**CHAPTER II**

**REVIEW OF RELATED LITERATURE**

* 1. **Theoretical Framework**
     1. **Speaking Instruction**

In this term, the researcher defines the definition of speaking, the components of speaking, the definition of instruction, and the components of speaking instruction.

**2.1.1.1 The Definition of Speaking**

Bailey in Kaharuddin argues speaking is the capability which is express the main what we want to extend. It means that how the people are able to acquit in expressing their ideas. Many research reports show that people use speaking for a variety of different purpose. Some people speak, in conversation for instance, to make social contact with people speak, to establish rapport (understanding), or to build social relationships between two people or more. Some engage on discussion with someone, on the other hand, to speak or express opinions, to persuade someone about something, or to clarify information. In some situations, some speak to give instructions or to get things done. The other use speaking to describe things, to complain about people behavior, to make polite request, or to entertain people`s with jokes and anecdotes. According to St. Asmayanti & Rezcy Amalia, Speaking is

interaction two or more people to give and get idea when they have spoken. It can make students work together in speaking and the students can practice it in realistic setting. As previously started that speaking is the act of saying something orally in which the act is built by a language system containing grammar, vocabulary, pronunciation as well as cultural awareness in a spoken discourse. Speaking not only occurs in social context, but also occurs in class room context where students learnt and practice using a foreign language.

Based on the definition from some experts above, the researcher can conclude that speaking is an oral activity. It is a process of transferring ideas, exchanging the feelings, opinions, and thoughts. Speaking also not only about words or instructions but it also built by the language system namely grammar, pronunciation, vocabulary, fluency, etc.

There are four components of speaking namely: vocabulary, pronunciation, grammar, and fluency.

* 1. **Vocabulary**

Vocabulary is the most important thing to be known or to be mattered for people who want to have skill in speaking. It is very important because the weapon of speaking because the weapon of speaking is vocabulary, without vocabulary we will not be able to say something in this case, vocabulary is the first element of speaking. Vocabulary acquisition is an area of language learning more amenable than most to such techniques as this.

* 1. **Pronunciation**

In this approaches pronunciation attended to be identified with accurate with the accurate production of individual phonemes However, with the advent of communication approaches to language teaching. Pronunciation began to be viewed as integral to communicative competence. Definitely, pronunciation cannot be separate between intonation and stress. Pronunciation, intonation, and stress are largely learnt successfully by imitating and repetition.

* 1. **Grammar**

Grammar in reality, most of student has impotence to express their ideas. To master in grammar, student should be able to increase their grammatical skill. It makes the people more understand about what we are saying. It also makes our English more structural.

* 1. **Fluency**

Fluency can be defined of the fluently or accurately to speak. When the students have capability in this forth element, they will not spend much time to express the message, because they have only small number of pause and “ums” or “errs”. Fluency: This means speaking fluently demonstrating a reasonable rate of speech.

**2.1.1.2 The Definition of Instruction**

Instruction design is a systematic process for designing, developing, implementing, and evaluating (Dick & Reiser, 1989).

Other definition is stated by Romiszowski (1981:4) that instructional means a goal directed teaching process, which is more or less pre-planned. The important thing is that a predetermined goal has been made before the teaching takes place.

Moreover, Smaldino, Lowther, Russell, and Mims (2015) define **instruction** as “any intentional effort to stimulate learning by the deliberate arrangement of experiences to help learners achieve a desirable change in capability” (p. 25).

It can be summarized that instruction is a systematic process for designing, developing, implementing, and evaluating the goal of teaching process to be directed and structured in order to help learners achieve a desirable change in capability.

**2.1.1.3 The Definition of Speaking Instruction**

Therefore, it can be concluded that speaking instruction is an oral systematic process for designing, developing, implementing, and evaluating the goal of teaching speaking in term of transferring ideas, exchanging the feelings, opinions, and thoughts. The instructions also built by the language system namely grammar, pronunciation, vocabulary, fluency, etc.

There are six components of the speaking instruction namely; spaced practice, interleaving, elaborative interrogation, concrete examples, dual coding, and retrieval practice.

* 1. **Spaced Practice**

The benefits of spaced (or distributed) practice to learning is arguably one of the strongest contributions that cognitive psychology has made to education (Kang, 2016). The effect is simple: repetitions spaced out over time will lead to greater retention of information in the long run than the same number of repetitions close together in time (known as massing). Teachers can introduce spacing to their students in two ways. (1) by creating opportunities to revisit information throughout the semester, or even in future semesters; and (2) by helping older students to create their own spaced study schedules.

* 1. **Interleaving**

Interleaving is another scheduling technique that can increase learning efficiency. Interleaving occurs when different ideas or problem types are tackled in a sequence, as opposed to the more common method of attempting multiple versions of the same problem in a given study session (known as blocking). For example, students might interleave different types of problems during learning, which is particularly applicable to subjects such as math and physics (Rohrer & Taylor, 2007). Interleaving can be helpful in other situations that require discrimination, such as inductive learning (Kornell & Bjork, 2008). Another type of interleaving involves the interleaving of study and test opportunities (Trafton & Reiser, 1993).

* 1. **Elaborative Interrogation**

Elaboration involves connecting new information to pre-existing knowledge, and describing things in many details. In practice, elaboration could mean many different things, but the common thread is that elaboration involves adding features to an existing memory. Elaborative interrogation is a specific technique under the umbrella of elaboration that has received ample evidence in terms of effectiveness. This technique is called elaborative interrogation, and involves students questioning the materials that they are studying (Pressley, McDaniel, Turnure, Wood, & Ahmad, 1987). To use this technique, students must ask “how” and “why” questions about the concepts they are studying, and then try to answer these questions – either from their materials, or, eventually from memory (McDaniel & Donnelly, 1996). The process of figuring out the answer to the questions – with some amount of uncertainty (Overoye & Storm, 2015) – can help learning.

* 1. **Concrete Examples**

Providing supporting information can improve the learning of key ideas and concepts. Specifically, using concrete examples to supplement content that is more conceptual or abstract in nature can make the ideas easier to understand and remember (Paivio, Walsh, & Bons, 1994). Concrete examples can provide several advantages to the learning process: (a) they can concisely convey information, (b) they can provide students with more concrete information that is easier to remember, and (c) they can take advantage of the superior memorability of pictures relative to words (see Dual Coding). However, care must be taken when selecting the examples (LeFevre and Dixon, 1986), and many examples will need to be provided so that students can deepen their understanding of abstract concepts rather than focusing on surface features (Gick & Holyoak, 1983).

* 1. **Dual Coding**

More information can be conveyed through a simple illustration than through several paragraphs of text (e.g., Barker & Manji, 1989; Mayer & Gallini, 1990). In addition to being able to convey information more succinctly, pictures are also more memorable than words (Paivio & Csapo, 1969, 1973). Paivio (1971) proposed that verbal and pictorial information is processed through separate channels or information ‘codes’. This dual coding theory (Paivio, 2007) suggests that providing both verbal and pictorial representations of the same information enhances learning and memory. Clark and Paivio (1991) provide a thorough review of dual coding theory and its relation to education. Given that pictures are generally remembered better than words, it is important to ensure that the pictures students are provided with are helpful and relevant to the content they are expected to learn. If students are provided with useful visual examples, this can decrease conceptual errors; however, visual details can at times become a distraction and hinder performance (McNeill, Uttal, Jarvin, & Sternberg, 2009).

* 1. **Retrieval Practice**

What should students be doing when they sit down to study? While tests are most often used for assessment purposes, a lesser known benefit of tests is that they actually cause learning by strengthening the memory of the tested information (Karpicke, Lehman, & Aue, 2014). Testing was shown to strengthen memory as early as 100 years ago (Gates, 1917), and in recent decades there has been a surge of research in the last decade on the mnemonic benefits of testing, or what we now call retrieval practice. The act of retrieval itself is thought to strengthen memory, making information more retrieval later (Roediger & Karpicke, 2006). In addition, practicing retrieval improves higher-order, meaningful learning, such as transferring information to new contexts or applying knowledge to new situations (e.g., Butler, 2010; McDaniel et al., 2013; Smith, Blunt, Whiffen, & Karpicke, 2016). Practicing retrieval is a powerful way to improve meaningful learning of information, and it is relatively easy to implement in the classroom. When students sit down to study, their primary strategy should always involve retrieval practice.

* + 1. **Whole Brain Teaching**
       1. **The Definition of Whole Brain Teaching**

Whole Brain Teaching approach is first introduced in 1999 by Chris Biffle, Jay Danderfin, and Chris Rekstad. The identical term often referred to Whole Brain Teaching is Power Teaching and it is used as a means to help teachers handle the challenging students in classroom and an attempt to optimize the learning process. It is called Whole Brain Teaching approach since it is developed by taking into account the parts of the brain that works during the learning process such as visual cortex (seeing gestures), motor cortex (making gestures), Broca’s area (verbalizing the lesson), Wernicke’s area (hearing a lesson), and the limbic system (giving emotional content to a lesson). When these parts of the brain are activated, it will have impact on the deeper and more lasting of learning (Biffle, 2010: 20). It is believed that when a lear learning process, there is not any mental area left for challenging behavior and in turns will help the learner to fully engage and involve in the learning process.

In definition, Whole Brain Teaching approach is a set of strategies that combines the best attributes of Direct Instruction and Cooperative Learning to create an engaging classroom environment for students and teachers and it combines both classroom management and sound teaching pedagogy (Macias and Maciasin Biffle, 2010: 179-181).

It can be concluded that whole brain teaching is a set of strategies that combines the best attributes of direct instruction and ccoperative learning which is optimize the parts of the brain to work during the learning process such as visual cortex (seeing gestures), motor cortex (making gestures), Broca’s area (verbalizing the lesson), Wernicke’s area (hearing a lesson), and the limbic system (giving emotional content to a lesson).

* + - 1. **The Principles of Whole Brain Teaching**

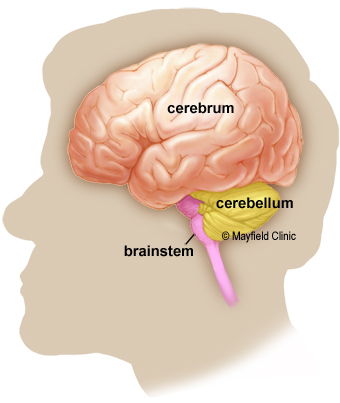
The brain is composed of the cerebrum, cerebellum, and brainstem.

**Cerebrum:** is the largest part of the brain and is composed of right and left hemispheres. It performs higher functions like interpreting touch, vision and hearing, as well as speech, reasoning, emotions, learning, and fine control of movement. The cerebrum is divided into two halves: the right and left hemispheres. They are joined by a bundle of fibers called the corpus callosum that transmits messages from one side to the other. Each hemisphere controls the opposite side of the body. If a stroke occurs on the right side of the brain, your left arm or leg may be weak or paralyzed.

Not all functions of the hemispheres are shared. In general, the left hemisphere controls speech, comprehension, arithmetic, and writing. The right hemisphere controls creativity, spatial ability, artistic, and musical skills. The left hemisphere is dominant in hand use and language in about 92% of people.

**Cerebellum:** is located under the cerebrum. Its function is to coordinate muscle movements, maintain posture, and balance.

**Brainstem:** acts as a relay center connecting the cerebrum and cerebellum to the spinal cord. It performs many automatic functions such as breathing, heart rate, body temperature, wake and sleep cycles, digestion, sneezing, coughing, vomiting, and swallowing.



***Figure 1.*** *Brain anatomy.*

The cerebral hemispheres have distinct fissures, which divide the brain into lobes. Each hemisphere has 4 lobes: frontal, temporal, parietal, and occipital. Each lobe may be divided, once again, into areas that serve very specific functions. It’s important to understand that each lobe of the brain does not function alone. There are very complex relationships between the lobes of the brain and between the right and left hemispheres.

### Frontal lobe

* Personality, behavior, emotions
* Judgment, planning, problem solving
* Speech: speaking and writing (Broca’s area)
* Body movement (motor strip)
* Intelligence, concentration, self awareness

### Parietal lobe

* Interprets language, words
* Sense of touch, pain, temperature (sensory strip)
* Interprets signals from vision, hearing, motor, sensory and memory
* Spatial and visual perception

### Occipital lobe

* Interprets vision (color, light, movement)

### Temporal lobe

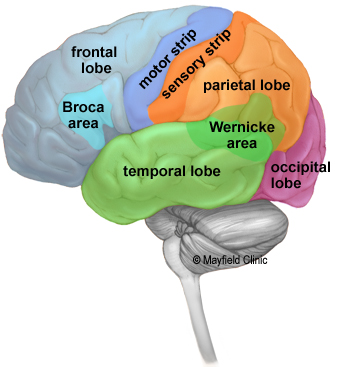
* Understanding language (Wernicke’s area)
* Memory
* Hearing
* Sequencing and organization

In general, the left hemisphere of the brain is responsible for language and speech and is called the "dominant" hemisphere. The right hemisphere plays a large part in interpreting visual information and spatial processing. In about one third of people who are left-handed, speech function may be located on the right side of the brain. Left-handed people may need special testing to determine if their speech center is on the left or right side prior to any surgery in that area.

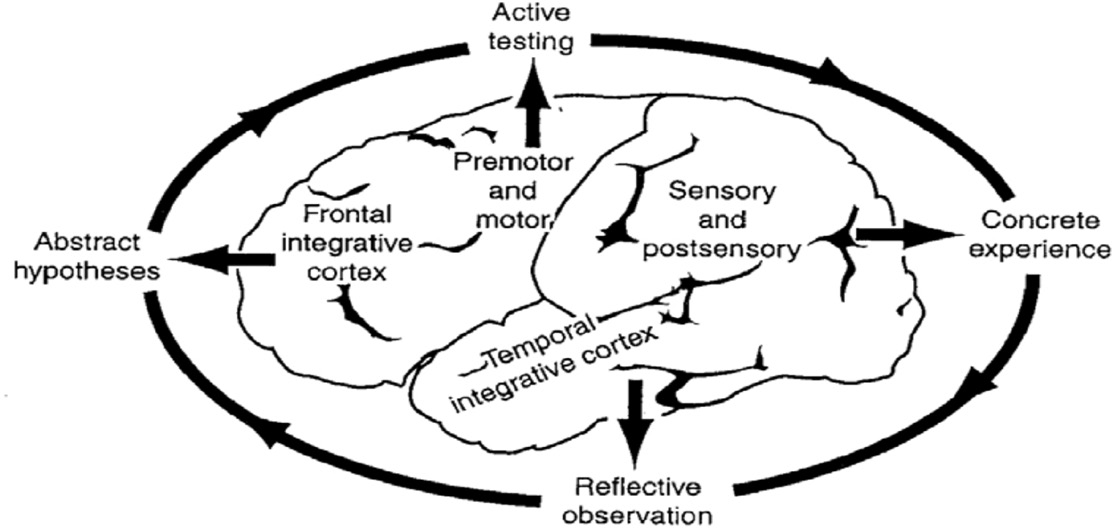
Aphasia is a disturbance of language affecting speech production, comprehension, reading or writing, due to brain injury – most commonly from stroke or trauma. The type of aphasia depends on the brain area damaged.

**Broca’s area:**lies in the left frontal lobe. If this area is damaged, one may have difficulty moving the tongue or facial muscles to produce the sounds of speech. The person can still read and understand spoken language but has difficulty in speaking and writing (i.e. forming letters and words, doesn't write within lines) – called Broca's aphasia.

**Wernicke's area:**lies in the left temporal lobe. Damage to this area causes Wernicke's aphasia. The individual may speak in long sentences that have no meaning, add unnecessary words, and even create new words. They can make speech sounds, however they have difficulty understanding speech and are therefore unaware of their mistakes.



***Figure 2.*** *The Brain Lobes*

The principles of whole brain teaching is followed in experimental learning with the application of principles such as patterning, parallel processing, and challenges to enhance learning (Phillips, 2005).

**Figure 3.** *The Experiential Learning Cycle and Regions of the Cerebral Cortex (Zull, 2002)*

This process of experiential learning is related to the process of brain functioning. “Put into words, the figure illustrates that concrete experiences come through the sensory cortex, reflective observation involves the integrative cortex at the back, creating new abstract concepts occurs in the frontal integrative cortex, and active testing involves the motor brain. In other words, the learning cycle arises from the structure of the brain” (Kolb and Kolb, 2005; Zull 2002).

* + - 1. **The Design of Whole Brain Teaching**

In the design, the researcher defines the term of objectives of teaching by using whole brain teaching, the role of teacher, students, and materials, media and the learning activities.

The objectives of teaching by using whole brain teaching are Whole Brain Teaching promotes a high-energy, hyper-focused method where teachers use game-like challenges, key words, and motivational methods, while eliciting continuous spoken responses from their students to keep them fully engaged every minute.The premise behind whole brain teaching strategies is that it motivates areas of the brain that direct instruction often doesn’t reach. When we use whole brain teaching in the classroom, it forces both sides of the brain to work together. The idea is that the motor cortex and the prefrontal cortex work together to control our movements and thoughts. When we use whole brain teaching strategies, we are stimulating both of these areas at the same time. This helps students to better understand and remember information.

This type of learning increases a student’s ability to problem-solve, think creatively, and remember information for longer periods of time. By utilizing a more interactive form of instruction, you continually are grasping the attention of students and it helps teachers with their classroom management. when both sides of the brain are working together, it’s more likely that a student will be engaged in what they’re learning. When students are actively engaged in the learning process, they tend to naturally follow classroom rules because it leaves less to chance (or their own “interpretation” of right versus wrong).

Harmer (2007b) classify roles of teacher in teaching speaking, as follows:

1. Prompter: The teachers provide the students with discrete suggestions, leave them to struggle by themselves, and give them chunks not words, without disrupting the discussion.

2. Participant: The teachers participate in the discussion by introducing new information and by ensuring the continuation of students’ engagement. The main point is the teacher should not monopolize the conversation.

3. Feedback provider: The teachers can give some feedbacks by giving helpful and gentle correction and by telling the students about their performance. Besides that, they should avoid over-correction, since it might lead to students’ reluctance to continue the dialogue.

4. Assessor: The teachers can write down some written samples of languages produced by students, or memorize some of it, then tell it to their students.

5. Observer: The teachers should observe the class speaking activity and find out what makes the activity breakdown.

6. Resource: The teachers have to provide some tools to improve their students’ oral competence.

7. Organizer: The teachers manage the classroom to set the activities and get the students engaged.

In one teaching activity, the teachers might play more than one roles in the classroom. They can be a prompter in the middle of speaking of activity then in the end of the class they will play a role as feedback provider.

Moreover, According to (David Nunan, 1989) This analysis demonstrates the wide variety of learner roles which are possible in the language class. These include the following:

a) the learner is the passive recipient of outside stimuli;

b) the learner is an interactor and negotiator who is capable of giving as well as taking;

c) the learner is a listener and performer who has little control over the content of learning;

d) the learner is involved in a process of personal growth;

e) the learner is involved in a social activity, and the social and interpersonal roles of the learner cannot be divorced from psychological learning processes;

f) Learners must take responsibility for their own learning, developing autonomy and skills in learning-how-to-learn.

Furthermore, the roles of instructional material from the printed material are :

(a) a resource for presentation materials (spoken),

(b) a resource of actively for learner practice and communication interaction,

and (c) a resource of stimulation and ideas for classroom activities.

Furthermore, The presence and availability of teaching media are expected to help teacher and students to solve learning obstacles. Media have four functions. They are as follows;

1) Media can attract students’ attention more so that it can stimulate learning motivation..

2) Media can make subject matter clearer and more meaningful so that it is easily understood by the students and enable them to master the expected competence better.

3) It can make learning method more various not merely verbal communications through teacher’s words so that students does not get bored and the teacher does not run out of energy.

4) Media can make students do more learning activities because they do not only listen to teacher’s explanation but also have other activities such as observing, demonstrating and so forth.

Media are aid tools which are necessary for English learning. Media can be used to help to simplify learning process of language and perfect it, reduce the use of mother tongue or first language, arouse students’ learning motivation and interest, explain new concept in order that students can understand without difficulties and misunderstanding, equalize perception; moreover the new concept has ambiguity, improve English learning quality and make learning process more interesting and interactive.

Whole brain teaching covers spoken and short instructions for learning activities for the students in the learning process as well as some rules regarding students’ expected behaviorin classroom. The education process includes planning, organizing, directing, controlling and evaluating (Suryosubroto, 2010).

Planning is an activity on deciding what will be achieved, how long and how to achieve it, how many peoples to be involved, as well as how much is the cost to spend. The planning is composed before it is proceeded. In this activity, besides formulating the goals, it also includes the time limit as well as the steps to be passed as to achieve the goals (Rohman dan Amri, 2012).

Organizing is defined as an activity in setting up some tasks for each persons involved in education. Therefore, since education involves a number of people and a number of tasks to be accomplished. The setting up of the task should be conducted by each organization members. The coordination means that there should be a control so that the task can be conducted according to the stated rules. Each person should know their tasks, than there will be no overlap. In the educational task, time management is a significant issue, what should be in the first list or in the next list. The coordination has a role in integrating the goal of separated activities to reach the goals efficiently and effectively.

Directing is conducted to ensure the activities can be in line with the stated goals to avoid some distortion and inefficiency. All parties involved in education should remember the goals consistently. To ensure that the process is in accordance with the determined goals, there should be some personnels who are good in leadership, i.e. to persuade people to work well as to reach the goals. The directing includes actuating. Actuating in an organization is a whole process in motivating employees or students. Actuating has an important position in order to realize a certain goals of organization.

Monitoring or controlling is an activity or efforts to find how far the educational activities have met the goals as well as to find the problems encounterd within the practice. Koonz (1980) states that, “Controlling is the measuring and correcting objective of subordinates to assure that events conform to plans”. Monitoring is conducted to discover whether the goals have been achieved or not. Monitoring is aimed at gathering the data on the process of achieving the goals. Monitoring is also used to find the problems encountered during the practice. Monitoring, basically, is data collection towards the practice in educational process as to achieve the goals. It is whether the practice has been well conducted, whether there is any distortion or whether there is any weakness in the practice.

Assessment is the activity to find whether the determined goals in the planning have been achieved or not. If the goals cannot be achieved; what factors behind it, what problems encountered within the process. The result can be used to revise the future performance. The assessment is not only conducted towards the result or performance, but also towards the educational process. The assessment or evaluation is the final point of an activitiy to know whether it is succeed or not. The result can lead to a better plan.

* + - 1. **The Procedure of Whole Brain Teaching**

Whole brain teaching covers 7 procedures known as the Big Seven applicable to almost any subject and any level. They are The Organizer (five classroom rules), The Motivator (The Scoreboard), The Attention-Getter (*Class-Yes*), The Whole Brain Activator (*Teach-Okay*), The Involver (*Switch*), The Focuser (*Hands and eyes*), and The Class-Unifier (Mirror). The Big Seven in this paper is ordered according to its relevance to the implementation in the classroom settings and explained as follows:

1. The Organizer: Five Classroom Rules

Teaching in a chaotic classroom where there is no rules to follow and there is no consequences of any negative behavior might lead to ineffective learning. Thus, it is necessary for teachers to have their own set of rules to help them manage their students. This Organizer principle is used to create the effective environment for learning to take place. Classroom management is the focus of this principles since it deals with the students’ behaviour in the classroom.

Though flexible to every teacher’s need, the five main classroom rules are 1) Follow direction quickly, 2) Raise your hand for permission to speak, 3) Raise your hand for permission to leave the room, 4) Make smart choices and 5) Keep your dear teacher happy. Follow direction quickly is about maximizing the time allotment. The students have limited time to think of any disruptive ideas when they know exactly what to do and how to do it. Raising hands is about giving chances for every students to speak up their mind. The students need also to learn how to make smart choices regarding their actions and behaviors inside and outside of classroom. By keeping the teacher happy in the fifth principle, it covers the disrespect behaviors of the students when they try to disrupt the learning activity. Implementing these rules in day-to-day basis in the classroom will engage whole brain in hearing, seeing, saying, doing, and feeling the principles resulting in an orderly classroom.

It is important to introduce these rules as soon as possible since it will be used during the whole academic year. The use of gestures in introducing each rules can also help the students to remember them better. The use of posters pasted on the classroom walls which depict the rules is also an option to remind the students of the rules.

1. The Motivator: The Scoreboard

To cover the issue if some of the learners are not following the classroom rules, a scoreboard system is used as the motivator. A scoreboard indicating the students’ positive and negative behaviour can motivate the students to behave more positively during the learning process. The teacher can use a smiley or a frowny icons for the students behavior and they can also enlivening the marking routine by saying *“Mighty oh yeah”* or *“Mighty Groan”*. This marking routine makes the students feel a small, positive or negative emotional jolt thus activating the reward circuitry in their brain limbic system (Biffle, 2010:23).

1. The Attention Getter: *Class-Yes*

The prefrontal cortex of the brain controlling decision making, planning and focus of attention is activated during this activity where the teacher use the attention-getter *Class-Yes* (Biffle, 2010:22). The teacher says *“Class!”* and the students must answer it with *“Yes!”*with the same style. Thus, when the teacher says *“Class!”, “Class!”, “Classity!”, and “Class!.* The students should response with *“Yes!”, “Yes!”, “Yessity!”, and “Yes!”*. The variations around the volume and the tone of the voice of the teacher and the use of attention-getting gestures can make the activity more fun and motivating for the students. This attention getter prepare the students of the instructions and help them to focus during the learning process.

1. The Whole Brain Activator: *Teach-Okay*

Before applying this principle, the teacher needs to make sure that the students have their own partners. Once done, the teacher gives instructions or mini- lecture of the lesson and uses *Teach-Okay* to instruct the students to teach their peers about what they are stating. The teacher says *“Teach”* and the students responses with *“Okay”*. Then the students change their sitting position with their friends and explain briefly about what the teacher has previously talk about (lesson or instructions). During this activity, five parts of brain namely; visual cortex (seeing gestures), motor cortex (making gestures), Broca’s area (verbalizing the lesson), Wernicke’s area (hearing a lesson), and the limbic system (giving emotional content to a lesson) are activated since the students are allowed and even required to use listening and speaking gestures.

The repetitive nature of the activity helps the students to understand and memorize the lesson better. They will continue repeating teaching their partners in turns if the materials have been explained until the teacher use the attention-getter (Biffle, 2010: 23). Additionally, the cooperative learning settings between each pairs of the students help them to be more active and engaged in the session. However, it is essential for the teacher to divide the lessons in chucks to make the students easier in rehearsing the materials.

1. The Involver: *Switch*

*Switch* is an instruction for students to switch partners in explaining the more difficult materials during *Teach-Okay* session. The teacher says “*Switch”* when the students doing *Teach-Okay* session and the students automatically switch their roles in rehearsing the lesson and listening to their partner.The listeners activates part of the brain called Wernicke and the speakers activates their Broca. Each responsible for hearing and verbalizing a lesson (Biffle, 2010: 24). *Switch* is especially powerful for English learners where they need a lot of time to practice acquiring new language, most comfortably in the privacy of conversations with a friend (Biffle, 2010: 82). The students have the opportunity to train their listening and speaking skills during this process.

1. The Focuser: *Hands and Eyes*

When the teacher wants to make an important point at the learning activity, after getting the students’ attention. The teacher says “Hands and Eyes” while making a gesture of bringing his or her hands together and asks the students to say the same words and to do the same gesture. The students prefrontal cortex as aforementioned above takes control of brain activity focusing the visual cortex and the auditory on the teacher’s lesson (Biffle, 2010: 24). It is important to check upon the students’ comprehension of the tasks using this principle particularly when the students has completed the *Teach-Okay* and *Switch* sessions.

1. The Class-Unifier: Mirror

Teacher uses mirror activity in which the students mimic the teacher’s gesture while explaining a lesson or giving instructions. It is a class-unifier since all of the students are required to follow the teacher’s gestures. The gestures used are casual (hand motions you naturally use when speaking), graphic (gestures that tell a story or describe a process), memory (gestures that are unique for each core concept or stated standard) (Biffle, 2010: 82). By mimicking the teacher’s gestures, the students are activating their mirror neurons when people learn by mirroring gestures and activity of others.

The attention given to both students’ behaviour and classroom discourse embedded in the seven principles is expected to help students to learn more effectively during the learning process. It has the benefits not only for the teacher but also for the students. The benefits in using Whole Brain Teaching approach for teachers are the positive behaviour reinforcement, memory, retention, and students’ engagement (Biffle, 2010: 181).

The teacher motivates the students by having a scoreboard to check upon the application of the five classroom rules and memory retention is managed through repetition in *Teach-Okay and Switch Session*. Students’ engagement can be acquired when the teacher uses *Class-Yes, Hands-Eyes, and Mirror Sessions*. On students’ behalf, there are three main reasons they can benefit from Whole Brain Teaching i.e. motivation, student-centered learning, and application of learning (Biffle, 2010: 185). Students are motivated since they have more empowering role in the classroom in which they teach their fellow classmates. Palasigue (2009) conducted a research on Whole Brain Teaching Strategies to create a more engaged learning environment in which in line with the above benefits. His research shows that the students have become more engaged in every lesson on a day to day basis and the accountability that is given to them through the *“Teach-Okay Sessions”* are able to motivate them to learn enthusiastically.

As stated above, that the *Switch* principle of Whole Brain Teaching is powerful for language learners in developing their listening and speaking skills, therefore the writer embeds some principles of this approach in the teaching of English speaking skills.

* + - 1. **The Advantages and Disadvantages of Whole Brain Teaching**

According to Bruer (1999), there are a number of positive attributes of brain-based learning. Educators of brain-based learning incorporate constructivist models for learning and teaching; student engagement and active involvement in their own learning; teachers teaching for meaning and understanding, rather than for rote memorization; teachers creating classroom environments that are low in threat, yet high in challenge; teachers immersing their students in complex learning experiences; teachers using research to inform instructional practice; and teachers judging what, and how research should be applied to their classrooms.

Laxman and Chin (2010) agree with Winters’ findings. They believe understanding the brain can potentially alter the nature of education, and transform traditional classrooms into interactive learning environments. They state, “Recent neuro-cognitive research suggests that the richness of early learning experiences affects the physical development of the brain and be a major cause of intellectual development” (p. 1).

The Macias (2013) also discuss WBT’s benefits for teachers and students. Teachers benefit from positive behavior reinforcement, memory retention, and student engagement. Students’ benefits include motivation, student-centered learning, and application of their learning.

According to Biffle (2013a), “Most challenging kids genuinely want to be part of the classroom environment; this is why they work so hard, and continuously, to get everyone’s attention” (p. 2). Biffle states, “If a student’s whole brain is involved in learning, there isn’t any mental area left over for challenging behavior” (p. 2).

However, if Whole Brain Teaching is not delivered correctly, it seems like it could become rote drills. The students cannot get caught up in the goofiness of the teaching method and forget the importance of what they are doing. Teacher training, personal attitude, and direction to students can fix this. Students are encouraged to respond in preprogrammed phrases and words rather than independently-thinking out responses. The teacher must make it clear when responses are required and when higher-order thinking is what’s called for. Shy students or those who are more reserved may be uncomfortable with so many hand and body gestures and the need to interact so often with classmates. Mostly this passes, but be aware of those students who have difficulty.

* 1. **Previous Relevant Reseaches**

The first related research was conducted by Syty Asmayanti in her research about Improving Students` Speaking Ability by Using Whole BrainTeaching Method (WBT) at the First year students` of SMPN 1 Baraka. Based on the research The result of this research indicated that the improvement of the students’ speaking accuracy was 6.5 classified as good and the improvement of the students’ speaking fluency was 6.9 classified as good. It could be stated that the students’ speaking ability through the use of Whole Brain Teaching (WBT) Method at the first year students’ of SMP Negeri 1 Baraka improved to good level after test in the second cycle.

The second research entitled “Teaching Speaking Ability Using Whole Brain Teaching Method at Junior Level (Young Learners) Students of ‘Speak Up’ English Course in Bandung” done by Nurhasanah (2013). The objectives of the study were were to find out whether or not teaching speaking ability using WBT method was effective to improve students’ speaking ability and to find out the students’ response toward teaching speaking ability using WBT method. The results of the study were teaching speaking ability using WBT method was effective to improve the students’ speaking ability and 93% of students agree that they like the use of WBT method in the instructional process. The similarities between her study with the researcher’s study is in independent and dependent, the independent variable was WBT method and the dependent variable was about speaking, but the difference was the population of the study. In Nurhasah’s study, the population was junior level (young learners) students of ‘Speak Up’ English Course while in researcher’s study used the eleventh grade students in a vocational high school.

The third research was conducted by Emyus et al., (2020) create a research with the title “The Influence of Whole Brain Teaching (WBT) to the Motoric and Linguistic Skills of Preschoolers” show the results of their research namely: (1) there are influences of motoric and linguistic skills between students learning using WBT and group model, (2) there are differences of motoric and language skills between students having visual literacy high and visual literacy low, and (3) there is interaction between WBT and visual literacy towards children’ motoric and language skills.

The fourth research was conducted by Muliana Mansur said that, WBT is one of learning model that can increase students' vocabulary with its strategies. It is proven by students' response of it. Based on the results of questionnaire, most of students had positive response toward WBT as learning model. Positive response that is given by students toward WBT also influences the results of teaching and learning process.

The fifth research was conducted by Dini Aulia Dwintan in her Research about improving the Eleventh Grade Students’ Speaking Achievement through Whole Brain Teaching Method at SMK Farmasi Bina Medika Palemban. Based on her research she found that the coleration is The results of this study showed that (1) that the p-output (Sig. 2 tailed) was 0.000 and t- obtained was 14.376 at the significance level at 0.05 in two tailed testing with df= 28. It means that there was significant improvement in students’ speaking achievement after the students were taught by using Whole Brain Teaching method, and (2) the t- obtained was 3.387 and p-output was 0.01 at the significance level 0.05 in two tailed testing with df= 56. It means that there was significant difference in students’ speaking achievement between who were taught by using Whole Brain Teaching method and those who were.

* 1. **Conceptual Framework**

Speaking is a productive skill that should be mastered by the students. Providing a good speaking instruction through whole brain teaching can help the students to enhance their speaking components proficiency. The speaking instruction should present the students’ need. Therefore, they will enjoy the speaking activities at the classroom. Based on the theories, the speaking components and the procedure of whole brain teaching as the basis of this developmental research. The conceptual framework of this research can be seen in figure 1.

WHOLE BRAIN TEACHING COMPONENTS

SPEAKING COMPONENTS

SPEAKING INSTRUCTION

**Figure 1.** *Conceptual Framework*