CHAPTER II

Review of Related Literature

In this chapter, the researcher explicates several theories through reviewing some literatures related to this study. This theoretical construct deals with some main areas: (1) Brainstorming; definition of brainstorming, types of brainstorming, and significance of brainstorming in ELT, (2) Teaching Reading; definition of reading, types of reading, and teaching reading components, (3) Brainstorming in Teaching Learning English, (4) Brainstorming as activities in teaching reading.

A. Theoretical Framework

1. Brainstorming

   a. Definition of Brainstorming

   Brainstorming is one of the most popular strategies in provoking creative and solving problem in every field whether in educational, commercial, industrial, and political fields. Brainstorming is defined as the activity of thinking that includes the breaking up the old ideas, making new connection, maximizing the limits of knowledge and the

16

onset of great ideas.[1] In other words it can be said that in brainstorming emphasized on calling the prior knowledge, linking it with the novelty ideas, and generating more ideas. Another statement claimed that brainstorming in creative problem solving probably becomes one of the most popular tools stated by Fernald & Nickolenko, and Leclef, and Stein.[2] It showed that brainstorming will become a creative way to solve students' problem because it provides the activities will attract point of view of students. Introduced by Alex Osborn, brainstorming becomes solution of the inconvenience of traditional business meetings. In his book under the title "Applied Imagination", Osborn explained the various tools and approaches creative problem solving.[3]

In one study, a group using brainstorming is more useful in generating ideas than individuals thinking up suggestions.[4] That study also supported by Al-Maghrawy which defines brainstorming as a creative group forum in producing general idea. Then, Jarwan defines brainstorming as the active way to solve the problem and the session of brainstorming heads for producing a list of ideas that can solve the

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[1] Bilal Adel Al-khatib, "The Effect of Using Brainstorming Strategy in Developing Creative Problem Solving Skills among Female Students in Princess Alia University College," *American International Journal of Contemporary Research.* vol. 2, No.10, *29.*

[2] Zargham Ghabanchi and Saeedah Behrooznia, "The Impact of Brainstorming on Reading Comprehension and Critical Thinking Ability of EFL Learners". *Procedia - Social and Behavioral Sciences 98.* 2014. 513 – 521. (www.academia.edu, accessed on May 5th 2015).

[3] Scott G. Isaksen and John P. Gaulin. "A Reexamination of Brainstorming Research: Implications for Research and Practice". *Creative Problem Solving Group.* Vol. 49, No. 4. 2005. 315-329.

[4] Scott G. Isaksen, *A Reexamination of Brainstorming Research:… 317.*

problem under discussion. Based on the studies and statements above, brainstorming is defined as a creative and an active way to provide solution for the problem solving that might appear in teaching learning process. In detail, producing ideas, discussing it, and sharing it under the discussion are the activities in brainstorming.

To make successful brainstorming activities, there are guidelines which are built by Osborn: (1) no Criticism or Evaluation. Express no negative evaluation or critics. (2) "Freedom" in expressing idea is welcomed. The large idea is expected. (3) quantity is wanted. The greater number of ideas shows the more the likelihood of winners. (4) combination and improvement are sought**.** Thus, those four guidelines are important in providing brainstorming. In addition to contributing ideas, participants should suggest how ideas of others can be turned into better ideas; or how two or more ideas can be joined into still another idea.[5] By that activities, list of brilliant ideas can be produced and from those ideas, students can find the solution of the problem.

b. Types of Brainstorming Activities

Types of brainstorming activities become options for students to do Brainstorming. Surely, types of Brainstorming can help students to

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[5] Paul A. Mongeau, and Mary Claire Morr, "Reconsidering Brainstorming". *Group Facilitation: A Research and Applications Journal.* Vol.1, No.1, Winter 1999. (http://69eisenhower.csub.edu/~rdaniels/Mongeua%20and%20Morr%201999.pdf, accessed on December 12th 2014).

encourage their ideas. There are some types of Brainstorming can be applied in teaching-learning process. Here are the details:

1) The Stepladder Techniques: this activity is developed by Rogelberg, Janet, Barnes-Farrell, and Lowe. This activity has basic steps. They are [6]:

a) Present the task or problem to all members. Then, giving them sufficient time to think and to form their opinion to solve the problem.

b) Create a main group consist of two members. Ask them to start the discussion about the problem or topic

c) Add the third member to the main group. The third member has to present the ideas before knowing those ideas from two members before. After all three members sharing their ideas, they discuss about their options together.

d) Repeat the same process by adding the fourth member, and so on, to the main group. Give the time for discussion after new member has shared his or her ideas.

e) Reach a final decision after all members have been given and shared their ideas.

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[6] Peter W. G. Morris – Jeffrey K. Pinto. (Eds.), *The Wiley Guide to Project, Program & Portfolio Management* (New Jersey: John Wiley & Sons, Inc. 2007), 216.

2) Brainwriting: it emphasizes the silent production of ideas in writing. Brainwriting was developed by Geschka, Schaude, and Schlicksupp and the variation have been developed by Goodman.[7] Here are the basic rules of brainwriting[8]:

    a) Each person begins writing the ideas on paper, card, or board by limiting the time.

    b) When time is up, everyone must share the ideas to someone else.

    c) The second person must read all the ideas of first person and add the new ideas.

3) The Crawford's Slip: this brainstorming activity was developed by Professor C.C. Crawford at the University of Southern California. This activity involves collating input from people on slips of paper. There are steps to do this activity [9]:

    a) Teacher gives students a scratch pad or paper

    b) The teacher presents a problem, for example in "how to" form

    c) Teacher asks each student to write down the answer about the problem

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[7] Christine Hogan, *Practical Facilitation: A Toolkit of Techniques*. (Kogan Page, 2005), 269.

[8] Chauncey Wilson, *Brainstorming and Beyond A User-Centered Design Method*. (Morgan Kaufmann Publications, 2013), 52-53.

[9] Donald C. Mosley Jr., Donald C. Mosley Sr., and Paul H. Pietri. "Supervisory Management: The Art of Inspiring, Empowering, and Developing People". *Decision Making, Problem Solving, and Ethics.* (Cengage Learning, 2015).

      d) Teacher asks students to place the slip of idea into the idea bank(box).

      e) Teacher asks students to arrange and to select the slips using judgement to throw the weak ideas out.

      f) Then, teacher asks all students to develop the good ideas and to present the recommendation to the larger group.

4) Brain-netting: this activity is similar to brainwriting, but it uses an electronic document stored.[10]

5) Round Robin Brainstorming: it was popularized by Spencer Kagan.[11] This brainstorming activity facilitate students to generate ideas in turn. If the students have no idea, they feel free to "pass". The session overs if everyone passes.

6) Mind Mapping: This activity was popularized by Tony Buzan.[12] Buzan promoted his conception of radial tree, diagramming key words in a colorful, radiant, and tree-like structure. In addition, this activity was first offered by Spenser Kagan.[13] Something important in providing this type is by using graphic approach,

[10] Mind Tool Editorial Team. "Brainstorming Approach". Adapted from: Mind Tools Ltd, 2009. (accessed on June, 29th 2015)

[11] David Fulton. "Teaching Contemporary Themes in Secondary Education". In Helen Gadsby and Andrea Bullivant (Ed.). *Global Learning and Sustainable Development*". (New York: Routledge, 2011), 149.

[12] Suzan Norman, *Transforming Learning: Introducing SEAL Approach* (London: Saffire Press, October 2003), 31.

[13] Michelle Manville, *Common Core State Standards for Grade 8: Language Arts Instructional Strategies and Activities* (London: Rowman & Littlefield, 2014), 5.

images, symbols, and key words. That tool aims to scribe responses or to organize information, then simply listing ideas on flipchart.

7) Reverse Brainstorming: This activity was developed at the Hotpoint Company, as a group method for discussing all possible weakness of an idea, or what might happen when an idea is implemented.[14] Here are basic steps to do this activity:

    a) Identify the problem

    b) Reverse the problem or challenge by asking about the solution or something that make that problem worse.

    c) Brainstorm the reverse problem to generate reverse solution ideas.

    d) Evaluate those solution ideas.

8) Starbusting: is a form of brainstorming that focuses on producing questions rather than answer. It can be used continuously, with further question to get more ideas. It uses six component of questions; Who? What? How? When? Where? and Why?[15]

9) Charette Procedures: This activity was derived from the Frensh word for Wagon. It comes from the architecture students in the

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[14] Tony Proctor. *Creative Problem Solving for Managers: Developing Skills for Decision making and Innovation* (Taylor & Farncis e-Library, 2010), 236.

[15] Richards, J and Randolph H, *Structured Analytic Techniques for Intelligence Analysis* (Washington: CQ Press, 2014), 44.

early 1800s. Then, introduced by Mind Tools CEO, James Manktelow.[16] Here are the steps to do this activity"

  a) Set the issues

  b) Divide the larger group into small groups

  c) Give the issue to each group

  d) Try to have a recorder for each group

  e) Record all ideas and set a time limit

  f) Start to record brainstorming of the next group.

  g) Discuss all the ideas to get the good ideas.

10) Random Input: is a lateral thinking activity. This activity tries to link the thinking pattern into the other to generate the ideas. The variations are all involve stating a challenge and comparing it to some randomly selected words, pictures, phrases, objects, and activities.[17] Random input entails using a random word, picture, or even sound to open the new ideas of thinking. This activity associated by Edward the Bono.

11) Free-Wheeling: according to Osborn, it is an activity which encourages people to recommend the ideas.[18] In this activity encourages the students to call out ideas freely and randomly until

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[16] James Manktelow. "Brainstorming Toolkit" *Mind Tools Limited,* (www.heftfaculty.co.uk or www.mindtools.com, accessed on January 20th 2016).

[17] Chester Davis, *Six Steps tp Better Acivism* (Booktango, 2013).

[18] Timothy M. Franz. *Group Dynamics and Team Interventions: Understanding and Improving Team Performance* (UK: Wiley-Blackwell, 2012).

none has anything further to add. This activity is spontaneous and

open in producing all the ideas.

12) Group Ideation: is introduced by Alex Faickney Osborn, the

founder of Brainstorming. The steps to do this activity are to form

a groups brainstorming then start to produce the ideas together.[19]

c. Significance of Brainstorming in ELT

Some of the significances of brainstorming are summarized below:

1) Brainstorming can generate or create greater number of ideas

and alternative responses. This statement is supported by

Arivananthan, in her journal said that brainstorming is a quick

and easy technique to generate the ideas for problem solving

and innovation.[20]

2) Brainstorming train critical thinking to solve the problem. It

helps the students to see other points of view and all students

have equal opportunity to participate. Alam Khan said that

brainstorming can encourage learners to think freely and

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[19] Karen E. Burris, "Leading Brainstorming Session: How to facilitate Ideation and creative Problem Solve". *Society for Healthcare Strategy & Market Development of The American Hospital Association.* 2015.

[20] Meena Arivananthan, "Brainstorming: Free-flowing creativity for Problem-solving". *Division of Data, Policy, and Research UNICEF.* September 2015, 1.

innovatively each other than they were doing routine classroom situation.[21]

3) Brainstorming is an activity to create a student-centered activity. Students manage their own group to generate the ideas, develop rating criteria, responsible with the movement of the group. In his book, Jones said that one of the activity that is used in student-centered activity is brainstorming.[22]

2. Teaching Reading

a. Definition of Reading

Reading is the activity that cannot be separated with the existence of reader and text or writing work. It can be said that there is an "interactive" process between a reader and a text when the reader reads something. In reading process, the reader interacts with the text and attempts to provoke the meaning and where various kinds of knowledge are being used: linguistic or systemic knowledge (through bottom-up processing) as well as schematic knowledge (through top-down processing).[23] Then, Reading is process from reading a words in a group

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[21] Intakhab Alam Khan, "Relevance of Brainstorming in an EFL Classroom". *Elixir Social Science.* 54A, January 2013, 12880-12883.
[22] Leo Jones, *The Student-Centered Classroom* (Cambridge: Cambridge Universuty Press, 2007), 40.
[23] Hesham Suleiman Alyousef, "Teaching Reading Comprehension to ESL/EFL Learners". *The Reading Matrix.* Vol.5, No.1, September 2005. 147.

of sentences and then link it to find the information or knowledge from it.

b. Types of Reading

There are two types of reading; extensive and intensive reading. Hafiz and Tudor defined in a journal of Alyousef that extensive reading is kind of reading program which provoke the students learn to write through reading. While intensive (or creative) reading, usually students read a page to discover the meaning and to be acquainted with the mechanisms of writing.[24]

From the explanation above, teaching reading in English has to include the six components of reading process and using the appropriate activities and strategies dealing with the types of reading to make reading become interactive process.

c. Teaching Reading Components

Seen as a complex process, reading, in a statement of Grabe that many researchers try to know and describe the fluent of reading process by examining a set of element skills in reading process; so at least there are six general component skills and knowledge areas[25]:

1. Automatic recognition skills

2. Vocabulary and structural knowledge

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[24] Hesham Suleiman Alyousef, "Teaching Reading Comprehension to ESL/EFL Learners". *The Reading Matrix.* Vol.5, No.1, September 2005. 66.

[25] Hesham Suleiman Alyousef, *Teaching Reading... 147.*

3. Formal discourse structure knowledge

4. Content/world background knowledge

5. Synthesis and evaluation skills/strategies

6. Metacognitive knowledge and skills monitoring

Those six components skills and knowledges that become requirement to know and describe the reading fluency. So, it is important for teacher to master it in teaching reading.

3. Brainstorming in Teaching-Learning Practice

One of activities in the teaching learning process is brainstorming. This activity trains students' critical and creative thinking to solve the problem. Ganji and friends state that brainstorming is considered as the importance thing in ELT because it can enhance critical abilities of student, social intelegence, novelty ideas, solution, and also provide the chance to discuss in language learning areas. Based on that statement, brainstorming is regarded as a beneficial activity in language learning process.

There are the steps in providing brainstorming which are stated by Simmon in a thesis of Mahdum, teacher have to : (1) deciding the topic which will be discussed or for the next topic the students can decide it, (2) making a list or concept related with the topic; meanwhile dealing with the words and idea related with the topic are students 'job, (3) developing the settled concept and students get the chance to clarify and

develop the ideas related with the topic, (4) choosing the topic which will be developed and students is given the opportunity in developing their ideas based on the topic discussion.[26] Dealing with the previous statement, the Simmon's steps of brainstorming, there are some important things to be highlighted, such as deciding topic, making a list or concept, developing a set of concept, and developing idea that have to be completed in doing brainstorming activity.

4. Brainstorming as activities in Teaching Reading

Evolving as one of the popular strategy, the main purpose of brainstorming is to develop and enhance communication skill, to help in encouraging ideas and to train the skill in making decision of sharing and delivering viewpoints and opinions. That statement also supported by Feather which said that brainstorming offered to make prediction of many materials.[27] Furthermore, it is such that brainstorming is one of strategies which involve students in generating the ideas concerned what prior knowledge about the topic of text given before reading it.

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[26] Mahdum, Thesis: *"Peggunaan Brainstorming dalam Meningkatkan Kemampuan Membaca Mahasiswa S1 Semester 1 Program Studi Bahasa Inggris FKIP UR Pekanbaru".* Pekanbaru: FKIP UR Pekanbaru, 2013.
[27] Zargham Ghabanci and Saeedah Behroznia, *"The Impact of Brainstorming on Reading Comprehension and Critical Thinking Ability of EFL Learners". Procedia-Social and Behavioral Sciences. Vol. 98, 2014. 514*

Brainstorming is also can motivate student's communication skill.[28]

There are identifying marks that will be used to sign good brainstorming

activities. They are

a. Teacher expresses good comment: no negative evaluation of any idea presented.
b. Teacher does for quantity, not quality--the longer and more the list of ideas, the better.
c. Extending on each other's ideas, piggyback, hitch on, elaborate whenever possible.
d. Increasing the thinking out of the box.
e. Teacher records each idea of students, at least by a key word or phrase.
f. Teacher sets a time limit and holds strictly to it.[29]

In addition, to achieve the successful brainstorming activities,

brainstormer (student-teachers) should have the skill in brainstorming.

There are some capacities that student-teacher should have:

a. Creating the positive attitude towards ESP content
b. Demonstrating the proper background knowledge relevant to the subject area
c. Mastering all the requirements of the Brainstorming session
d. Providing the positive and permissive atmosphere that encourages idea generation, discussion, and invention
e. Providing students with novelty ideas and situations and giving motivation to them in generating novelty ones
f. Reflecting their satisfactory command of scientific and technological English
g. Initiating activities which students interest in, comments, questions, etc.
h. Appreciating the scientific point of view and the role of science and technology in modern society

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[28] Rita S. Dunn and Kenneth J, "Practical Approaches to Individualizing Instruction: Contracts and Other Effective Teaching Strategies". *BRAINSTORMING APPROACH*, 1972, (http://www2.maxwell.syr.edu/plegal/crit3/a12.html, accessed on April 16th 2015).

[29] Rita S. Dunn and Kenneth J, Practical Approaches to Individualizing Instruction: …. 2.

i. Mastering the linguistic, technical, and psychological aspects of ESP teaching and learning.

Hutchinson and Waters state that all of the capacities above can be used for improving the level of student's comprehension in ESP reading. From the identifying marks and brainstormer skill above, it is important to use those categories in doing the brainstorming activities of teaching reading.[30]

B. Previous Studies

There are some studies related with the current study. The first study is done by assistant professor of University of Jerash, Jordan, Walid Mahmoud Sdouh, in 2012-2013, that investigated the effect of using strategies of brainstorming and computer education in academic achievement and the development of creative thinking skills among the students of sixth grade and their attitudes towards learning the engineering unit in mathematics. This previous study is the same as term brainstorming, but in previous study using brainstorming as strategy but this current study using brainstorming as activities. Then, another difference is the subject material, the previous study is mathematics and this current study is English. The first group of this previous study included 34 students who used the brainstorming strategy. The second

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[30]Mohammad Ahmed Manasrah, "The importance of Brainstorming in Improving ESP Reading Compehension". *International Journal of Arts and Commerse*. Vol.3 No. 1, January 2014, 22.

group included 35 students who used the strategy of computer education. The result of the previous study showed differences with the statistical significance in developing creative thinking skills. Then, using strategy of computer education to learn the engineering unit also showed the differences with statistical significance.

The next study is done by Bilal Adel Al-Khatib in 2012 that analyzed the effect of using brainstorming strategy in developing creative problem solving skills among female students in princess Alia University College. This study is to investigate the effect of using brainstorming strategy in developing creative problem skills. To find the significant result, the researcher used a program of brainstorming strategy and Torrance creative thinking test. The different things between Al-Khatib's study and current study is this current study analyzed the brainstorming activities that will be done by student-teachers and describe it by using rubric which contain the identifying marks of brainstorming and the brainstormer skill items. There were two classes in the previous studies. The first class represented the experimental group totaling 47 students taught through brainstorming strategy in the course of developing thinking skill. The second class represented the control group totaling 51 students. The findings of previous study showed that there is statistical significant difference

between those two classes. The result showed that using brainstorming strategy is effective in developing creative thinking skills.

The last study was conducted by Mahdum which attempted in describing and testing whether brainstorming can increase students' reading ability at English Department FKIP UR Pekanbaru. This previous study used quantitative and qualitative data in collecting data. Whereas this study uses qualitative data. Besides, the previous study used action research as research design, in contrast, this study uses qualitative research. In previous study, the participants were 25 students of the first semester S1 program. This study uses observation, interview, and tests. The result of the previous study showed that brainstorming can improve students' reading ability.