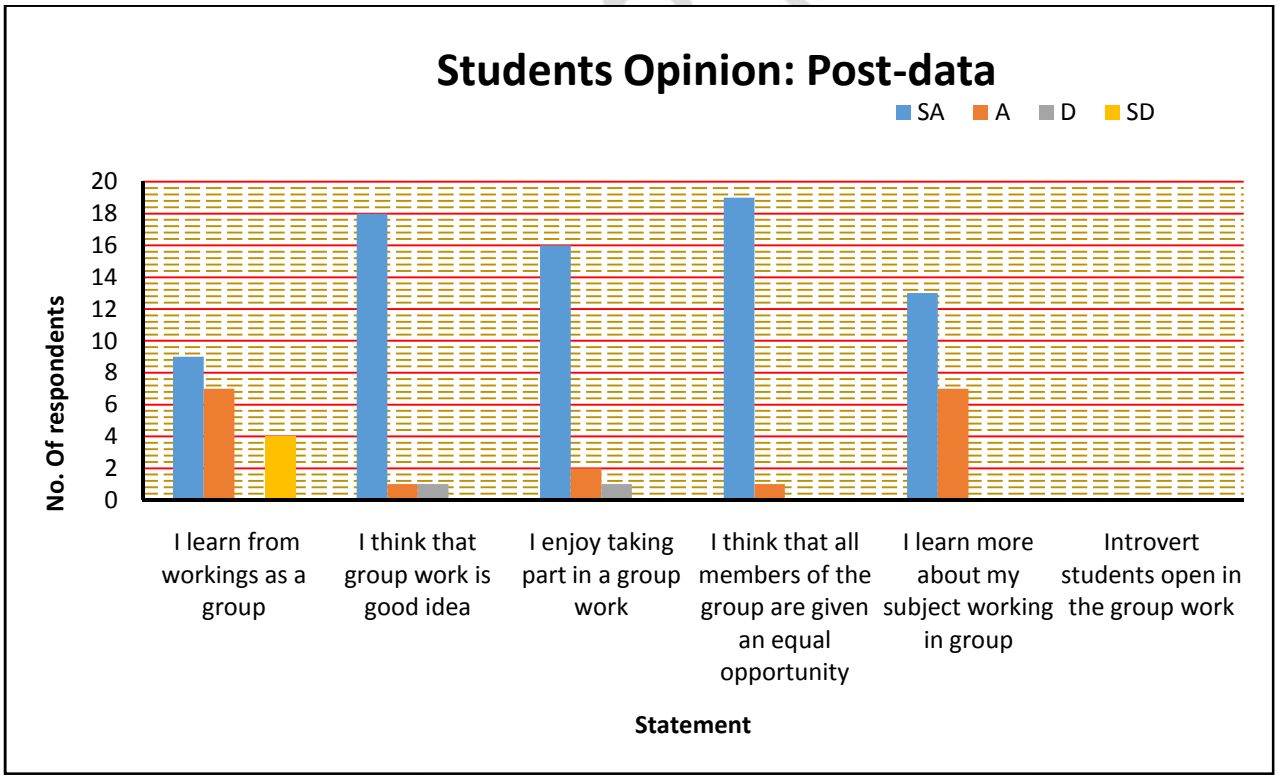

Fig.4. Student's opinion on group work participation in Chemistry (Post-data)

7. DISCUSSION AND CONCLUSION

Our education system for many decades is greatly influenced by teacher centered. Such pedagogy has resulted students to depend on teachers and students were remain just as a passive receiver of knowledge [12].

Student's participation both in classroom and group activities is insignificant and they were taking those task as burden. Still most of our students don't like working in group because they feel group work as extra work for them and they hate those teacher who gave more group to do but all the researcher and educators have proven that group activities has become the chief approach of deep understanding of the subjects contents.

From the comparative data analysis we can say that during the start of the lesson, the students were not interested and reluctant to participate in the group activities. Basically they used to abandon themselves from group discussion until they were made mandatory or forced and made to speak. Those who wished to participate and interact in the classroom were mocked by others. However, after intervening for four weeks the magnitude of participation and interaction has increased as shown in the (fig3, fig.4).

The number of students participating has increased for both the gender but dominated by females. The study found majority of the students prefer reinforcement as a source of inspiration for class participation because we found out that when we gave them verbal or some prizes for presentation, they were doing with full enthusiastic and wonderfully. Many of our students were sharing that they feel more comfortable to participate when the teacher is friendly and approachable.

This action research also enhanced our classroom behavioral skills which are required for arousing student's curiosity, attentiveness and also heightened my knowledge on how to develop student's cleverness on their problem solving.We contemplate this study as success as we could adopt different strategies and skill which are crucial in enhancing student participation in group work for my subject chemistry. We are also confident that we can implement our learnt strategies and skill from our action research in the classroom situation in future.

8. RECOMMENDATION AND LIMITATION

The current action research was undertaken in a classroom where the teachers was an implementer of learning, not as an authoritative source. Such a teaching style meant that there was 'direct teaching' occurring in the classroom, instead an emphasis was placed on students being independent in the learning process and working collaboratively in groups. Every individuals during the implementation of the intervention strategies and it might have let the learner's feel that they have been ignored. Further, we would recommend future teachers to track the factors that influence the participation in the classroom and change the attitudes of different achievers toward the group activities. Future teacher can also disseminate and

implement strategies used by researcher into their classroom.

CONSENT

Participants signed a consent form at the Beginning of each interview and interviewees had the opportunity to ask questions to the facilitator.

ETHICAL APPROVAL

Authors have sought ethical approval from the School administration to conduct the action research.

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APPENDIX (I)

Hello! We are enlisting your help in completing this survey for our action research. The purpose of this study is to enhance the students participate in group work.

Please answer the following questions with as much as honesty and detail as possible. Your responses are anonymous.

Male ☐ Female ☐

1. How are you finding chemistry so far?
2. How are you finding working in groups so far in this subject?
3. Does working in groups affect the way you learn chemistry?

Please circle and describe the answer that best fits you.

Statement	Strongly Agree	Agree	Strongly Disagree	Disagree
4. I learn from my friends				
5. I learn from workings as a group				
6. I think that group work is good idea				
7. I enjoy taking part in a group work				
8. I think that all members of the group are given an equal opportunity				
9. I think I learn more about my subject working in group				
10. I think group work allows students contributes and work for the activity				
11. Introvert students open in the group work				
12. I feel free working in group work				
13. I love to work in heterogeneous grouping				

APPENDIX (II)

Frequency of Students participating in group activities (data Collection)

Days	Boys		Girls	
	Tally	In numbers	Tally	In numbers