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MODELS IN APPROACHING HIGHER-ORDER THINKING SKILLS (HOTS) TOWARDS THE MALAYSIAN LABOR MARKET

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1. INTRODUCTION

In this era of globalization, employability skills are pivotal in the labor market that can help the graduates or entry-level in attracting the employer and organization. One of the main focuses of skill is the ability in higher-order thinking skills (HOTS) which is the important component viewed by the organization in recruiting the graduates especially for those who have the ability in problem-solving since it will give benefits to the organization (Saad & Majid, 2014). In Malaysia, higher thinking skills be measured through the ability on translating, analyzing and manipulating information (Wilson & Narasuman, 2020). Hence, the value of higher thinking skills must be adapted among the graduates since studies in higher institutions. This can be supported during the pandemic of Covid 19, a study determined there is a significant effect between the academic background with the agreement on impacts of the Covid 19 towards graduate employability (Iqmal et al., 2020). However, the graduates are affected to be employed during this pandemic especially for those who are not proactive in upgrading their knowledge and skills (Hayati et al., 2020). In addition, in the labor market graduates are not proactive in upgrading skills (Hayati et al., 2020) which this kind of issue existed due to no alignment of practices of higher thinking skills with the policy of the skills provided (Chun & Abdullah, 2019). Therefore, some models (i.e, Bloom's Taxonomy, FRISCO Model, Watson-Glaser Critical Thinking Skill, and RED Model) will be focused on and this study also is to aim at the best model that can be used in approaching the higher-order thinking skills (HOTS) towards the Malaysian Labor Market. Thus, the purpose of this study is to identify the best model of the higher order thinking skills (HOTS) which can be used in the teaching and learning process by following the suitable models that could help the students be more criticized in thinking and solving problems.

2. MODELS OF HIGHER-ORDER THINKING SKILLS (HOTS)

Bloom's Taxonomy model consisted of six levels of cognitive-based on the classification of thinking (Forehand, 2011). One of the aims of this model is to improve and upgrade the communications of educators (Sobral, 2021) in the teaching and learning process. Furthermore, Bloom's Taxonomy is illustrated through the pyramid model is divided into two levels which are the lowest and highest levels (Sobral, 2021). First, at the lowest level, there are three components knowledge, comprehension, and application. For the highest level consist of the

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analysis, synthesis, and evaluation. Thereafter, in sustaining the relevance for the 21st century this model has been revised in some components. It is redefined by Lorin Anderson and David Krathwohl in 2001 (Wilson, 2016) which the adaptation based on the concerns and criticisms of the original taxonomy. As a result, the changes were made by maintaining the six major categories but it changed from noun to verb forms (Forehand, 2011). Other than that, the two lowest levels have been renamed with remembering and understanding, and the changes made for the highest two levels into evaluating and creating. This can be referred to in Figure 2.1 shown the differences between the old and new versions of Bloom's Taxonomy model. Besides, all these elements have their roles and functions in approaching and adapting critical thinking skills during the teaching and learning process. Thus, through this model, it assists the learning process by making reflection through analysis of the new knowledge creation (Hyder & Bhamani, 2017)

2.1 FRISCO Model

This model was developed by Robert Ennis in 1995 which FRISCO model is one of the processes of critical thinking that provided the guidelines in structuring the reasoning the analysis of problems (Carreira et al., 2016). The acronym stands for Focus, Reasons, Inferences, Situation, Clarity and Overview. Furthermore, these elements have their role starting with identifying the main point or problem, determined the relevant reasons, make inferences, try to be in the situation, sustain the clarity, and lastly sum up with an overview based on the decision made or what has been discovered (Hitchcock, 2015). These are the processes in approaching higher order thinking skills (HOTS). In addition, this model helps in supporting the process of critical thinking by providing the directions and guidances for problem analysis and structured reasoning (Dominguez et al., 2015). Besides, it leads to pedagogical situations which have encouraged the learning abilities of the individuals (Dominguez et al., 2015). This will increase and improve the ability of higher order thinking skills (HOTS) among the students to adopt and adapt to all of the main components under the FRISCO Model. Therefore, this model will create the ability of strategic and higher order thinking skills that can encourage high competencies which lead to a high level of critical thinking.

2.2 Watson-Glaser Critical Thinking Skill

The Watson-Glaser Critical Thinking Skill is a theory formulated by Edward Glaser which has been developed in 1941 (Fazriyah et al., 2018). He has defined that critical thinking can be categorized into several meanings which are a wise behavior in viewing problems and logical knowledge in investigating the issues. It shows this model more focuses on how to deal with problems through the processes provided. This can be seen from the steps of having higher-order thinking skills (HOTS) in solving a problem starts with making an inference, identifying the statements, determining the decision, interpreting the final decision, and lastly is evaluating the arguments (Hitchcock, 2015). In addition, this theory also stressed the elements (i.e, reflective thinking and systematic) that need to be practice (Hitchcock, 2015) which can assist to improve and upgrade the ability of students to solve problems at a higher level of thinking. Moreover, Watson Glatser also emphasized the knowledge, skills, and behaviors which can help the graduates in solving the problems with a higher level of thinking

(Fazriyah et al., 2018). Thus, having systematic processes (i.e, identifying, thinking, analyzing, and solving any problem) can increase the ability in thinking among the students.

2.3 RED Model

RED Model was developed by Pearson Education Incorporation in the year 2013 which the acronym of RED stands for Recognize the assumptions, Evaluate the arguments, and Draw conclusions (Boa et al., 2018). This model focuses on how individuals will view the problems based on their assumptions and thoughts. A study by Wulandari & Hindrayani (2021) found that there are some key questions for the RED Model made by Pearson. Firstly, under recognizing the assumptions focused on the questions about what are the main ideas, evidence, needs, key issues, and people involved (Wulandari & Hindrayani, 2021). This is to identify how the individual creates identification on issues or arguments. The next element is evaluating which can be asked what are the pros and cons of solution decided and the consequences that may happen (Wulandari & Hindrayani, 2021). Here is more on focuses through the action taken how it can solve the matters and problems. The last element is to draw the conclusion related with what are the possible conclusion that can be made and what kind of opportunities can be gained (Wulandari & Hindrayani, 2021). Therefore, the individuals need to have a lot of knowledge and a higher level of thinking which to ease them to go through all of the processes in the RED Model.

3. DISCUSSION

This study is to identify which model is the best approach of higher order thinking skills (HOTS) able to attract the employer and organization through the thinking skills. The approach of upgrading higher order thinking skills (HOTS) needs to be done through the teaching and learning process in higher institutions. The most effective model in approaching this skill is Bloom's Taxonomy. This is because under the context of Malaysia the Revised Bloom Taxonomy is used and applied since some levels can reach the ability of higher thinking skills which consists of the cognitive processes (Nabilah et al., 2020). Besides, a study by Rahman et al. (2017) found that this model consists of learning outcomes that focused on the three sets of abilities (i.e, think rationally, think purposefully, and relate effectively with context). This has taken into account a set of abilities that be extrapolated from the Malaysian Education Policy, Objectives of Teaching and Learning English Literature, Taxonomies of Educational Objectives (Rahman et al., 2017). Hence, the model helps especially the students to have rationality and effective thinking skills. Furthermore, this model also has included metacognitive knowledge. A study by (Shah, 2011), employability ratings by the employers in Malaysia more focuses on the ability of the graduates in solving problems. Thus, this model will encourage knowledge of cognition in general which emphasizes strategic and reflective knowledge use in solving problems and tasks (Wilson, 2016). Therefore, this model will lead to improvement and upgrading the ability of thinking skills especially among the students as preparation before they are graduated.

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4. CONCLUSION

There are many models developed by scholars and researchers which to help the students increase their higher order thinking skills (HOTS). This will be as a preparation for them to attract the employer and organization in the labor market due to high competition among the graduates to be employed. Hence, Bloom's Taxonomy has its uniqueness with the processes and major components provided which be as guidelines for the teaching and learning processes. Besides, the Revised Bloom Taxonomy is also an initiative to improve this model based on the concerns and criticism received regarding the implementation of this model. Therefore, the skills needed on how the graduates can contribute towards the organizations and help in achieving the organization's goals.

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