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### The Underlying Fact behind Successful Education with Reinforcement And Engagement

Education is now one of the biggest concerns among all controversial issues around the world. Education will only be presented in inputs like school resources, teacher quality, and family attributes. The output is the measure of student achievement associated with test scores or in the form of evaluation, such as participation. All educational institutions' efforts are trying to maximize students' best performance and nurture potential scholars. The debate on how to educate most effectively can be divided into either improving the facilities, adding activities, or improving teacher qualities. Among all approaches, the majority of methods have implications related to the psychology aspect of learning. Abundant concepts related to conditioning and subconscious learning has been view as practical approaches to education. Therefore, a question is raised about how skills that utilize those psychological concepts can be developed and how enhanced schools, which applied to those psychological concepts, can manage the educational inputs accordingly, measuring students' achievement with a reliable evaluation boundary. While analyzing the educational process, it is inevitable to incorporate subjective evaluation standards that may be build up divisions. It may be only plausible to analyze the objective score of a quiz, test, or exam in academic courses.

Besides the difficulties in dealing with the education from the instructor's perspective, the current educational system's challenges are not merely the incompetency of teachers or institutions, but also the waning attitude and worsening status of students. Thus, it becomes more challenging to teach efficiently, especially when students also face difficulties. The debate encompassing student performance outcomes can also be divided into four categories:

talent, attitude, study environment, and family expectation. A few common issues regarding students' status focus on the starting time of school and efficient memorizing capability. After all, to maximize the best education condition, many teaching methods have been preparing the school period's agenda has been edited or discussed with intensive considerations. **Even though education is sometimes tedious and perplexing for teenagers, which occasionally leads to difficulties in students' study, using techniques such as performing participative and repetitive learning was very valuable in the cultivation of children because it has enormous impacts on the subconscious and psychological concepts of those potential and young scholars.**

#### Perplexing Source for Current Educational System

What is meant by confusing in general when it comes to the question about education? This is the central question that is being asked by both educators and students. There is one common interpretation for the answer to this question, and that is "the underlying meaning of why teaching those academic courses in each way." Many students nowadays are merely learning the concepts teachers taught them in the elective that they are asked to choose one in school life. It limits young scholars' ability to foresee why they should stay in educational institutions and incorporate various courses into their life experiences. It has always been a question for students how theoretical knowledge can be their "capital" to sustain their lives. Teachers should guide students on the meaning of learning, clarifying how the daily study they are experiencing now is related to reality in a practical way. This turned out to be difficult for teachers because most school instructors fail to follow the "objectives" in higher education (Simpson 535).

Most of the time, teachers in schools will design an objective chart for each term or semester to schedule the agenda ahead to regulate the institution's classes. Objectives have essential roles in the teaching process because it helps students determine whether they

understand the knowledge they learned for the past months and because it helps professors set milestones to mark measure periodical achievement and recall the practical connection for why teaching the course.

One reason why today's study is perplexing for students is that instructors fail to utilize the role of objective as institutional planning guidance. Milestones or benchmarks are steps that can be recorded to reach the final goal of a teaching aim. Instructors could clarify the teaching objectives to students from tiny steps to comprehensive aim, so the whole semester becomes more approachable and understandable for students and instructors. The syllabus is a crucial document. However, many professors fail to give the syllabus to students, so they are unaware of each week's distinctive sections. From the student's perspective, they are only learning course content every week that they can't grasp to understand how each week's activity relates to the whole semester's final objective. When the syllabus is regulated at an organizational level, its function can expand to a general statement, including instructional goal, research goal, and public service goal (Simpson 536). In this case, students can benefit from the clear syllabus by knowing how each step is included in the broader program of understanding the semester achievement and make plans accordingly in person. There should be a framework or blueprint of the whole term instead of "pebbles' amassment," which only results in vagueness.

The second reason for being unclear is because of the confusing future among students about applying theoretical knowledge. There is one gap between the 'high ground' of the theoretical knowledge and the 'swamp ground' of the real-world problem (Morgan et al. e10). This gap makes students unsure about the future and how can they transfer what they learned in lecture into the application field in career. The uncertainty on putting application of knowledge becomes more apparent in university than in earlier school. Course contents should require realistic scenarios to encourage professionalization, which means converting

the learned knowledge into practice. The center of the issue should be clarifying the purpose and why teaching these concepts regarding real applications. Failing to elucidate that will only lead to the more perplexing fact of students' study.

Combined with current affairs, COVID-19 is the primary concern for education in many countries. Due to the danger of being infected by the virus, many schools are forced to either shut down or use online lectures. This new form of teaching is also a source of confusion for the study of students. Online lectures are usually lagging. Some students can only reach the last slide of PowerPoint when the teacher's sound has arrived in the next slide. Due to the inconvenience, students will give up to ask for a pause most of the time. Secondly, communication between students and teachers become harder. The students can usually speak out the question and point at the part they don't understand in the classroom. On line, the course will require typing the question even though the lecture is still going on. This sometimes causes students to leave out important information. Teachers also don't know whether teenagers are following or not. They cannot see the confusing facial expression of the students that are apparent in the real classroom. Checking students' following progress also requires time to stop the lecture and type in the questions, and students need to respond accordingly. Sometimes the course is not even in the form of life but in the form of recorded video. This makes communication even harder than life. Researchers propose adding a muddy point on the slide positions soon after the confusion (Glassman et al. 2). Although the effect was beneficial, this technique still cannot be implemented on a large scale.

#### Tedious Source for Current Educational System

Tiredness while learning or working is very common during the day. Some through the coffee to make sure that they are awakened, some try to spend leisure time such as break and lunchtime sleep on the sofa. There are still many cases of falling asleep during class. According to the statistics, over a quarter of high school students report falling asleep in class

at least once per week (Carrell et al. 62). The constant tiredness of students disrupts the educational process. Though, what is the origin of this tedious atmosphere?

Many research pieces have shown that the school's starting time is a critical component of this phenomenon of being tiresome. One misconception among students is "Experiencing long lectures or videos will make people fall asleep." This is not true. There is no cause and effect relationship between boredom and sleepiness. Students yawn or fail to stay conscious because their bodies tell them that they need to rest to recover from brain functioning's highest efficiency. The problem originates from the mistake of adaptation in the body. The mis-adaptation resulted from early school time and irregular sleeping time during the teen years, which can directly cause sleep-deprivation. Melatonin, the hormone regulating sleep cycle, will start being produced around 11 PM and stop being produced around 8 AM (Carrell et al. 64). It is rare for high school students or university students to fall asleep before 11 PM and wake up after 8 AM. The advanced sleep-wake cycle will only interrupt the circadian rhythm of teenagers. The disrupted circadian rhythm is the main reason that leads to daytime fatigue. Feeling fatigued is not a welcomed status of learners because students will miss out on some information when they lose consciousness while nodding their heads during the class. This is one cause of the tedious environment in school. Besides, the sleep cycle, which is being disrupted, can cause depressive mood (Carrell et al. 79). Depression will distract adolescents from concentrating on lessons and leave teenagers in pessimism, causing further harm to their lives, such as suicidal intentions. The conclusion of recent research clarifies the benefit of pushing back school starting time to 8:30 AM will ensure a higher possibility of students staying awake and alert (Watson et al. 624). This will be helpful in the overall academic performance in school. Despite the tremendous benefit of pushing back schedules, institutions remain status quo because of the packed schedule sustained for

decades. The inability to change the severe issue of having sleep-deprived students in the educational system is the chief culprit that leads to a tedious school atmosphere.

#### Repetitive Teaching and Its benefit on Subconscious Level

Hippocampus is a part of the brain that converts short-term memory to long-term memory. For students, the hippocampus must be the most critical brain part because they accumulate knowledge and life experience at the most significant rate among all ages throughout life. Adolescents are in a transformation period due to various factors, including turning into an adult, moving to a new environment, and becoming independent from parents. Experiences have been converted into long-term memory used in later career life on a massive scale through the hippocampus.

Human memory works in two ways. One is in the form of Long-Term memory, which can be stored as experience and knowledge that will be used throughout life. For example, long term memory reserves memory of daily tasks such as how to walk and how to chew. These are all tasks that used all the time repetitively memorize for all years long. On the other hand, short term memory is working memory that only holds the information that has been processing now in temporary cases (Anderson 25). Examples of short term memory include memorizing the casualties in World War I or memorizing ways to calculate the area under a curve in axis, which may appear as test questions for students. Short-term memory doesn't last long if the knowledge is no longer used because it will rapidly decay. This is where the hippocampus will function. By converting short-term memory into long-term memory, the course concepts learned in classes will remain longer. Besides conversions, the hippocampus can also create a link between the past event and future goals, which helps perception skills that also indirectly lead to long-term memory formation (Stokes et al. 1838). Long term memory is formed by forming connections between learned knowledge. Teenagers who need to memorize much knowledge during education will frequently create long-term memory.

Their brain will activate the concept learned through position, sequence, or any other outsider objects when they want to recall something. This can be reinforced by repetitively review the knowledge.

Cognitions are crucial for students because they have to learn many abstract concepts through courses in schools. One cognitive theory derived from the research of the hippocampus is related to long-term memory. The cognitive theory is called Ebbinghaus's Forgetting Curve. Ebbinghaus's forgetting curve explains that people tend to remember more time after the second, third, or more exposure to a studied concept (Chun and Heo 56). In other words, people can relearn something faster than before because they still unconsciously possess the image representation in their brain from somewhere before. Based on this research, new learning methods have been developed to enhance students' long-term memory to help them effectively memorize concepts. The new ways of teaching techniques are referenced as Repetitive Learning.

Repetitive learning is very similar to conditioning. It nurtured someone to be accustomed to a habit. This technique has been commonly used in many treatments on drugs and psychological disorders. One derivative method of repetitive learning is Flipped learning, which has been examined and tested carefully in an experiment. In one experiment that applied the Flipped Learning, researchers reinforced the habit of students by reviewing contents of the same thing repeatedly to improve their academic performance (Chun and Heo 56). Students were asked to watch a video tutorial before class as the first exposure. Then they were instructed to do various activities on the same thing in class as the second exposure. After the class, students would write a journal reflection regarding what they had learned as the third exposure (Chun and Heo 57). By presenting the information in various ways repetitively, the students reported that they could memorize more concepts when trying to complete the tests on the subject.

In addition to the hippocampus, other brain parts can also be stimulated from repetition and form lasting memory even for amnesia patients. Medial Temporal Lobe is also associated with learning and conditioning. In a study conducted by Race, researchers indicate that the repetitive stimulus can contribute to specific priming tasks by establishing associations instead of memory (Race 98). This involves the formation of procedural memory. Procedural memory is commonly viewed as muscle memory by the public. Instead of cultivating some specific memory context responses, procedural memory facilitates the "memory of muscle" (Race 103). For instance, when one elder man's vision worsens, it is more difficult for him to see the toothbrush's position every morning. Nevertheless, the man may form procedural memory by doing repetitive acts every morning in his life. His muscle rehearses many times to know how much he should stretch and which direction he should stretch to reach the toothbrush. When the stimulus of "taking the toothbrush" is induced, the response "stretching the muscle in that direction" is triggered. The association between the two is formed not through hippocampus processing, but the response is introduced through the medial temporal lobe. This is also commonly known as non-declarative memory that will be extracted through the subconscious level.

How can association and muscle memory relate to education? The examination of procedural memory is a precursor of the implicit memory test (Murre and Dros 20). This means to test if the person has the remaining image of learned concepts even without conscious awareness. Students can also apply non-declarative procedural memory while memorizing course content by doing repetitive tasks similar to the toothbrush case. Many educational institutions nowadays, for standardized tests such as SAT and ACT, is utilizing the repetitive recall association as a beneficial teaching technique. Teachers instruct students to practice answering questions repetitively on the past test paper. When it comes to a challenging question such as analyzing "the author's emotion," procedural memory will be



induced. There is no specific sign word for test-takers to memorize as an indication of the memory because it varies among all articles and lack a universal conclusion. Some may have the sense of detecting the emotion through words, but not all students have the ability to do that. Nonetheless, other students who have no such capability may recall a similar article they read before that has the same emotional response in general through the procedural memory previously formed. When the state of doing that question coincides with the current test, the response is introduced through instinct or association. It helps the students to answer the question effectively. This is also known as Long-Term Potentiation.

#### Participative Teaching and Its benefit on Psychological Level

Many schools apply the evaluation of "participation" in the overall grade of students. Why is participation so meaningful? The primary intents of grading participation are to ensure students' accountability (reading the required articles or not?), involve more learners, stimulate thinking, and incite contemplation (Jones 60). All of those reasons can be reasons why participation is crucial for students. Also, participation is a means to push to higher-level thinking by forcing students to do easy tasks actively. By reinforcing the participation of teenagers, the following educational technique related to participative education can be implemented.

There is a term called Mood Congruent Memory. It means that when a person's emotion is bridging a moment's mood in the past, they can recall the memory of the particular past. Then how does this link to the education process? Participative education has benefits in three aspects: mimicking the realities, attracting students' s interests, and forming memory.

Mimicking realities is one of the central aims of education. Although students learn much theoretical knowledge in the classroom, they lack the experience to apply them in the real field. In the real field, some emergencies change without implications. This requires the ability of students to solve the issue under such circumstances. With participatory education,

students can learn theoretical knowledge and skills, and attitude in real cases (Missingham 38). Here is an example. When a student is asked to calculate the hypotenuse's angle in a right triangle, he or she may calculate it by using trigonometry learned in the lessons. However, they may not be aware of the real cases that they can use the same knowledge. Positioning a plank when moving to a new home is a real case that may use trigonometry. Suppose the same student is asked to place a plank in his or her room as a stand used, without doing application questions in participative learning. In that case, the students may be harshly aware that such a case is the same as calculating the hypotenuse angle. It is only because the contexts are different. Participative learning exists in mathematic books for many occasions as application questions. Adding context and letting the students participate in the real scenario establishes the connection between theoretical knowledge and real cases.

In those trivial cases of daily life, applying theoretical knowledge to a career in a more significant community is also improved through participative learning. Today, many schools are trying to let students participate in the social community and doing services, which is an example of participative education. Experiencing or participating in the community cultivates, the capability to assert one's idea, develop decision-making, and implement the actions, which are all useful in future employment. Participating in real cases can create scenarios or difficulties that students may face in the future, such as an emergency. Providing the chance to contact communities is a useful checkpoint for teachers to assess whether they fully interpreted their knowledge. For instance, a medical student may face being taught to face emergencies such as running out of a type of blood. The method of handling this situation may have been covered while learning the course. However, the person can be so panic that they forget the patience of handling this situation. Community service is an example of participative learning that apply theory to realities by doing similar things or doing an internship to observe how professional act in emergent cases. The course

that learns about the culture of the Researcher indicates that pedagogy must contain the appreciation of participatory activity so that critical thinking skills of applying abstract can be cultivated (Rönnlund 17).

Attracting students' interest is another point that incorporates in participative learning. Game is the most common entertainment in this generation due to its various experiences that players can try through fictional conditions. When education is in the form of the participating game, students will be interested in focusing on the game. The learned knowledge hidden in the game will also be memorized through the process even though the game participants are not aiming to do so. One research has shown that the experiment participants can memorize more efficiently because they are immersing the role with preoccupation (Bekebrede et al. 1528). One popular game in China recently called Genshin Impact mimics the real-world situation vividly and implies scientific knowledge through detailed images or the character's reaction. One case in the game is that the character will lose a few "lives" when he swims and then fight with an electric slime. This is because water is a great electricity conductor.

Like role play, teenagers, while experiencing the sense of being fully participated in a character, will remember the content more clearly. One research taught students to figure out the number of siblings in a household. The question asked is "how will you count your siblings when you go to the back yard?" and "how can you solve the problem for them" (Francis et al. 234)? Using those phrases in the question, the students feel that they have a position in the scenario to solve the issue more effectively. If they solve the problem, they will feel the achievement that is closely related to reality. When a mother is trying to ask her child to clean up the room's mess, she shouldn't get angry. Alternatively, she can ask her child, "Can you teach the mother how to clean up the mess?" to motivate the child because they like the sense of superiority when teaching their mom. It is an achievement for them.

Letting students participate in the case by shifting the perspective is relatively useful in education.

In conclusion, teenagers are surrounded by education when they were young, and education is almost the most crucial part of forming their experiences and personality. Education tasks are performed through many channels, including parents, educational institutions, and friends. However, education nowadays faces difficulties because it is too tedious and confusing for students to understand the concept. It is perplexing mainly because students have a sense of the gap between application and theoretical knowledge, unable to grasp the objective of learning a course. It is tedious mainly because of the early school starting time. The way to solve the problem is to use repetitive Learning and participative Learning because applying these two teaching methods and subconsciously and psychologically influences the concept positively learned.

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