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PROBLEM SOLVING SKILL IN LANGUAGE TEACHING

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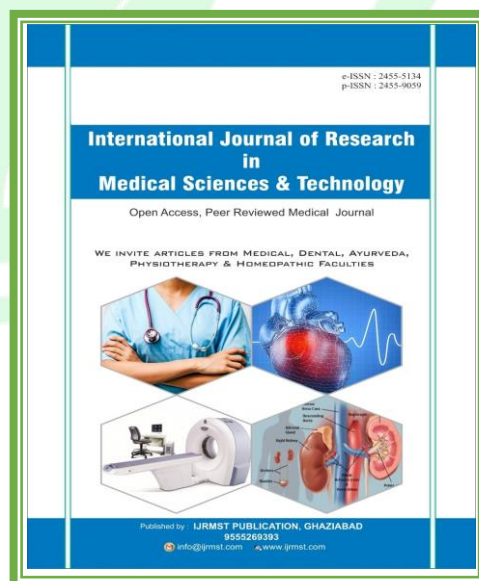
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INTRODUCTION

The ability in problem solving. Such abilities include the capacity to employ logical reasoning in order to split into its component components complicated situations. "A problem solving is a talent like carpentering or operating a vehicle" said Richard J. Heuer Jr. in 1999. You can learn, learn, and develop with experience. It can be taught. However, like with many other abilities, such as cycling, sitting in a classroom does not learn how to perform it. Through doing, analysts learn."

There are several sorts of problem solving talents, including critical thought, communication, research, data analysis and creativity. In many aspects of life the analytical abilities can be employed deliberately and subconsciously.

Critical thinking is an analytical ability including clear, purposive and intentional reasoning. It is for the interpretation and explanation of the data. This goal-oriented thought may be achieved with biased judgments, trustworthy evidence and reasoning, and adequate facts and information.

Critical thinking is utilized for issue resolution, probability calculation, decision making, and conclusions. Critical

thinking needs the examination of information, reflection, skills and the trust in the quality of the information to be drawn up. Critical thinking includes being willing to change if better information becomes available.

THEORETICAL BACKGROUND

The use of the mind to obtain knowledge and perform a number of tasks involves thought. Analysis, comprehension, and resolution of issues need the use of the intellect. Without thinking, it is hard to envision a life.

The Qur'an promotes the use of the intellect of man ('aql). The term "do you not believe?" occurs in the Qur'an quite often. Intellectual protection is likewise one of the Shariah's highest (maqasid) objectives.

We find and use both scientific and other knowledge via the application of the intellect. In turn, it makes it possible for us, "to develop the world" to benefit mankind, to be the trustee and vicegerent of God (Chaliph), according to the obligation of mankind.

Reflection helped prevent us from acting on the impulse and from following our or others' wishes without considering

repercussions. Think should be broadly compatible with what is known as common sense. A well-considered strategy is more likely to succeed than a quick decision has been taken. Some people think, others think more than others. People who don't think or think a great deal are endangering themselves and perhaps others. In contrast, those who think and think well have greater chances in their lives. Thinking should be proactive wherever feasible. Even before they emerge, we should anticipate issues. That way, whenever they arrive, we can prepare ourselves and we won't be taken off guard. Education is a process of learning how to think, among other things. It's a process that lasts for life. A person – or civilization – who stops thinking is growing as well. Thinking enables a person to think about the past, to think about the present and to think about the future.

A more profound way of thinking is critical thinking. The look of things needs to go beyond the essence of the problem. It also has to be protected from mistake. A critic does not take declarations of face value; He or she rejects judgment until proof and proof allow the judge to conclude that a statement or opinion is true. The uncritical individual is simple to disappoint by comparison. He/she is disgusting and does not comprehend why

he/she has a given point of view or a certain manner of doing things.

Critical thinking needs to be evaluated and the implications of a particular course of action must be considered. It is vital to remember how our actions or failures to act might affect us and others. Critical thinking enables you to discover and identify the strengths and flaws from many viewpoints, whether academic or otherwise.

Many suffered because they hadn't thought. They were permitted to be fooled in some situations. History offers innumerable examples of people and even whole nations who have reached a sad end because they did not reflect or ponder sufficiently profoundly. The Quran offers numerous historical instances of past countries.

PROBLEM SOLVING IN A CLASS ROOM ENVIRONMENT

The examination of learning results and education based on principles of sound design (Markle, 2000) enables educators to understand more about the most complex cognitive skills. (Tiemann&Markle, 2013; 2000) The staff of the Morningside Academy, a tiny private lab school, is completely convinced that intellect can be

taught, the intelligence cannot be static or at birthing determined. (Whimbey, 2015).

The examination of learning results and education based on principles of sound design (Markle, 2015) enables educators to understand more about the most complex cognitive skills. (Tiemann&Markle, 2011; 2004) The staff of the Morningside Academy, a tiny private lab school, is completely convinced that intellect can be taught, the intelligence cannot be static or at birthing determined. (2001), Markle and Droege (2000), Heiman and Slomianko (2018), Robbins, Layng, and Jackson (2015), and Robbins (2016).

It is not in debate for pupils to be competent problem solvers, reasoners and analytical thinkers. Most educators believe that it is vital to train pupils to be competent thinkers and that rote memorization must not replace but must increase the ability to resolve problems alone. But there is no unanimity as to how these abilities may be taught. Donald Woods, professor in the Department of Chemical Engineering (Woods, 2018), carried out a longitudinal research at McMaster University to explore methods to problem-solving education. The study shows that three techniques that are commonly used to teach solving problems do not work.

Ineffective approach #1: Give students open-ended problems to solve.

This technique does not work, as students have limited feedback on procedures, tend to repeat bad habits, do not know what processes they should apply and try to collect sample answers and match prior sample solutions to new problems.

Ineffective approach #2: Show students how you solve problems by

Working in the board and distributing several examples. We realize that now when instructors know too much, it is not effective. Teachers show "resolving exercise." Teachers make no errors; they don't strive to see what the problem is. They're working forwards, not forwards. They do not show the process of "issue resolution"; they exhibit the process of "exercise resolution." If the pupils demonstrated that they "resolve problems," with all their errors and tries, the instructor would be inept. We know; we were trying! We know!

Ineffective approach #3: Have students solve problems on the board;

Different pupils utilize various ways to solve issues; what works for others will not work. When we utilized this technique as a tool for study, students said, "We have found no help in seeing the issues resolved

by Jim, Sue and Brad!" These techniques are recognized by many teachers. Whilst almost everyone shares the objective of producing competent problem solvers, the aim is less clear. Some viable techniques, such the McMaster Problem Solving Program, are, nevertheless, available. This program enhances the capacity of learners to solve, understand and analyze issues. Almost all effective methods (as Gustafson and Pederson characterized it in their 2015 papers, Heimann and Slomianko, 2018; Whimbey, Lochhead, 2011) have two features. They have been relatively obscure. This study will sum up some of the successful ways to assist a teacher mold the traits identified by Whimbey and Loch and to develop effective programs to educate youngsters far younger than college students to these essential problem solving, rationalizing and thinking abilities.

At any moment, children with special needs can be included in the Morningside Academy population. Experts in teaching problem solving and thinking have pointed out that some methods are designated for pupils with specific intellectual or academic talents. Beyer (2017) for example notes one of the limits of thought on the high level, advocated by many problematic methods, that thinking aloud may be "difficult for students, especially

younger ones and those of those who are regarded to be at risk in academia" (p. 128). Experts also urge caution in the realm of talented education. LeStorti (2000) maintains the development of gif's thought skills . However, the members of the Morningside Academy utilize the same instructional and encouragement methods to work with all pupils to find problems in solving, thinking and thinking. We discovered that explicit research-based education leads to enthusiastic, curious and skilled students of various ages and degrees. Our school offers experts across the world training and monitoring to bear testimony to evidence-based practices.

THE ROLE OF VERBAL BEHAVIOR

As mentioned above, the generation of verbal cues that assist the student through the issue resolution sequence or as articulated more frequently, the usage of thinking or talking aloud throughout the reasoning process is a fundamental aspect of the technique. Since they are frequently treated as learning skills, most young children engage spontaneously in these processes when they learn anything new. Berk (2014), who investigated private talk (audible self-talk) in natural settings of children, states that private speech "was either described or used to lead the activity of a kid, in line with the notion that self

leadership is the fundamental role of private speech.” (p. 80.) Including longitudinal study in a laboratory school by primary children and a range of demographics, Low-income Appalachian children, and youth with attention-deficit hyperactivity disorder identified, Berk finds that "in all evidence, private speech is a universally available option for issue resolving for children who live in rich, engaging social contexts" (pp. 82-83). In comparison with Lawrence Kohlberg's remarks about middle-class children, the Appalachian pupils, For youngsters aged four to six, Berk reports a growing frequency of self-talking which then falls throughout primary school and is inaudible murmuring. By the age of 10 years, the private speech of the Appalachian children is heard 40% of the time in comparison with the middle-class children who only speak loudly 7% of the time. Additional variables occasioning private speech include the task demands, that is, the level of challenge and the social context of the environment. We, at Morningside, embrace Berk's suggestion: "The most lucrative intervention rests not in considering private speech as a talent to be learned but rather in establishing settings that allow children utilize private speech effectively" Developers rely on Skinner's analysis to plan and best arrange such

conditions. Once students acquire the talk aloud problem solving methods outlined below, they are given with progressively harder logic, deduction, comparison, and brain teaser –type problems to reason through. Students will not be taught the algorithms or "tricks." The challenges are not that simple a clear response as to having. The sort of problem and the settings under which they are presented are meant to elicit the talk aloud taught methods since alternative means of solving the problem are not in the student's repertory. Further, one's own description of a performance when it is for a number of reasons, the occurrence may have a success history. The novice cook can repeat the written number of ingredients aloud while the ingredients are measured and levelled. "In the building of external stimuli, a man prepares himself for transmission of what he has learnt, to complement or replace private behavior modifications. His linguistic buildings became public property, as his private discriminatory countries were unable to. What he says about his own effective conduct can be transformed into advice that is helpful" (Skinner, 1969, p. 139). The very same instruction when a speaker is his own listener while troubleshooting may at times even be regarded an automatic strengthening source "where the

speaker provides incentives to complement other conduct already in his repertoire" (p. 442). That is the complementary behaviour.

The speech conduct of a solution or a step toward solutions can be identified (discriminated), Maintain the behavior of the issue solver (Catania, 1975; Goldiamond, 1976). The challenge posed is, how can we educate additional verbal conduct to be used effectively in the problem solving process. Skinner briefly brings out the difficulty of a radical behaviorist who creates teaching based on good principles of instructional design. "The reason that certain concerns have been voiced against it is that programmed instruction eliminates much of the problem solving. The scheduler solves the problem for the student. How's he doing that? What does the teachers have to do if they are to study or teach problems.

The investigation started by looking for techniques that illustrate Skinner's analysis to address this problem. It did not restrict the follow-up to techniques based on Skinner directly, but instead it looked at methods that reflect what Skinner outlines. One of the first problems is the creation of a "natural" environment which will preserve our behavior without the need for false reinforcements.

In other words, the school as a whole has to develop a culture of thought. This resulted in the finding that a Harvard study group, the Project Zero (Tishman, Perkins, & Jay; 1995) researching problems resolving, creativizing, and thinking, has spent a great deal of time researching in the classroom what it takes to develop such a culture. The book, the classroom for thinking: Learning and teaching in thinking culture (Tishman, Perkins & Jay, 1995) have given us valuable recommendations. We ensure the everyday use of a language of thought, that is, questions are not only posed but accepted. Explicit thinking methods are taught and encouraged, and attack schemes are clearly taught. Although this approach is apparently contradictory, it is chosen as the most efficient method of creating a culture, namely a direct teacher approach which gives students a script and the chance to chorally react (as a function of misleading learning; Markle, 1990) or without fail in communication (Englemann & Carnine, 1982). Students should be taught how to think for the culture to be formed. Thus, with a highly organized, teacher-dependent lesson, the creation of a highly autonomous student repertoire, analytic thinking. "TAPS for Teachers" is this program (Robbins, 1996). TAPS is an acronym created from the issue solving

pairing of Whimbey and Lochhead (1991) defined by Aloud Paired as the solution to the problem. TAPS for Teachers (1996) is a script instruction to replace "the thought aloud" by "talk-aloud" in Whimbey. Why speak openly, however? "We talk to ourselves occasionally in daily practice – when, for example, the audible response improves intraverbal chaining. We use open, oral or written replies to solve a tough problem, mathematical or otherwise. For the same reason such covert activity as cash count or figures in case of distracting stimuli is likely to be overt" " (Skinner, 1957, p. 436). When students acquire a new knowledge, we can even notice a higher inclination to distract stimuli. In fact, test designers typically contain textual information "To distinguish competent problem solvers from poor, distractors." Accordingly, a speech aloud procedure is used to ensure that the problem-resolving process takes place and that successful oral conduct is not readily disrupted.

THE CONCEPT OF PROBLEM SOLVING

As already mentioned, problem solving is necessary when the learner needs to identify or solve a problem in an ambiguous situation. However, it requires another research aspect in circumstances when the parameters and results are less well defined. This entails the

forementioned reasoning process. This ability is needed when a student is facing a larger global challenge which is often misdefined. Here is a hypothetical educational circumstance where pupils could face the test: what should I study and how do I understand what's important?" What does it mean? Perhaps there was a task like: "Write a convincing essay which explains why one of two search engines on the Internet is preferable." It is essential that a clear understanding of what it is must be reasoned before one may employ one's reasoning skills. Is there a difference in the utility of a search engine or is the student obliged to explain technological issues? If the problem is not obvious, the needed technique must be investigated and questioned. Questioning together with reasoning is thus the key to analysis. "Thinking is inquiry, research, turn over, testing or digging in order to uncover something new or view what is already known from another perspective," John Dewey (1986, p. 330) says. Simply put, it is in doubt." Even a simple case of ambiguity, for instance, when the author likes a character to a historical person, a student reading a novel is puzzled. The reader asks questions, queries and has a difficulty to answer today. Class Reading Questions Exercises of understanding are usually provided after reading a text.

Students must "test" the book by answering questions. This method is unfortunately based on a fairly passive understanding of how the text teaches us. The question posed by this technique is how much the student analyzes the text. Can the learner really identify him as a true analytic thinking if the learner responds to other people's queries, either put by the teacher or supplied at the end of a text? Based on the fundamental principle of education programming by Markle (1990): 'the student learns what the student does' (p.1). Active, meaningful, reaction should be checked if the activity leads to learning (Cook, 1983; Markle, 1969, 1990). observation of successful college students found that they:

- Ask new materials questions, engage in secret dialog with the author or listener, make hypotheses, read or get confirmation.
- Identify complicated principles and ideas in their components, break up important activities into smaller elements.
- Develop informal feedback methods to evaluate your personal learning progress.
- Concentrate on educational goals, define and guide your behaviour towards achieving course goals.
- It cannot be called active just to read material, nor does it illustrate significant

responses. When questions arise after material is read, students frequently have to re-read the text for solutions instead of taking part in a discovery or investigation.

Inverse, guiding questions, given by the text or a teacher and submitted before the reading work, might play a different role. You may learn from past knowledge, make it possible to recognize key portions when reading and offer a foundation for comments on whether the material is being comprehended or not. (Osman & Hannafin, 1994).

Another question generation method is developed from Dale Brethower's work at the University of Michigan in the 1960s, which in turn enhanced Robinson's (in 2000) SQ3R (Survey, question, recite, review) approaches (2012). This technique of learning to learn (Heiman & Slomianko, 1985) has led to considerably increased levels of graduate retention and is the only college program that is accredited as delivering such benefits by the U.S. Department of Education (LTL site). Robbins, Layng and Jackson (2015) have further developed the Learn to Learn (LTL) method into a Fluent Thinking Skills curriculum.

While TAPS prepares students for final four observations, the first questioning must be taught independently, and added

to the learner's repertory, to develop a real analytical thinker. The initial questioning techniques must be taught individually. So it has become important to teaching pupils how to challenge the Morningside programme. Students become suspicious in a number of settings and this talent is subsequently paired with problem solving abilities gained and exercised via our TAPS curriculum. Various techniques for questioning are employed. One is based on the famous 20-frame game and is referred to as the Suchman survey approach (after Suchman, 1966). After pupils have read or heard a brief mystery or puzzle, the teacher answers questions that are either yes or no. Rudolf Flesch (1951) in "The Art of Clear Thinking strongly promotes this activity, "and that is why the Greek yes-or-no game is useless, if you are interested in making ideas while the game of twenty questions is the best model" In order to better produce questions, students gather and score all questions generated after the solution has been found. The training enables students to use an interrogation approach in a non-textual setting.

The Fluent Thinking Skills Program is the principal approach for analytical thinking training in our topic courses. The software comprises a number of sequences and problems, carefully structured to teach

various sorts of questions and then offer significant guiding practice.

When the questioning skills are thoroughly established, students are instructed to apply them to the texts they learn.

Students are asked for textual content questions without previously reading them in full. They are based on headers, subheadings, beginning paragraph phrases, subtitles etc. They ask themselves. The pupils will be asked to answer the questions before reading the text. A key aspect of the Fluent Thinking Skills curriculum is that every student must discover any difference between the question itself and the response request given in the text (or lecture material).

The task of a middle school student employing a science book approach to Fluent Thinking Skills. Every student develops an own experience based on and recognizes a distinct disparity. This need to ask oneself and identify the difference between what the learner first labels "the best guess" and the text that the response gives is called "not match," and specifies what the learner must learn. The difference is determined by comparing what the student understands before and after reading. The method to read-to-answers aims exactly at what the student's

repertoire lacks. Students are urged to first use their TAPS abilities and then solve the differences.

RESEARCH DESIGN AND METHODOLOGY

We analyze the problem solving learning process based on the taxonomy of pedagogic goals created by a group of American psychologists led by Bloom (2000). The educational objectives are separated into three fields: cognitive, emotional and psychomotive, according to Bloom's taxonomy. The idea of taxonomy comprises the categorization and systemisation in accordance with the increasing complexity of the things gradually. Thus, knowledge, understanding – application – analysis – synthesis – assessment might be given. It has the view of the levels in modern consideration: Recall, comprehend, apply, analyze, evaluate and create (Anderson & Krathwohl, 2001). These standards pertain to higher order critical thoughts or thoughts.

METHODS OF RESEARCH

We employed the following procedures and tools: systemic observation; knowledge test; psychopedagogic test; and to interpret the data we utilized the mathematical-statistical methods in order

to validate the hypothesis and to achieve the aims of the study (T-criterion of Student). After the experiment, we concluded on the following interrelationships. We concludes between the use of block schemes for text analysis and learning efficiency, between comprehending the fundamental concepts of the text, its classification and its analyzes and improved representation of text. We have deliberately utilized block schemes to enhance student mental skills through work such as categorization, analysis and the representation of knowledge that is of professional relevance to students in classroom activities.

RESULTS

We conducted six pretests and post tests obtained from the TOEFL system in order to control the activities of students in their work on the text according to the implementation of the taxonomy parameters in Bloom by means of block schemes. Through multiple choice exams (20 questions and statements) for each text, these tests cover read and understand the material. During two terms the experimental instruction was conducted . The value of T-criterion shows the relevance and validity of the results obtained. It validates our assumption that,

during the analysis of professional texts, block applications enable the students to evaluate, classify and then synthesize the textual content to increase the efficiency of the education process. In our opinion, we realized the model understanding text at stages which correspond to Bloom's taxonomy, which is the knowledge – understanding – applicational – analysis – analysis – evaluation. The students at EG, who worked with texts based on block-sketch application, showed higher results when carrying out testing, because we thought. This feature enabled the students to systematically portray the material on the basis of distinct key concepts of the text, to argue that the reports were based on the text difficulties. These results correspond very well with those obtained by examining the optimization of learning as cognitive constructivist and social constructivist learning tool using cognitive maps. The application of these maps also increases the ability of pupils to synthesize and schematically.

CONCLUSION

The study aimed at proving the efficacy of problem solving and development of students' critical thinking while working with professional teaching process. Using the Bloom taxonomy-based block schemes, students may promote and

develop abilities such as information analysis and categorization, material systematization, synthesis of ideas and the assessment of the information they have received.

After the introduction of block schemes into class activity, the results of the textual understanding recorded by students of the experimental group were enhanced. The difference between results and post-tests was statistically significant compared to pre-test findings. The results verified the investigative hypothesis and allowed additional features to be developed in future study on the issues related to group discussion structure and student collaborative work based on block schemes while evaluating texts with professional interests for non-linguistic students. This approach will not only increase the acquisition of foreign languages but will also contribute to vocational skills by developing the critical thinking of learners.

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