CHAPTER II

REVIEW OF LITERATURE

The review of related literature will be discussed under three headings: (1) theoretical background of critical thinking and (2) learning approaches.

2.1 Theoretical background of critical thinking

2.1.1 Definitions of critical thinking

Critical thinking has been defined differently by various experts and authors. Lewis (1994) describes critical thinking as the individual's own perspective to something, not an over-generalized or another person's view. Thus, for Lewis, critical thinking is to think for oneself. Ho (2002) says that critical thinking is a judgement of adequacy and validity by comparing the ideas, knowledge and values of others with that of oneself. Furthermore, Surasak (2001) defines critical thinking as the ability to separate thoughts and evaluate them. It allows us to see the positive side of things and apply them.

Dewey (1933), one of the first authors to write about critical thinking, defines critical thinking as a means to give reasonable judgement and

exercise an open mind. According to Dewey, critical thinking involves students doing things and thinking about the things they are doing. Also, Jones and Ratcliff (1993) state that critical thinking is thinking about one's own thinking, that is, metacognition[1]. Thus, one is aware of what one is thinking while performing a task.

According to Scriven and Paul (1996) critical thinking is applying, analyzing, synthesizing, reasoning and evaluating information gathered from observation, experience, reflection and communication. Angelo (1995, p.6) has a little different view of critical thinking. According to him, critical thinking is the use of higher order thinking skills such as analysis, synthesis, problem recognition, problem solving, inference and evaluation. The Center for Critical Thinking (1996) has defined critical thinking as "the thinking that assesses itself" (p.2). Also, the Center explains critical thinking as recognizing one's strengths and weaknesses in thinking and improving the weaknesses.

An another Thai expert on critical thinking, Soraj (2001) states that critical thinking is "an independent, logical, rational thinking free from the superstitions and the absolute authority of texts and teachers" (p.3).

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[1] A process where one reviews his/her learning process.

Furthermore, he says that critical thinking is used to defend or evaluate our own beliefs in order to revise them. It requires us to apply critical thinking questions to all claims, including ours. In addition, the National Educational Committee of Thailand defines critical thinking as reasonable and detailed thinking that has been considered through the related variables, the positive and the negative side of the issue and its real use. Also, critical thinking, according to Norris and Ennis (1989, p.1), is reasonable and reflective thinking that is focused upon deciding what to believe or do.

2.1.2 Components and characteristics of critical thinking and critical thinkers

According to the National Educational Committee, higher order or complex thinking, consists of many thinking skills. Some of them are drawing conclusions, analyzing, integrating, organizing, construction, finding patterns, prediction, establishing criteria and applying. In addition, Surasak (2001) states that critical thinking is the ability to think analytically and it should be a component of the syllabuses in all the levels of education in Thailand.

Also, Jones and Ratcliff (1993) state eight characteristics of critical thinking: "asking questions, defining a problem, examining evidence, analyzing assumptions and biases, avoiding emotional reasoning, avoiding oversimplification, considering other interpretations and tolerating ambiguity" (p.10). In addition, Beyer (1995) explains there are four essential aspects of critical thinkers. First, critical thinkers are open-minded. They take other opinions into account before developing their own. They view things from different points of view. Second, critical thinkers use criteria to judge something before making arguments. Third, critical thinkers are able to reason by examining logical relationships. They think in a step by step procedure. Finally, critical thinkers make use of many procedures like asking questions and making judgements before concluding their viewpoints.

The National Educational Committee defines a critical thinker as a person who can solve problems and make decisions correctly. In addition, it is stated that a critical thinker is able to think in a systematic manner by setting goals in a right direction, clearly defining the thinking objectives, considering opinions about issues from a wide perspective, analyzing and selecting information for thinking, evaluating information,

applying reasoning in considering information and expressing opinions about the issues.

Also, Facione and Facione (1996) define a critical thinker as the person who engages in analysis, interpretation, evaluation, inference, explanation and metacognitive thinking. These are the characteristics of an adult critical thinker. However, a young learner would not be able to 'explain' in a foreign language or involve in metacognition. A young learner is not yet proficient in the target language to use it for explanation.

2.1.3 Levels of critical thinking

The higher order thinking levels of Bloom's taxonomy are accepted as critical thinking levels by most authors. There is a list of sub-skills that can be categorized under each higher order skill (Bloom, 1960). Anderson and Krathwohl (2001) also state some sub-skills of the levels of higher order skills. Some examples of thinking sub-skills in each level from both of the above sources are:

2.1.3.1 Knowledge: recall of facts and recognition of information. Examples of sub-skills are 'define', 'identify', 'label' and 'wh-questions'.

2.1.3.2 Comprehension: interpreting, translating or explaining something. Examples of sub-skills are 'select' and 'match'.

2.1.3.3 Application: applying information to new situations. Examples of sub-skills are 'show how', 'apply', 'How?', 'Why?', 'categorize' and 'order'.

2.1.3.4 Analysis: breaking down parts of something and relating parts to whole Examples of sub-skills are 'distinguish', 'classify', 'compare', 'contrast' and 'differentiate'.

2.1.3.5 Synthesis: combining elements into a new pattern. Examples of sub-skills are 'choose', 'create', 'combine', 'solve', 'design', 'develop' and 'what would you have done in this situation?'

2.1.3.6 Evaluation: making judgement of good and bad, right and wrong from a set of criteria and stating why. Examples of sub-skills are 'evaluate', 'rate', 'judge', and 'choose why?' and 'which is best?'

Beauchamp (1956) says that 'conceptualization', 'generalization', 'problem-solving' and 'giving reasons' are higher order mental processes. According to Beauchamp (1956), conceptualization is breaking down the parts and then combining them again so that they are related.

Generalization is organizing some facts that are applicable to many kinds of specific situations. Problem solving is to create something new and different by removing the barrier on the way in order to reach the goal. Finally, giving reasons is combining previous experience in such a way as to reach a new goal. Jean and Gail (1992, p. 36) state that a child centered curriculum for young children includes problem solving activities like matching, sequencing, classifying, making surveys and investigations. Investigations, here, includes higher order skills like predicting, counting, measuring, comparing, classifying, making surveys, describing process and sequencing.

Greene (2001) states that the higher order skills of 'knowledge' and 'comprehension' are classified as familiarization stages and 'application', 'analysis', 'synthesis' and 'evaluation' are classified as problem-solving stages. In the beginning stages, students need to acquire knowledge about structures and vocabulary before they could apply that knowledge with critical thinking. After students get the 'knowledge', they can use the levels three to six of the Bloom's taxonomy for problem solving. Greene (2001) supports the fact that problem solving is a higher order thinking skill.

Wink (cited in Duldt, 1997, p.5) describes the use of questioning as a way to foster critical thinking. Like critical thinking skills, questions that foster critical thinking also have levels. Evertson (1997) suggests two kinds of questions. The first are convergent questions that require one single correct answer. The second are divergent questions where different kinds of responses are acceptable. These kinds of questions allow students to explore and think critically. Wink also presents two other ways of categorizing questions, that is, low-level and high level questions. A low level question requires students to recall and a high level question requires students to "compare, describe, infer, hypothesize, analyze, making judgements and evaluation. In other words, it can be said that the high level questions foster critical thinking. However, low level questions have their significance in that they are a foundation to the high level question. Richard and Morgan (cited in Evertson, 1997) state that teachers tend to ask more low level questions than high level ones and students lose opportunities to learn to think critically.

2.1.4 Research related to critical thinking

Clark (1997, pp. 30-40) says that critical thinking can be developed if children are in the right environment and at the right age to develop it.

It is not an inborn ability. She adds that learning new critical thinking skills requires a lot of practice and then it will be rewarding. Montessori (1967) and Alvarez (1993) believe that if something is taught at a young age, it would bring out best results. Alvarez (1993) states that in order to be a bilingual a child should start learning the languages at least at the age of 5. In Montessori schools worldwide, students are taught critical thinking skills and this has yielded good results. Students are able to solve problems within lesser time, when compared to students at other schools (Montessori, 1967). The National Council of Research and Educational Laboratory (Fennimore and Tinzmann, 1990) emphasizes the use of critical thinking in all the areas of the curriculum. The curriculum emphasizes that by the age of 16, students in the United States of America should possess basic and thinking skills.

Kosin (2001) states that critical thinking equips students with the skills that are needed for a democratic society and competitive business. Wipawee (2000) says that, according to his survey, Thai students have not practiced using the critical thinking skills necessary for them to live in a democratic society. Students complain that the child-centered methodology currently being supported by the government is not appropriate for them and they are not learning anything from it. In order

to make it effective, the government has to enforce the methodology from earlier levels of schooling. Likewise, for students to be able to think critically, they should be taught to think from childhood in order to provide them the right environment to prosper in. Bloom (1960) states that an enriched environment that facilitates critical thinking accelerates the development of students before the age of four years by 50% and can accelerate the development of students before eight years of age by 80%. The result before the age of four is only 50% because the result is more observable as the students grow older.

2.1.5 Teacher characteristics for teaching critical thinking to young students

Teaching style and teaching strategies are key factors to promote critical thinking. According to Clark (1997), teachers who teach thinking skills should encourage students to participate in more thinking activities and not only let students memorize. This can be done by asking open-ended questions so students will learn how to use knowledge to try out their ideas. Furthermore, the teachers should emphasize on correcting rather than simply grading. Also, students should be taught researching skills along with thinking skills. Finally, students should be encouraged

to express their feelings and opinions. This is very difficult, especially for Thai students, who have not been encouraged to express their opinions in the classrooms. (Wipawee, 2000)

The above practices encourage the teacher to become a facilitator by developing critical thinking skills. In addition, Clark (1997) mentions that to teach critical thinking skills, the teacher should play several roles. The teacher should be a researcher (ask questions), a planner (facilitate students to work their own way to find out the answers or create something), an adviser (help students to get used to the thinking process), an evaluator (help students to overcome their barriers), an analyzer (guide students to think on the right track) and a decision maker (ask questions to find out the amount of thinking they use).

A teacher of young children should know what to teach them. Because children are "natural language learners" (Donato, 2002), they do not need grammar. They understand the target language naturally. They like to speak and mimic a foreign language. This means the teacher does not need to give extensive lessons in grammar. This would cause boredom for the students. Instead, the teacher should speak naturally (Donato, 2002). The teacher can choose to point out a linguistic feature while teaching a lesson (Jean and Gail, 1992, p.27). In the case of young

children, this means the pronunciation, spelling, etc. Furthermore, Jean and Gail (1992, p.26) state that students improve their listening ability if the teacher conducts the class in English. They also improve their pronunciation skills because young children are able to reproduce sounds and rhythms easily (Jean and Gail, 1992, p.28). In addition, Jean and Gail (1992, p. 31) state that teaching is facilitating discovery, not presenting knowledge where students are drawn into a broader view of the world, not only monocultural. When students learn to observe and think, along with practicing new sounds and rhythms, they are able to learn a new language faster (Jean and Gail, 1992, p. 33).

According to Donato (2002), in order to be an efficient teacher, a teacher of young learners should have a knowledge of the content (know the target language proficiently), knowledge of teaching (make oneself comprehensible to the students) and knowledge of students (understand how students learn languages).

The teacher should aim for the students to think, not only learn a language. Clark (1997) states that teachers should present alternatives to the students rather than only one option to the students. This makes them develop alternative thinking skills. It allows them to make decisions. Furthermore, Clark mentions that choice making or decision making is a

step after problem solving. It can be developed in young learners and gives them a sense of competency and achievement so that they love to learn. Concerning this, Getswicki (1995, p.82) says that young children should be encouraged to make decisions (choices) and to plan. Plan, here, would probably be short-term planning because children of this age are unable to plan long-term, as stated earlier.

Concerning the amount of learning that students should master, Clark (1997) adds that teachers should aim for students to be thinkers, not only high achievers of grades. A gifted child or a thinker is able to generalize, work with abstract ideas and synthesize relationships, whereas, a high achiever is good at 'knowledge' and 'comprehension' level learning. This means that the higher order thinking skills of 'synthesis' and 'analysis' are used by a thinker.

Dewey (1933, p. 105) suggests that teachers should focus on the ability of individual pupils and allow them to communicate freely with each other about their experiences and let them teach each other. Also, students should feel proud of their successes. Nunan (1994) says that it is crucial that the teacher praise the students or display the students' work in public so that they can feel their success. Finally, Lemlech (1998, p.15)

states that the teacher should teach the students what they are ready to learn.

The final characteristic of the teacher is to know how to control the classroom . Rogers (cited in Bernard, 1972, p.56) suggests that misbehaving children are mostly those who dislike themselves. This means that the children, whose psychological needs are not satisfied, express themselves through misbehaving in the classrooms. Hence, the teacher should strive to satisfy the students' needs by observing their participation and performances. The students whose needs are satisfied are those who pay attention, unless the task takes more time than his/her attention span. Jean and Gail (1992, p. 40) adds that students like to know the acceptable and non-acceptable behaviors in the classroom in order to know where they stand. So, the teacher should specify these in order to lessen confusion and increase their sense of security. Another important characteristic of a good teacher is that he/she should continually praise and encourage them for their work. This would also decrease the classroom misbehavior.

With the above qualities, the teacher can facilitate young students to have critical thinking skills so that they can think reasonably, problem solve and make decisions for the rest of their lifetime.

2.1.6 Young learners and critical thinking

Research related to young learners or small children covers various aspects, that are, psychological factors affecting young learners, developmental stages and abilities of young learners, curriculum for young learners and evaluating critical thinking of young learners.

2.1.6.1 Psychological factors affecting young learners

Psychological developments of young learners differentiate their learning from that of adult learners. Young children are less distanced from the age when they acquired their mother tongue naturally (Jean and Gail, 1992, p.24). This means that they still possess the natural strategies that they have used to acquire their mother tongue. They come to know psychologically that different forms (languages) serve the same communicative functions as their mother tongue. Students' interests, attitudes, values, emotions and social controls have a lasting effect when the child becomes an adult. The teacher should guide students to control their needs according to their own satisfaction and social approvals, otherwise the students would face learning problems in the future and would create a bad attitude towards learning (Lemlech, 1998, p. 18). Bernard (1972, p.55) describes psychological factors of young children

that the teacher should keep in mind. First, students need acceptance. The teacher should recognize and accept students' emotional, social and physical limitations. Second, students need security. This depends on the feeling about oneself. The teacher should help the students feel successful and worthwhile. Moreover, students have psychological differences and need teachers to respond to them differently. In order to know these differences, the teacher should allow student input and be friendly and courteous for students to express themselves openly.

The needs of acceptance, approval, autonomy and curiosity should be fulfilled in order to be good learners (Bernard, 1972, p.65). For autonomy to occur, young learners must know how to think. Also, if they were allowed to express themselves and get heard, they would satisfy the need of approval. Nerbovig and Klausmeier (1956, p. 31-32) describe the following needs of young learners that are different from those of Bernard's. He presents five needs of young learners. The first need is the 'physiological' need. These are food, warmth, activity, rest, etc. Second is 'safety' need. Students should feel things are in order rather than in disorder. They prefer routine in the activities. Third is 'love and belonging' need. Students should feel loved and accepted. Fourth is 'esteem' need. Students should feel useful. The fifth need is 'self-

actualization'. The student should feel that he/she is near to or has achieved what he/she desires to be.

2.1.6.2 Developmental stages and abilities of young learners

Several authors have described the developmental stages of young learners. Piaget is one of the leading researchers in this area. He presents the following four stages; sensorimotor period, pre-operational period, concrete operations and formal operations. Children of age from two to seven years are in the pre-operational period. Here, children start learning labels, names, sameness of things, and comparisons, such as, bigger, older, taller, smaller, etc. At this stage, the child is quite inconsistent, that is, the same child might answer differently about the same thing if asked twice. This is why the researcher did not conduct a needs survey with the subjects directly. Also, children at this stage lack the ability to plan ahead. They view the world with their own momentary perspective and judge things based on their perceptual experiences. So, in order to help the students problem solve, the teacher has to guide the students to listen to other people's opinions and consider them. Furthermore, Piaget (cited in Evertson, 1997, p.75) says that although students at this level do not

understand other people's ideas and opinions, they understand the concept of size, shape, color etc., and are able to use symbolic representation or words and numbers to solve problems. This information is stored in their mental file called schema. Therefore, the teacher should aim to expand what students already know. In other words, the teacher should teach the student what they are ready to learn (Lemlech, 1998, p.15).

An another expert, Dewey (1933, p.104) divided students into five stages. Each stage has three groups of ages. The stages are first stage, transition, second stage, transition, and beginning of secondary. Students in a kindergarten level, aged from four to six, are in the first stage. In this stage, students have a need for physical activities, to create things, investigate and communicate. Students at this level cannot focus on long range goals. They are interested only in the present and the immediate future.

Apart from their developmental levels, students of this age group have a different set of skills or abilities. Piaget (cited in Evertson, 1977, p.75)) described the four skills of listening, speaking, reading and writing for students aged between four and a half to six years. For the listening ability, student can listen to peers, stories and simple direction and

messages. The speaking skills that they are able to perform are speaking simple sentences within the vocabulary range of 2,000 to 10,000 words. Some of them can identify the signs that they frequently see. Students like to color, use crayons and paints and observe adults write. They like to draw and work on the board.

Getswicki (1995, p. 254) lists four characteristics of children during the age of four to seven. They are centration, egocentrism, irreversibility and concreteness.

1. Centration-- is the ability of students to focus on only one aspect of a problem. For instance, they can focus on only the 'tall' or 'fat' attribute of an object but not 'tall' and 'fat' at the same time.
2. Egocentrism-- is the inability of children to understand other people's point of view. They cannot easily put themselves in other person's situations in order to understand their ideas.
3. Irreversibility-- is the inability of children to reverse their thinking to reconstruct the actions that got them to the final point. This means they cannot think metacognitively.
4. Concreteness-- is the ability of children to understand real objects and situations but not abstract ideas. They cannot learn by being

given information or by imitating but they bring what they know to each learning situation in order to understand the new information.

2.1.6.3 Curriculum for young learners

The National Educational Department of Thailand does not provide a curriculum for the kindergarten level. Therefore, the researcher used the primary level curriculum as a guideline to gear it down to the students' level. English, as a subject is compulsory from the second semester of Prathom 1 (Achara, et. al., 1996, p.7). The structure of the English primary curriculum in Thailand (National Curriculum, 1992) is divided into three parts. The first part is the preparatory level (second semester of Prathom 1 and both semesters of Prathom 2). Second is the literacy level (prathom 3 and 4) and the third is the beginner fundamental level (prathom 5 and 6).

The course objectives stated by the National Educational Department of Thailand are as follows for the Prathom level. Students should:

1. be able to use English appropriately in a given context
2. be able to listen and carry out easy tasks
3. be able to use language meaningfully in easy situations according to their level

4. be able to pronounce letters, words and short texts to communicate meaning correctly
5. have a good attitude towards English

This curriculum aims to develop learners in two ways; to be able to use language for social and cultural purposes and to be able to use language to communicate appropriately in a given context. These two aims are to be carried out by using the learner-centered method, by arranging meaningful and various activities so that learners can practice using language for real life purposes. The teacher should act as a facilitator and encourage learners to express themselves by supporting them and by not giving them overt negative feedback. The teacher should use various techniques, such as, songs, games, role-play, real-life situations, story telling, pantomiming and guessing answers, not only lecturing.

The course description of the Prathom level states that learning English at this level emphasizes natural acquisition by focusing on listening and speaking. It includes engaging in play and activities that bring fun and happiness through the use of basic language functions for social use. The learners should know basic nouns used with humans,

animals and things near them in daily life. This also includes the use of basic verbs that indicate motion.

The above is the National Curriculum. There are many experts who have shared their views about curriculum for young learners. Donato (2002) suggests that a curriculum for young learners should be theme-based or story-based. This means that the topics of the unit and lessons should be linked with each other. They should be content based, for instance, the teacher should teach nutrition not only food, and teach flags, not only colors. Also, the teacher should aim at production, not only comprehension because students should be able to use their knowledge and not only gain knowledge. The lessons should allow students to perform a task in order to assess their improvement. Moreover, materials should be used again and again so that students can remember more. This allows the students to review the vocabulary and structures.

A child-centered curriculum also fosters critical thinking. A child-centered curriculum requires teachers to monitor and assess student performance regularly in order to develop a curriculum that continuously encourages higher levels of achievement. This will make the curriculum suit the learners' needs (Evertson, 1997, p.76). Thailand has adopted the child-centered curriculum in 2002. In order to make the child-centered

curriculum effective, a primary curriculum should be linked to English language teaching, not be separate from it. The English curriculum at this level should link to colors, size, shape, time, etc. to give confidence to the children and motivate them. The curriculum should include the skills for learning, such as, comparing, classifying, predicting, cause and effect, planning, problem solving and hypothesizing. Furthermore, the teacher should encourage the students to exercise the above skills by keeping ethical behavior in mind (Jean and Gail, 1992, p.36).

A good curriculum should take into account how students learn best. According to Evertson (1997, p. 75), the elementary child learns through the iconic mode, that is, through the use of pictures and visuals. This means the teacher should include ample visuals like pictures, charts, and realia[2] into the lesson plans. This is true because for children to use difficult abstractions, some direct experience with what the word stands for is essential (Lemlech, 1998, p.181). Lemlech also supports the use of realia or pictures for this purpose.

A supportive learning environment is a vital factor affecting young students' English language learning. A supportive learning environment

[2] real objects that explain the vocabulary being taught, such as, an apple, a telephone, etc.

can be achieved through practice in pairs and small groups, arranging of activities that suit children's experiences, use of ample visual aids and techniques like problem-solving, surveying, role-playing and playing games.

A good curriculum or program should be assessed. Donato (2002) says that one of the ways to assess the affectability of a program is by knowing the attitudes of other teachers or administrators. This means that other teachers should be asked to evaluate the lessons periodically or throughout the program.

Critical thinking should be taught throughout the educational program and it is best to start as early as possible (Duldt, 1997). Duldt supports speaking skills because they show critical thinking quite well.

2.1.6.4 Evaluating critical thinking of young learners

Young children can be assessed in a number of ways. A good curriculum should incorporate various assessment methodologies. Students can be assessed by their teacher or they can assess themselves. Donato (2002) says, "kids assess themselves fairly accurately" (p.2). Also, students should be assessed over time and the evaluations should be comparable.

A fair assessment should assess what students know and can do rather than what they do not know or cannot do (Donato, 2002). For young students, the best way to assess their critical thinking is to through their speech. Young students are better at speaking than at writing, especially for a foreign language. Also, students can present their immediate thoughts through speaking. Through presenting their thoughts, they are actually practicing the target language unconsciously.

Assessing children is different from assessing adults. Because children cannot read and write yet, they are often assessed orally. There are two ways of oral assessments suggested by Ockey (2002); individual oral interview or group oral interview. He prefers the group oral due to a number of reasons. Firstly, it gives a better picture of students' communication strategies. Second, it takes less time to conduct as compared to an interview with each student. Third, it is good for less confident students who need time to think. Finally, it provides a chance for more natural conversation.

Norris and Ennis (1989, p.33) say that direct classroom observation where the whole class is observed is beneficial in a number of ways. First, the teacher can record the number of students that answered according to a general assessment of critical thinking and an assessment

of specific critical thinking skills. Second, the teacher can choose to focus on the whole class or a specific student. The teacher may find it necessary to observe one student more often than the other students. However, all students should be periodically observed because the critical thinking ability of young students grows rapidly, given the right environment for it (Clark, 1997, p.40). Third, in order to assess the critical thinking of a whole class, we need to observe the whole class.

On the other hand, Norris and Ennis (1989, p.34) show that the individual interview has its advantages. First, it is better to assess students when they working on problems because they have their own approaches. Second, it allows the teacher to ask more open-ended questions in order to know how they each student thinks. Also, the teacher can probe the student to ask what he/she is thinking at that moment or before that moment. This is because most of the students in the age of two to seven have the characteristic of 'irreversibility'; that is, they are not able to tell their thinking processes that have lead them to a certain solution. Hence, both the individual interview and the group oral has its benefits, therefore, the researcher has incorporated both methods in this research.

For critical thinking assessment, Facione and Facione (1996) suggest that a test of critical thinking should test many aspects, one of which is reasoning. Reasoning allows students to use various levels of critical thinking skills. According to Facione and Facione (1996), critical thinking should be scored holistically with the combination of other elements, such as, content knowledge and technical skills. This is a pathway to a more authentic assessment of critical thinking. However, the strength or weakness of one element --critical thinking, content knowledge and technical skills-- may affect the overall score. Therefore, the evaluator should focus on each element while assessing and should be able to differentiate them. One way to overcome this problem, according to Facione and Facione (1996), is by viewing several student assignments before evaluating any of them. This will get the evaluator used to all the responses before evaluating any of them in order to avoid bias. Although Facione and Facione (1996) suggest written evaluations, this can also be possible with oral assessments. This is by recording the responses and evaluating them after listening to all of them or by using more than one rater in order to avoid bias.

Morrow and Smith (1990, p.13) suggest that the observers should observe the students' psychomotor, cognitive, social and emotional

development. The following skills should be tested. First, students should be tested on vocabulary, picture identification and sequencing (world knowledge). Second, students should be tested on visual discrimination, auditory discrimination, letter-name and letter-sound knowledge. Third, students should be asked to read old and newly learned words by recognizing the initial or final part of the words. Finally, students can be asked pre-reading questions like what they think the story would be about (predicting). To assess critical thinking skills in an English language classroom, the teacher should assess both language development and the development of critical thinking skills.

2.2 Learning approaches

In this study, four approaches, four models of instruction and various strategies are used so that the syllabus incorporates all the essential elements to foster students' critical thinking skills. According to Brown (1994, p. 74), the use of an eclectic approach is beneficial for capitalizing on student development at various periods. He suggests that teachers should think in terms of a number of possible methodological options that suit their classes. This gives way to new innovative possibilities to hold students' interests in the classroom. Brown has

presented various teaching approaches. Some of them used in this research are audiolingual, the natural approach and communicative language teaching. The first approach, audiolingual approach, allows students to practice pronunciation skills through drills. This approach views language learning as habit formation that has to be practiced. This approach incorporates the use of repetition, memorization, pattern practice and drills. However, Getswicki, (1995, p.254) mentions that when students merely repeat, they are not learning. This is because they do not know the meaning of what they are saying. On the other hand, Duldt (1997) encourages teachers to practice pronunciation skills with young children because they can easily pronounce sounds like native speakers compared to adults. The audiolingual was not very extensively used in this research, as it does not assist in developing critical thinking skills. However, it was used sometimes to improve students' pronunciation skills.

The second approach that was used in this study is the natural approach. This approach focuses on using activities that allow comprehensible input. It focuses on meaning not form. Therefore, vocabulary is considered the main tool of language learning, not grammar. The materials used for this approach are realia in order

develop comprehension and communication. The natural approach believes that a foreign language is developed through acquisition rather than learning. Krashen and Terell (1995, p.24) state that young children can more easily learn a foreign language because they are less distanced from their golden age when they first learned their mother tongue. Therefore, they should be allowed to learn a foreign language by using the same strategies as when they learned their mother tongue. Communicative language teaching is a method, under whole language used for this study to promote real life language use and the use of authentic materials. Activities in this approach are meaningful tasks. This would make the learners focus their attention on meaning rather than the form of the language. This includes practising real conversations and negotiation of meaning. For young learners, this would be basic communication.

The third approach used in this study was the whole language approach. Here, the content is structured so that students regulate their own learning and relate things so that learning is always meaningful (Bernard 1972, p. 58). Also, Dewey (1933, p. 105) says that teachers should focus on the abilities of individual students and allow them to communicate about their experiences and so teach each other. This

encourages the use of the whole language approach so that students can relate the new knowledge with their experiences (Brown, 1994). Jean and Gail (1992, p. 36) state that teachers should make language learning easier for young children through linking to students' experiences or interests.

Finally, the TPR (total physical response) approach was also used in this study. Bernard (1972, p. 58) states that young learners are more physical than verbal. This means that young children are eager to learn through kinesthetic activities, which allow them to move around. This does not mean that the students have to go through TPR (Total Physical Response) lessons. Rather, they should be encouraged to express ideas through art, music, drama and dance (Nerbovig and Klausmeier, 1956, p.43). Dewey (1933, p. 104) supports the need of physical activities, creating things, investigating and communicating for young children. Hence, TPR can be hidden in the lesson plans but not used as a main tool for a critical thinking syllabus because it does not encourage thinking. Therefore, the teacher should engage students in activities that allow them to move around and think critically.

There are various methods that give light to the development of students' critical thinking skills. Linking the ELT (English Language

Teaching) to primary curriculum enhances students' critical thinking because they use thinking strategies like, "comparing, classifying, predicting, problem-solving and hypothesizing". (Jean and Gail, 1992, p.37). This gives confidence to young children because they think by themselves rather than follow. Regarding this, Brown (1994, p. 182) mentions that activities that require thinking are problem solving techniques. These techniques allow students to focus their attention on cognitive challenges rather than grammar or structures. In addition, decision-making technique is a kind of problem-solving technique where students solve problems and then decide what to do. Other problem-solving activities may not require decision-making. Therefore, all decision-making techniques require problem-solving but all problem-solving techniques might not require decision-making techniques. However, in this study, students are required to problem solve and then make decisions.

Brown (1994, p. 142-143) describes various techniques to suit various kinds of syllabuses. These are controlled, semi-controlled and free techniques. He recommends the use of more free techniques in a learner-centered classroom. In this study, some of the above techniques are used. Since this is a critical thinking syllabus and is a part of a

learner-centered curriculum, more free-techniques or uncontrolled techniques, for instance, role-play, problem solving, interview and discussion were used. Some controlled techniques like identification and repetition were also used. Most of the techniques that were used incorporate group work. Brown suggests that use of group work leads to learner autonomy and promotes their thinking skills. The advantages of group work are that it allows interactive language, it creates a positive environment, it makes the learners responsible and it is a step towards individualizing instruction.

Young learners express ideas through speaking, especially in the foreign language where learners are not able to write because of their incompetence in grammar and structures. Bloom (cited in Nerbovig and Klausmeier, 1956, p. 43) encourages teachers to allow students to express their ideas through art, music, drama and dance, not only verbally. Brown (1994, p. 206) suggests a few speaking techniques for foreign language classrooms. The techniques used in this study are imitative (practice of drills), intensive (practice of phonology and grammar) and responsive (short questions and answers between the teacher and the students). The researcher used these three speaking techniques because the learners did not possess enough language skills for the other three

techniques. The 'big book' was also used to promote the critical thinking of young children. The 'big book' fosters critical thinking skills of reasoning, predicting and synthesis (Ligon, 2002). The 'big book' uses repetitive structures and adds new items to the same environment and context. Thus, the content of a big book is predictable based on the first pages of a book and on students' schemata[3]. Students predict by applying the information that they possess. Many other activities can be done with the big book and students who are interested in it. The small version of the 'big book', used in Unit 12 of the syllabus developed in this study, is attached in Appendix I.

In each lesson, students are taught the content and then encouraged to use critical thinking skills in that content area. This matches with the absolutist paradigm, which supports the method of teaching critical thinking where students are taught content and then the critical thinking skills rather than both at the same time (Blodgett, 1995).

Apart from the approaches and the other issues stated above that allow for students to think and express themselves, different models of instruction can be used to achieve different goals. Gunter, et. al. (1995,

[3] Students' background and experiences

p.73) defines instructional models as "a step by step procedure that leads to specific learning outcomes." He presents ten models, from which the researcher chose four models; direct instruction, concept attainment, concept development and classroom discussion.

Direct instruction model was used to teach skills through procedures that follow each other until mastery of the skill is achieved. It can be used to teach pronunciation, vocabulary or structures. This model requires the teacher to review the previously learned material, state objectives for the lesson, present new materials, guide practice with corrective feedback, assign independent practice with corrective feedback and review periodically with corrective feedback, if necessary (Gunter, et. al., 1995, p. 89).

The next model, concept attainment model, was used to build up concepts for the students through accepting the positive examples of a concept and not accepting the negative example of a concept. This allowed students to learn how to build concepts through compare and contrast of characteristics and attributes. Concept attainment model is used to introduce abstract concepts to the students by beginning with familiar concepts and moving on to the less familiar ones. This model is effective with the whole class or with groups where students can add on

to each other's thinking. There are nine steps in this model. The teacher selects and defines a concept, selects its attributes, develops positive and negative examples, introduces the process to the students, presents the examples and lists the attributes, develops a concept definition, gives additional examples, discusses the process with the class and evaluates.

The third model, concept development model, was used to analyze relationships between parts of a concept. Each person possesses different information about a particular place, person, object, and so on. This model extends and refines our information about concepts. It allows us to apply, analyze, synthesize and evaluate concepts. It incorporates the use of all the higher order thinking skills. The steps of this model start from listing as many items as possible, grouping the items, labeling the items by defining the reasons for grouping, regrouping or substituting individual items or whole groups to other groups, synthesizing the information by summarizing the data and forming generalizations and evaluating students' progress. The last step can be omitted if the teacher has assessed students during the prior step. Also, if the teacher knows that students know the reasons for grouping, they should not be asked to give reason when they label the groups. This is especially true with young learners who cannot explain the process of their thinking. In

addition, young learners might not be able to summarize data to construct a concept by themselves.

The last model used in this study was the Classroom discussion model. This model is suitable from the kindergarten to grade twelve or higher levels. Here, the teacher reads the materials and prepares questions, clusters the questions, conducts the discussion, reviews the process and summarizes students' observations and evaluates the discussion (optional). The teacher can prepare post-reading or post-listening questions where students discuss for alternative answers, not just one right answer. There are three types of questions that Gunter, et. al. (1995, p.176), suggests for this model. These are factual (answer stated in the text), interpretative (exploring what the text means) and evaluative (to what extent the ideas of the author match with that of the reader). It is essential to ask these three types of questions to build up students' thinking skills.

All of the above models were used individually or two or more models were integrated to achieve certain learning outcomes. The models were adapted for use with young children; therefore, only some steps of each model were covered taking into consideration students' needs and teacher's teaching ideology. Some lessons that used the above

models incorporated group work. Through group work, students were able to compare their ideas with their peers' ideas and arrive at best conclusions.