



## IMPROVING CLASSROOM LEARNING ENVIRONMENT FOR ENHANCING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

NIDA AYZAZ<sup>1</sup>, ABDUL GHAFAR<sup>2</sup>, MUHAMMAD IDRIS<sup>3</sup> & MS. SANA AYZAZ<sup>4</sup>

<sup>1</sup>PhD Scholar Department of Education, Abdul Wali Khan University Mardan, KP, Pakistan

<sup>2</sup>Associate Professor, Department of Education, Abdul Wali Khan University Mardan, KP, Pakistan

<sup>3</sup>Associate Professor, Department of Education, Abdul Wali Khan University Mardan, KP, Pakistan

<sup>4</sup>PhD Scholar Department of Education, Abdul Wali Khan University Mardan, KP, Pakistan

### **Abstract:**

*This study investigate the role of metacognitive strategies in improving classroom learning environment. The study also finds out the effects of metacognitive strategies in developing student's interest in reading comprehension. Action research was adopted by selecting grade fifth thirty students (age 10-11 years). WIHIC interview and documentation were used for collection of data. Data was analyzed through reflections and content analysis. Data showed improvement in learning environment of classroom for reading comprehension of the students. Data elicited that metacognitive strategies enhance student's interest in reading comprehension. It is recommended that the respective departments must strengthen teachers' awareness of metacognitive strategies and their application in the classroom through frequent trainings. In addition, research initiatives in other languages skills are recommended. Future study perspectives may take into account the cultural diversity of the students and teachers in various communities.*

**Keywords:** Learning Environment; Metacognitive strategies; Reading comprehension; Action research

### INTRODUCTION

A classroom learning environment, often known as an educational environment is a social context in which learning occurs (Arisoy, 2007). It encourages learner autonomy and control over the process of learning, helps pupils understand the link between success and efforts, and fosters the development of mastery goal orientation (Sungur Gungoren, 2009). According to Ulker et al.,(2013) creating a classroom learning environment that addresses needs of students' and perceptions enables an effective communication. The classroom learning environment has a significant impact on results of students and is critical to improve learning efficiency at all levels of education (Arisoy, 2007). For more than four decades, various academics have focused on the classroom learning environment (Atbas, 2004; Arisoy, 2007; Dorman et al., 2006; Gür, 2006; Telli et al., 2009). Classroom learning environment can be improved through the application of processes like metacognition.

Metacognition is updated topic of educational psychology. Flavell 1979 is credited with popularising it in the field of educational psychology (Baltaci & Akpınar 2011; Yore & Treagust, 2006). Metacognition is a process that entails fruitful knowledge not only about various processes of cognition but also how to use and regulate these processes of cognition for fruitful consequences, particularly in learning processes (Sungur & Senler, 2009; Ozsoy, 2008). Metacognition is best defined as "thinking about thinking or cognition about cognition" when used as an umbrella term (Flavell 1979; Karakelle & Sarac, 2010). Metacognition could increase learning in various fields, but we will concentrate on its impact in English language learning contexts. The English language broadens students' knowledge and is regarded as an international and universal language for communication (Harmer, 2001). Writing, listening, speaking, and reading skills are essential for effective study and mastery of the English language. Reading is an important ability that increases students' talents and serves as a knowledge bridge" (Snow, 2003). Learning to read is not an easy process; pupils confront numerous challenges. As a primary school teacher, I am aware of these issues. Some strategies, known as metacognitive strategies, should be used to make reading more engaging and simple, as well as to boost reading speed and comprehension level. Metacognitive reading strategies are those that try to increase readers' awareness of and control over their reading comprehension, as well as to measure the success of their attempts at comprehension. Metacognitive methods overcome all



challenges encountered by readers during the reading process and change the learning environment into a favourable learning environment. It enables students to not only learn tactics that aid comprehension but also to effectively implement these strategies (Baker, [2002] 2008).

In Pakistan, the educational system begins with preschool and progresses through primary, middle, high, intermediate, and university programmes. The primary stage begins after preschool and lasts for five years, encompassing grades one through five. Primary education should be focused on boosting student learning and establishing a solid foundation for future academic programmes. At the primary level, eight subjects are taught, with English being one of them. English language acquisition is usually difficult for students, and English teaching methodology is inadequate. Several reasons have been identified as contributing to the bad English language teaching environment. (Manan et al., 2015).

Metacognition develops naturally between the ages of 7-8 years, and its application may improve learning environment (Shamir et al., 2009; Veenman et al., 2006; Whitebread et al., [2002] 2009; Ayaz et al., 2020). Various studies have identified metacognitive strategies to be the most fruitful and relevant in the field of English (Benito, 2000; Ceylan & Harputlu, 2015; Karbalaei, 2011; Schoenfeld, 2009; Ayaz et al., 2020). Therefore, we undertake an action research to investigate the role of metacognitive strategies in improving classroom learning environment and to find out the effect of metacognitive strategies in developing student's interest in reading comprehension.

#### **Research Questions**

- In what way metacognitive strategies can improve classroom learning environment?
- What affect do metacognitive strategies can have in enhancing student's interest in reading comprehension?

#### **Objectives of the Study**

- To investigate the role of metacognitive strategies in improving classroom learning environment.
- To find out the effect of metacognitive strategies in developing student's interest in reading comprehension?

## **MATERIALS AND METHODS**

#### **Research Design**

This study was carried out by using Classroom Action research. The aforementioned study approach was created by a prior research group to increase teachers' teaching skills as well as students' learning skills (Fisher & Phelps, 2006; Kemmis & McTaggart, 1988). The action research was carried out in four cycles, each of which had four steps: plan, action, observation, and reflection. Every cycle and its steps were carried out using the action research approach developed by Kemmis and McTaggart in 1988.

#### **Data Collection Tools**

A WIHIC based group interview was conducted at the end of each cycle. The 16 structured-question interview (Appendix A) was utilised to acquire an in-depth insight of students' actual classroom learning environment in their English class. The researcher produced the interview questions, which were then examined by three experts in the field of English as a foreign language. The interview questions were made by keeping in view seven aspects introduced by Fraser et al., (1996); Dorman, (2003); Gur, (2006). (student cohesiveness, teacher support, involvement, investigation, task orientation, cooperation, and equity). A set of five students was chosen at random for an interview. The interviewer group was different after each cycle because the same questions were utilised in all cycles. Thus, twenty of the thirty students participated in group interviews. Reflections on each cycle were also used as data collection tool.

#### **Subject of the Research**

At the age of 7-8 years, researchers demonstrated the emergence of metacognition (Veenman et al., 2006; Shamir et al., 2009; Whitebread et al., [2007] 2009). As a result, this study was conducted on 30 fifth-grade students (ages 9-11 years) in the academic year 2022, because these students were in the appropriate age group for metacognitive development. The researcher was an English teacher in a government girls primary school. Various studies have indicated metacognitive strategies to be the



most beneficial and significant in English learning environment (Schoenfeld, 2009; Benito, 2000; Karbalaei, 2011; Ceylan & Harputlu, 2015). As a result, this study was conducted using English text book course.

#### **Data Analysis**

Data was analyzed through content analysis and reflections. Furthermore, the interview questions were developed based on seven sections that corresponded to the seven aspects of the WIHIC scale and was analysed based on the answers given to each question.

### **IMPLEMENTATION OF THE ACTION**

The first three lessons of fifth grade English text book were taught in the first cycle of action research. The student's attendance was recorded, and five groups were formed. Planning strategies were used prior to conducting the lesson. Students were told to consider the images presented in the text and predict what they would learn. Following that, the subject was taught using monitoring strategies for obtaining meaning from the text. Rereading strategies and underlining the difficult words followed the lesson. They were given the opportunity to discuss their personal experiences and tie them to the lecture. Students' reflections and modification for the next cycle were recorded.

Cycle two began with modification in the form of reducing lessons to be taught in order to focus more on practising metacognitive skills in a supportive learning environment. To improve students' activities, vocabulary was concentrated on, and teacher participation in the classroom was reduced. Additional tasks were assigned to the students while they analysed the challenge, such as underlining each clue they discovered and marking them on distinct task papers with coloured pencils. Following the completion of Cycle II, the students' responses to changes in the upcoming cycle were recorded. More opportunities for individual use of metacognitive strategies were provided in the third cycle. Students' confidence and accountability were promoted. It was focused that understanding is more important than remembering the answers. For improved understanding, students were urged to make inferences by relating the text to personal experiences. Teacher's responsibility was to assist them stay focused on the actual text and avoid distractions. This cycle also included text rereading in order to better understand the content.

In the fourth cycle, inquiry was utilised to make students feel better about themselves and to encourage them to apply metacognitive skills to absorb less by rote and to increase student success via comprehension. Students were questioned about topics they did not understand, specifically how to locate an idea in a book. They were then given the opportunity to ask questions. During the class they also shared their opinions. Students were encouraged to ask themselves questions before beginning the session, during the monitoring process, and regarding what they had learnt from the lessons. Interview (Appendix A) was taken at the end of each cycle and responses of the students were noted.

### **RESULTS OF INTERVIEW AFTER EACH CYCLE**

#### **Interview responses of Cycle I**

The interview questions were made by keeping in view seven sections involving Student Cohesiveness, Teacher Support, Involvement, Investigation, Task orientation, Cooperation and equity. Students were asked to provide insight on the teacher's current and previous teaching strategies and relationship of students with peers. They responded as

*Learning through traditional strategies did not provide us much time to think and then rethink, to monitor and ask questions of oneself (Student1, student2) (Group 1). Moreover, the activities involved were motivating. We have become more engaged in the classroom discussions and have begun sharing our opinions because we sense something new is happening in the class (student1, student2) (Group 1).*

Students' limited vocabulary made the comprehension process challenging and tiresome for them. Poor vocabulary made it difficult for readers to understand the material because they won't be able to understand the text if they don't understand the meanings.



*I don't understand the meaning of words which cause problems for me (Student 2, Student 3) (Group1). "I searched for the meaning of words in the dictionary and wrote them on the words, which took me a long time because I didn't know about those words (Student 5, Group1).*

*I am not happy and dislike the text reading because i am not enriched in vocabulary. I become disheartened when try to understand text (Student 2, Student 5) (Group1).*

*It was really difficult and confusing for us to understand and follow the instructions given by teacher. We are not given any opportunity in the past to use metacognitive strategies for reading comprehension in groups. We are just familiar with the translation of text, noting answers in the notebook and memorize the answers of exercises individually (Student1, Student 2)(Group1). These innovative strategies appropriate use were confusing and following the steps of planning, monitoring, and evaluation was strange for members of groups (Student1, Student2)(Group1).*

The comments of the students supported idea that thinking-related activities were more beneficial for understanding the text than learning in the traditional manner, i.e., only using translation strategy activities and remembering exercises separately. The students supported application of metacognitive strategies through group work as well, since group activities required more critical thinking. It encouraged participation in learning as well as monitoring and evaluating their progress for future learning.

*Understanding of the text is easier and more fruitful than with the use of traditional teaching (Student1, Student 2, Student 3, Student 4)(Group1).*

*Learning through traditional strategies did not provide us much time to think and then rethink, to monitor and ask questions. The teacher is teaching in a beautiful way through which our interest is developed. We wait for the English class and give preference to complete our homework (Student1, Student2) (Group1).*

Students responded that the activities involved were motivating. Moreover their interest was developed through the use of planning, monitoring and evaluation strategies.

*For the first time in today's class, i feel a sense of importance in learning. I need to be involved, and this is the power of these new strategies to involve me fully in my own learning (Student 3, Student 4, Student 5) (Group 1).*

In the traditional method of learning, students had just one way to learn through translation. They were typically not focused and attentive, which made learning and understanding of text tedious for students. Students found variety of questions and processes of investigations. They got the opportunity to assist one another in the classroom. Students' responses suggested that this method improve learning environment for effective learning in the first cycle.

### **Interview responses of Cycle II**

Students responded that required changes in cycle II made it more interesting for them to comprehend the material. They claimed that reading text in this cycle did not exhaust them.

*We prefer studying English in such a fun environment that is why we wish to learn English. It was interesting for us to learn English now because it would help us learn more in the future. I was aware that English is currently very important to students. It will guarantee us being useful in the future (Student 1, Student 4, Student 5, Group 2).*

Students said that several of the exercises the teacher had recommended for understanding text were interesting. Students added that learning exercises kept them focused on goals.

*I appreciated exercises that the teachers offered. The students appeared to be having fun while learning and i would like to continue learning this way in the future. Additionally, using metacognitive strategies improved our chances of bonding with our friends. I believe it to be quite advantageous for us (Student 2, Student 5, Group2).*

They also showed their content by engaging in practice and activities to understand the material. The research activities did not leave them feeling worn out.

*Using metacognitive strategies to learn is a great idea. We no longer find it boring. I anticipate the instructor using a lot of exercises (Student 1, Student 2, Student 5, Group2). We were having fun understanding text through activities so we could practice and learn at the same time. It wouldn't cause the students' engagement in educational activities to dwindle (Student 3, Student 4, Group2)*



*At the moment, i enjoyed using these methods to learn. It is quite helpful for students, and i wasn't worried about the challenging and dull reading (Student 1, Student 2, Student 4, Group2).*

One of student responded very beautify that this strategies transform our attitude toward the comprehension of content through providing effective learning environment and bundles of ways to involve thinking processes for understanding.

*Since you introduced the new teaching strategies, i have begun to better grasp reading. This inspired the students to improve their reading comprehension and critical thinking abilities in future (Student 2, Student 3, Group2).*

*The learning environment set up by the teacher could train us to enhance our thinking skills. Activities helped to improve thinking abilities in the right direction. These abilities were developed through the application of planning, monitoring, and evaluation strategies (Student 1, Student 2, Student 3, Group2). It assisted us in overcoming fear while working in groups (Student 3, Student 5, Group 2).*

*Students were occasionally given very little time to practice the metacognitive strategies, so we weren't competent when we presented to the class because we weren't prepared (Student 1, Student 2, Student 3, Group2). We were under pressure to finish our work before the allotted time expired (Student 3, Student 4, Group2).*

### **Interview responses of Cycle III**

Students provided thoughtful responses after cycle three regarding the new strategies and teaching environment. They responded that in contrast to the prior learning environment, they did not feel bored and loved using metacognitive strategies.

*At the moment, it is enjoyable for us to understand the content. It's better than the past when teachers didn't use metacognitive strategies (Student 1, Student 2, Student 3, Group3).*

*When I ask questions, you are prepared to respond and lead us, so the adoption of these strategies is commendable. Teacher gives us a pleasant learning environment where i attempt to study on my own, and inferring concepts from the graphics is more exciting (Student 1, Student 3, Student 4, Group3).*

The class was having fun studying when the teacher used charts and workbooks for reading comprehension exercises while modeling metacognitive skills with the students. It was preferable for them to exercise their reading comprehension skills.

*I liked practicing, using charts and asking questions as we completed our assignments. Our skills are improved by such activities (Student 1, Student 4, Student 3, Group3 ).*

*Your post-practice questions for group discussion got us more involved. We think critically. Compared to writing exercises in notebooks, it is more useful (Student 3, Student 5, Group 3 ).*

They said that the teacher was cooperative while carrying out these activities. Students had received awards from the teacher for completing their tasks on time. This inspired the students' more than the conventional teaching strategies to take interest and understand the content.

*You have created a welcoming setting for us to learn how to employ metacognitive strategies for reading comprehension (Student 5, Group3). The teacher praised us for our good work, it made us feels better (Student 2, Group3).The present teacher and teaching is good. Confidence is given to us to work with the teacher and ask questions without any fear (Student 3, Student4, Group 3).*

*I gained confidence, in the past i lack confidence due to our fear of making mistakes (Student 1, Student 2, Group 3).* I questioned the students to clarify their statement easily. We are confident now. Their comments were

*I mean that we have more opportunities in the classroom to comprehend the material rather than memorization. We rarely learned in this way in the past because we were terrified of making mistakes. However, we are now more comfortable interacting with one another and teacher, at least in the classroom (Student 3, Student 2, Student 5, Group3).*

### **Interview responses of Cycle IV**

Students agreed that improvement was seen in learning environment. While engaging in the learning activities planned for them, they were quite happy. The classroom becomes active as a result of these exercises.



*The usual classroom setting was really dull; it made us passive and made us feel sleepy all the time (Student 1, Student 2, Student 3, Group 4). The learning environment is enjoyable and superior to earlier ones; the student classroom has been transformed into an interactive one. Most of the activities were enjoyable for us (Student 4, Student 5, Group 4).*

The students informed me that they found using metacognitive strategies to improve reading comprehension to be better for them and that it might continue to be better in the future.

*Additionally, we felt confident working and practicing in a group with friends.)(Student 1, Student 2, Group 4).*

The response from the students was that the teaching style was more active than in the past. For them to practice and learn, it was integrated into practical activities (pair work, practice in books, use of pictures, flashcards).

*Your current teaching approach is better since it offers lots of chances for activities and content practice. Compared to the previous one, this one is more entertaining and helpful for students (Student 1, Student 2, Group 4). The innovative application of strategies may reduce the monotony of English lesson learning (Student 3, Student 4, Group 4)*

Students responded that the current setting makes it easier for us to collaborate and learn as a group. It improved the students' ability to work in team and assist one another in completing assignments on time.

*At the moment, group learning is preferable because the majority of activities were created through group assignments, which might increase our accountability (Student 1, Student 2, Group 4).*

#### RESULTS OF REFLECTIVE DATA FROM EACH RESEARCH CYCLE

These results of reflections go beyond academic success to take into account students' attitudes toward reading comprehension, which is always seen as a crucial component of student learning, particularly in English, as well as the classroom environment, which is crucial for enhancing students learning. To increase the students' text comprehension skills, new teaching strategies were used. This was the first step in a long process of moving away from the traditional teaching style and toward high order thinking, student-centered learning and self-regulation. The first cycle's implementation suggested a more productive environment of learning than the one previously supported by teacher-centered activities. Data from the first cycle showed that the students did work with more rote memorization than understanding, which made it difficult for the students to accomplish their goals. They were not confident to ask question from teacher and cooperate with one another.

In order to increase students' confidence and practice metacognitive strategies, the number of lessons was decreased at the beginning of cycle two in accordance with the data from cycle one. The students utilized more metacognitive strategies to understand the text since they were encouraged and motivated. The interactions between teachers and students improved. The students were not afraid to ask questions right away. Majority of the students appeared content with their activities. The previous passive classroom environment was no longer present. All of the students received encouragement in a welcoming setting. However, improvements were still required in the findings of research through conducting third research cycle. The students have currently shown development in their skills but there were still problems which need to be resolved. Most students used a word-by-word approach and were unable to understand questions because they had mistranslated them. Clearly, this had a negative impact on their ability to correctly answer the questions. Additionally, there was a presentation issue also. Some students were still learning by rote. Despite my encouragement to avoid rote learning, they made no attempt to change their routines or habits. Depending on the students' backgrounds and level of English language proficiency, each group performed differently. The brilliant students always gathered in one group when i instructed them to practice with one another in groups, leaving the less capable students in the other groups. These groups' negative attitudes were evident from the work's poor quality.

After cycle two was over, the majority of them displayed increased confidence. The children engaged in active learning and enjoyed it. In cycle three, the individual efforts of the students were encouraged. The way that students interacted with one another improved. It was noticed when the



third cycle of instruction combined more and less talented students as a result of which the students' performance in reading comprehension significantly increased. Some students still preferred learning by rote. The quality of each person's work did not increase. Many students completed the task in a low-quality manner.

The fourth cycle's arrangements were better than those of the previous cycles, and collaborative learning was used to encourage each student's usage of metacognitive reading comprehension skills on their own. Students were actively engaged and more likely to pay attention to tasks because the proposed procedures (for planning, monitoring and evaluating) were made to fit their needs as learners. In the fourth cycle, it was noticed that they were doing better in terms of their interest and collaboration. Student appeared more engaged when working in groups since they were expressing questions and supporting one another. Additionally, using more strategies in class improved students' ability to employ monitoring and evaluation strategies and motivated them. Improvements and required changes in cycles further improve the student's use of strategies independently. Metacognitive strategies application thoroughly involved critical thinking abilities of the students in learning environment. Learning environment with metacognitive strategies gave the students a better setting for brainstorming, for monitoring their reading, and for answering questions at the end. During research cycles, it was noted that the learning environment changed from being quiet to being busy. Students showed an improvement in their work confidence as compared to past. Students practiced without fear of making mistakes and were encouraged to collaborate with their classmates.

#### DISCUSSION

Understanding metacognitive strategies and how to use them successfully might help a person learn. If English subject teacher and their students use metacognitive strategies effectively, classroom learning environment will improve and students' reading comprehension may improve dramatically. This study contributes to our understanding of how metacognitive strategies can improve classroom learning environment by enhancing students' reading comprehension in English at primary level. An action research was conducted for improving classroom learning environment through application of metacognitive strategies for enhancing reading comprehension. Research study was conducted in four cycles. It was noted that the classroom environment shifted from passive to an active and lively environment where the students participated happily and enthusiastically in learning activities. This shift in setting had a positive impact on learning and comprehension of the content. Throughout the progression of each cycle, there was found a consistent improvement in student performance. The student's performance in terms of motivation, active engagement, curiosity, Student cohesiveness, teacher support, involvement, investigation, task orientation, cooperation and equity has improved. Our findings concluded that learning environment in English classroom by using of metacognitive strategies enable students to take responsibility of their own learning processes. Other researchers' outcomes were similar to our research (Bransford et al., 2003; Zohar & Dori, 2012 ; Paris & Paris, 2001). The findings of the study elicited that after each cycle, students have begun to approach understanding the material with a positive attitude, enjoying their time in class and were eager to participate in the activities. Students showed an improvement in their work confidence as compared to past. Students were guided away from rote memorization toward comprehension of the text. Metacognitive strategies offered a welcoming learning atmosphere in classroom. Other research groups found similar results and emphasized the importance of implementing metacognitive strategies in educational institutions for improving students learning and classroom environment (Parvinder Kaur & Sarita Saini, 2020; Desoete & Veenman, 2006; Leat & Lin, 2003 ; Schraw et al., 2006; Veenman, Hout Wolters & Afflerbach, 2006).

#### Recommendations

- In order to improve learning and reading comprehension skills of learners, the educational environment must be encouraging. Teacher requires to be aware of the importance and uses of metacognitive strategies. The education department must conduct targeted seminars for teachers on a regular basis to help them to improve classroom learning environment for effective learning and better understanding of text through application of metacognitive strategies.

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- Education department must arrange in-service training for teachers to update them about the effects of metacognitive strategies on other aspects of learning and the proper use of metacognitive strategies. If the students become able at primary level to appropriately use metacognitive strategies, learning will become easy and their interest will be developed. They will become smart learner because their base will be strong. Significant difficulties, such as the lack of such strategies and the level of instructors' expertise, prohibit a teacher from successfully adopting metacognitive strategies in the classroom. If schools encourage and support metacognitive practises, all teachers will use them. This will surely lead to better teachers and students along with a better learning environment.
  - More researches on the impact of metacognitive strategies on other aspects of classroom are recommended. Researches in other skills of languages are also recommended. Future study perspectives may take into account the cultural diversity of the students and teachers in various communities.

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¥ Research Scholar, Department of Education, Abdul Wali Khan University of Mardan (AWKUM), 23200, Mardan, K.P., Pakistan; [nidaayaz@uop.edu.pk](mailto:nidaayaz@uop.edu.pk)

\* Associate Professor, Department of Education, Abdul Wali Khan University of Mardan (AWKUM),23200, Mardan, K.P., Pakistan; [abdulghafar@awkum.edu.pk](mailto:abdulghafar@awkum.edu.pk)

€ Associate Professor, Department of Education, Abdul Wali Khan University of Mardan (AWKUM),23200, Mardan, K.P., Pakistan; [midrees@awkum.edu.pk](mailto:midrees@awkum.edu.pk)

£ Associate Professor (till April, 2023), Department of Education, Abdul Wali Khan University of Mardan (AWKUM),23200, Mardan, K.P., Pakistan; [dr.amirzaman@awkum.edu.pk](mailto:dr.amirzaman@awkum.edu.pk)

\* Corresponding email: [abdulghafar@awkum.edu.pk](mailto:abdulghafar@awkum.edu.pk)

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## Appendix A

### Interview

1. What kinds of learning activities do you like when compare between past learning activities and present learning activities? Please give your reasons.
2. How well you work with your peers?
3. Whether you like supporting your classmates in the classroom?
4. How do you think about English subject?
5. Does your teacher consider your ideas/opinions in the classroom?
6. What are the activities you expecting from the English teacher?
7. Does you participate in classroom discussion to solve problems
8. Do you like to study English further? Why?
9. Do you get the questions asked by the teachers?
10. What are the factors that hindering you to learn English well?
11. How you obtain answers to questions in class?
12. Why your English performance is not better? How to make it better? Please give reasons.
13. Do you cooperate with other students in pair/groups?
14. Do you found other students cooperative in classroom?
15. Does the teacher provide equal assistance to each student?
16. Do you feel important in the classroom?