An Overview on the Effectiveness of Critical Thinking on Knowledge

Solehah Yaacob

Abstract—The study focuses on revisiting the effectiveness of Critical Thinking in human mind capability as a major faculty in human life. The tool used as a measurement of this knowledge ability consists of several processes including experience and education background. To emphasize the 'Overview' concept, the researcher highlights two major aspects of philosophical approach, they are; Divine Revelation Concept and Modern Scientific Theory. The research compares between the both parties to introduce the Divine Revelation into Modern Scientific theory. An analytical and critical study of the both concepts become the methodology of the discussion.

Keywords—Critical thinking, knowledge, intellectual, language.

I. INTRODUCTION

KNOWLEDGE or information is an entity which needs to be preserved. This information might be called understanding, or skill that one gets from experience or education as a result of awareness or being aware of something as mentioned by Merriam Webster Dictionary [12]. However, Business Dictionary focuses Knowledge as human faculty 'Human faculty resulting from interpreted information; understanding that germinates from combination of data, information, experience, and individual interpretation' [13]. The question raises: How to preserve knowledge in order to evaluate the information comprehensively? The concept of critical thinking might be considered as a tool to expand the thinking ability or it is that it is safe to claim that it has become an independent field of enquiry which professionally explores human capital as mentioned in Quran [1] "*Afalaa tubsiroon*? [51:21] Do they not do *tubsiroon* in the creation of themselves? [88:17] "*Afalaa yanzuruun*" Do they not do "*yanzuruun*" in the creation of camel? [6:50] "*Afalaa tatafakkaruun*" Do they not do "*tatafakkaruun*" in the distinction between blind and seeing? The verses mention either *tubsiroon, yanzuruun or tatafakkarun* on the indication of analytic thinking which based on circumstances. Having an excellent critical thinking will produce a result which will affect the life quality of human being. Thus, this paper highlights working definition consisting of three main components; Mind Analysis, Data Evaluation and Theory in elaborating the concept of Intellect as a frame work of critical thinking and then each dimension of this definition is defined and elaborated further so that the complexity of the concept could be framed in an extended model.

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II. INTELLECT IS MIND

The word '*Aql*' also known as 'Intellect' which means rationally, intelligent, comprehension and understanding '*Afalaa Ta`qiluun*'? Do they not do understanding? The word *Ta`qiluun* derives from word '*aqila*' then changes into '*Aql*' indicating the importance of thinking for every mankind as mentioned in Quran 49 times which focuses on disbelievers who do not understand the command of God. The relationship between logic, thought or so-called '*mantiq*' is popular among linguists. To them 'major part of thought' is language without the process of language means no thinking process. This view has been emphasized by Abdul al-Qahir al-Jurjani (1010-1078 A.D.) when he introduced the concept of *Nazm* in linguistic structure which focused on morphology changes in order to get the different meaning of structure even with the same sentence used [7]. The question is how to identify the process of thinking. To identify the process of thinking usually deals a lot with learning procedures which concentrate on reading, writing, listening and speaking. All these elements are connecting with the faculty of human mind or so-called intellectual package. The philosophers such as Aristotle in his book '*The Logic*' mentioned the connection process between mind and things. The cause and effect concept mentioned in his theory is the best example to represent the connection between the both parties; mind and effects or deep structure and surface structure traces. Thus, he believed that the process of logic can be divided into three categories; noun, verb and particle [5] by example 'Socrates rides the white horse'. This sentence includes all the sentence elements mentioned by him that knowing 'Socrates' is a man, because his ability riding the horse indicated who he is. Another logical concept we could find in this sentence is 'the white horse' the word white is suitable with the word 'horse' because it is an adjective of the horse designation. As mentioned earlier, the mind process is popular among the linguists, thus the Arab grammarians believe that the connection between logic and language is playing an important role in imposing ability of thought comprehensively [11].

To have a balance judgment on understanding between God Revelation concept and Scientist or Philosophers theory connection or co-incidence or different views, Fig. 1 might be able to illustrate the concept of thinking which so-called deep structure; intellect or mind, logic, consider and reflexive otherwise surface structure only represents the eloquence:

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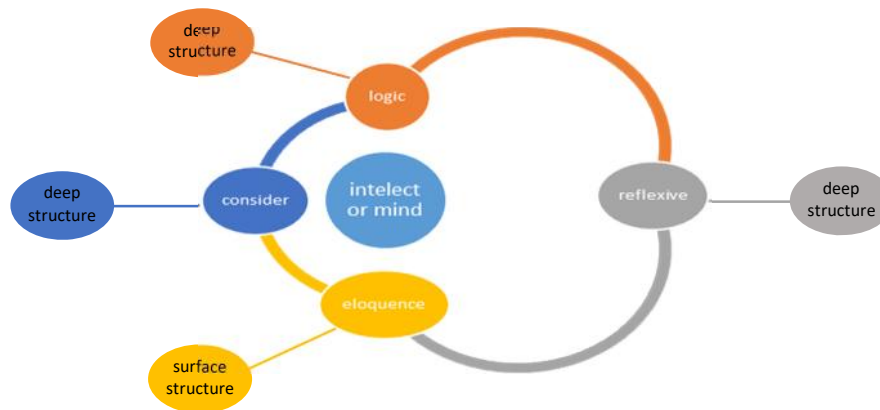Vol:10, No:12, 2016

Fig. 1 The process of mind in producing deep and surface structures

In addition to Islamic philosophy approaches, logic included not only for the formal study as mentioned above but it also becomes the major aspect of language production so-called 'eloquence or surface structure'. Otherwise, the concept of 'deep structure' consists of three elements; consideration (tafakkur), acceptable or logic (possible or mantiq) and reflexive (istijaabah) processes before the language production. However, Gottlob Frege in his study on the relations between logic and thought, have given the different impression on the view that logic has nothing to do with mental processes as mentioned on his attack of logical psychologism '*Not everything is an idea. Otherwise psychology would contain all the sciences within it, or at least it would be the supreme judge over all the sciences. Otherwise psychology would rule even over logic and mathematics. But nothing would be a greater misunderstanding of mathematics than making subordinate to psychology. Neither logic nor mathematics has the task of investigating minds and contents of consciousness owned by individual men* [10]. As part of a renewed interest in psychologism in recent years, Frege has even been criticized for making such a radical separation of logic and thought, as when one recent commentator writes: "Frege's extreme anti-psychologism so effectively banishes the mind from logic that it becomes virtually impossible to understand how logical propositions can ever actually take on direct relations to logical thinkers" [4].

III. MODERN THOUGHT ILLUSTRATES THE CONCEPT OF CRITICAL THINKING

Mind Analysis means human mind is potentially capable of performing a variety of skills and abilities. Analysing the human mind for the purpose of better understanding how it operates has produced a variety of models as mentioned by some studies such as [2] and [8]. We present a model with six mental components namely: 1. Mental Constructs, 2. Mental Operations (macro-skills), 3. Mental Abilities (micro-skills), 4. Mental Dispositions (habits of the mind), 5. Mental Conditions, and 6. Mental Activities. Data evaluation is the second component of the definition provided for critical thinking. This aspect of critical thinking deals with analysing and assessing the data of the mind receives. According to [6],

critical thinking is the careful application of reason to determine either a claim is true or not. Living in the era of information and misinformation necessitates the development of knowledge, skills, and traits which allow a thinker to distinguish rationalizing from logical reasoning and manipulation of persuasion. The opposite of thinking critically in this sense is the gullible acceptance of claims. Critical thinkers manage the information is presented to them rather than receive and accept it passively. Taking a critical approach in the face of the information requires the critical thinker to develop specific criteria for the evaluation. Thirdly, theory is an academic evaluation which has been gone through the methodology policy of the system so-called academic learning. The mind analysis is the most major part in control the data evaluation process before theory recognition:

IV. MIND ANALYSIS PRODUCES SCRUTINY DATA

The idea becomes the most important part in critical thinking in producing data receiving. The data normally can be divided into two types; either social sciences or hard sciences, so the production of mind analysis will be designated based on the type of data collection. To brand or upgrade the data officially, the system or methodology will impose it in getting the recognition as a theory.

Human mind recreates real phenomena and entities in the form of mental concepts. This provides the opportunity to think representations of external phenomena. Each concept is embedded with some ideas such as the construction of the concept based on fact or assumption. To analyse the construction concept, the mental ability skills needs to be composed of five micro-skills.

The 'critical' part of critical thinking denotes an evaluation component either is used to convey something constructively or not. This is also called directed thinking because it focuses on obtaining a desire outcome. As mentioned by Paul and Elder, "Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action" [3] and [9]. The inner concept of critical thinking

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provides some implicit elements which contain several parts of mind creativities in producing a surface structure elements so-called verbal foundation. The realization that education is much more than knowing some random facts within a discipline encouraged the educationalists to explore new ways to overcome the challenges of improving deposited knowledge into the learners' minds in leading educational paradigm shift.
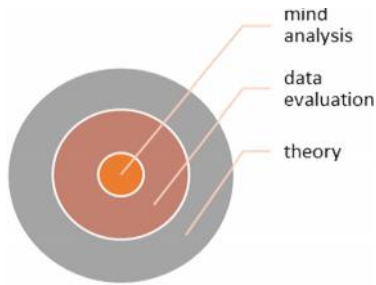
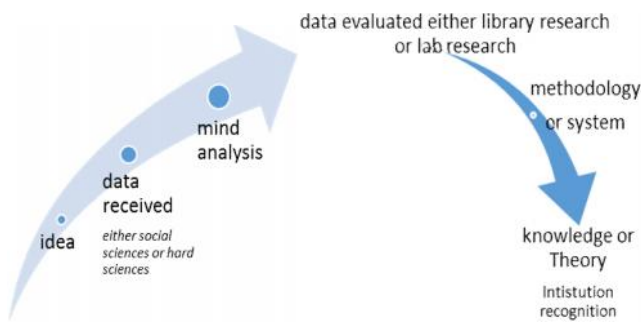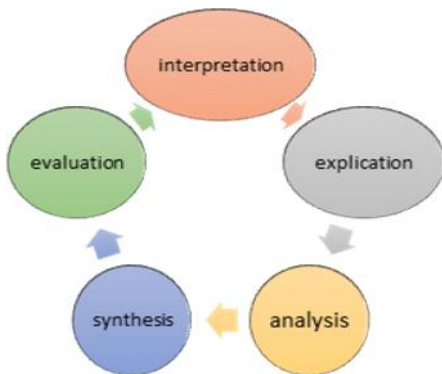Fig. 2 The level of theory production

Fig. 3 Data process

Fig. 4 How the mind works on data collection

VI. CONCLUSION

The critical thinking concept is an inner process of mind ability. However, without comprehending the Divine Revolution references, the Scientific theory will lack in becoming the major application of the modern world.

As a result of combining both parties; Divine Revolution references and Scientific theory, the critical thinking produces more competently and resourcefully of result decision without any prejudice or preconception.
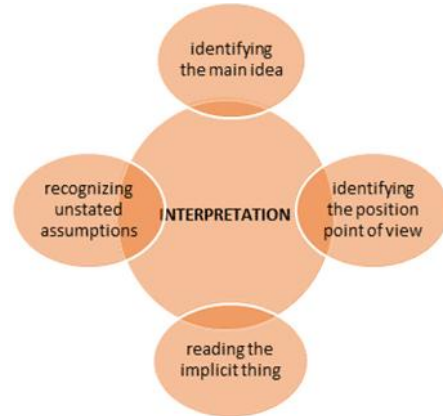

Fig. 5 The data interpretation process
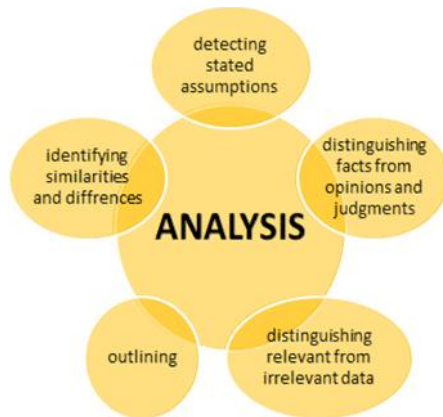

Fig. 6 The process of explication
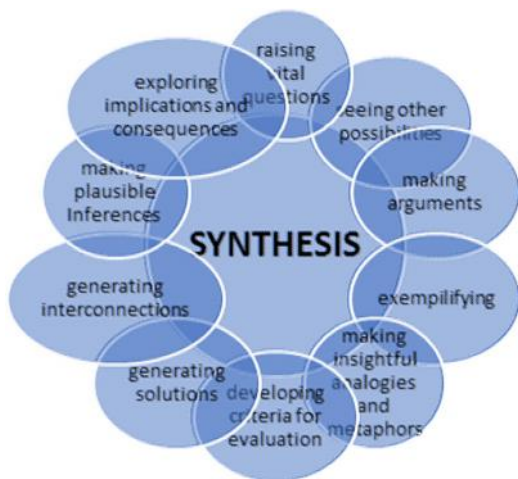

Fig. 7 Identifying data analysis

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Fig. 8 The synthesis data generated

Fig. 9 The data evaluation process

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