"Good Thinking for Great Teaching and Learning"

Dr A Ra Sivakumaran

Associate Professor
Head
Tamil Language and Culture Division
Assistant Head
Asian Languages and Cultures
National Institute of Education
Nanyang Technological University
Singapore

The world today is under the thinking ability's effect. Many classes have been conducted to teach how to think, it is stressed here that the ABILITY TO THINK is the basis of all the teaching and learning process. When a teacher plans his teaching based on this skill, it paves way for perfect teaching. Before we proceed to perfect teaching, let us have a brief look at thinking abilities.

Thinking is a natural activity which is done by everyone. The seeds of thinking are sowed when man started to drop things he doesn't like and started to search for his desired things. The seed has grown into a tree today. At this juncture, many western scholars today express various aspects of this ability. Dr.Robert.J. Swartz categorizes thinking into 17 categories. Researchers after him have categorized thinking skills into various other categorizes.'Marzano' mentions eight basic points of thinking. They are focusing, information gathering, remembering, organizing, analyzing, gathering, integrating and evaluating. Now let us see how can we betterment teaching with focusing.

Focusing

Focusing is the basis of all activities. There are two kinds of focusing,

- 1) Focusing on Problem or activity
- 2) Focusing on programme for the solution or finding a goal for the programme.

There are two ways of setting goals. They are long-term and short-term goals.

A teacher who enters the class must have both these goals. He must have a focused idea about the aims to which the pupils are led and the hindrances to achieve them. A teacher might have taught a lesson for years and may be very good at that particular teaching unit, but this will not ensure that his pupil understood his lesson clearly. As every year new pupil enters the school, they come in with varied learning skills and perceptional abilities. In this context if the teacher follows the same teaching techniques which he followed in the previous years, it might not be effective in delivering the learning objective. This kind of realization is necessary for a teacher. While planning the lesson unit, the teacher must decide on his teaching techniques through the pupil's perception, their attitude towards learning and their aptitude.

A teacher who wishes to complete a lesson within a particular period of time is not doing his duty. It is clear that he is not duty bound. This is not an ideal approach to the teaching and learning process. As the proverb "Give alms according to the vessel", a teacher should have a clear idea about his learner's mood, time and place. How much the students understood is important than telling them the best ideas. These facts should be considered, and problems which hinder the pupil's understanding should be paid due attention. The teacher must overcome those problems. This is where Creative decision making and problem solving skills are important for a teacher. A teacher has to understand how to teach pupils to overcome certain problem, which he or she might face during a physical education lesson. For example, the teacher could have taught the most effective dribbling skill during a basketball class but the pupil might have difficulty in executing it. This could be overcome if the teacher breaks the entire movement into smaller steps rather than just demonstrating it in one swift movement.

The next thing a teacher should concentrate on is the goals he wants to reach in a particular class. This goal may vary for each class. (He should focus on the reasons for this varied needs and goals). Factors such as the time necessary to attain these goals and the short-term plans to reach that goal should also be decided before conducting a class. He should also know the specific objective for the class. How should he design lessons to achieve that goal? Have the pupils achieved that particular goal in that particular class? What are the assessment methods and tools to be used to measure the outcome? Teaching and learning process is at its best only when a teacher has answered all of the above questions. This is where cognitive science comes in handy to teachers who are conducting physical education classes.

Focusing is one of the thinking skills that Marzano mentions. "Focusing," helps us in the planning of lesson, which is the heartbeat of teaching.

Planning is the process which lists down how a particular action is to be done in a certain sequence or a proper method. Therefore it requires a clear-cut understanding of the following basic factors.

- 1) A definite goal
- 2) Deciding the time schedule
- 3) Finding the steps to achieve the goal
- 4) Finding out the activates which are necessary to achieve the goals
- 5) If the goal is not achieved finding out the reasons for the failure

Sometimes the activities may not be up to our expectations. The reasons for these kinds of experiences are the result of faulty planning.

Amazon's AGO represents Aims, Goals and Objectives. Though these three words are synonymous, they are different in usage. Even if the goal is achieved in a long term, the aim of the teacher who wishes to achieve it may be different in different periods. Generally speaking, a teacher wishes that the learners understood the lesson unit well. But sometimes it becomes necessary that all pupils in the class understand the lesson unit thoroughly. For instance, a teacher who teaches physical education for a class for an hour must ensure that his specific objective for that day is fulfilled, as his lesson of that day would form the basis for upcoming lessons about physical education. So his lessons should be understood by every one, without doubts. This is very important. In this light his aim for this class should differ from other classes and due weight should be given for that particular period. Consequence is a factor in finding out the activities which help to achieve the goal. i.e. a teacher should know the problems of the pupil if they didn't master the basic skills. This should be taken care while planning the lesson. That is if a student fails to achieve the basic skills, the teacher should have foreseen and planned what he must do to achieve it. He should have clear idea about what to conduct in the remedial class and for whom such classes should be conducted. For example, if a student is not able to do a "Standing Broad Jump," due to not understanding how to gain momentum when jumping he should not be made to do activities which focuses on strengthening core muscles.

In accordance to Marzano, "CAF" is defined as considering all factors. By taking care of all factors that are related to the problem it helps us to find out ways which will better the teaching. By paying attention to things like sports facilities, ventilation, space, and the state of the electronic teaching aids, how pupil are arranged (e.g. semi circular, circular or group by group), the place of the activity, mood and dynamics of the students, the session in which the class is conducted, the physical education class can be more effective.

The last factor is Marzano's focusing PMI (plus, minus, interest). The Positive and Negative factors should be taken into interest. We know the positive and negative activates in our activities. At the same time it gives us the factor that should be taken care in the successive plan. If we follow Focusing, one of the eight thinking skills of Marzano it will help us to betterment our preparation and planning which is the heart and soul of teaching. This shows that the success of a lesson relays on planning and it is not merely an exaggeration.

The next part of the good teaching is questioning. Questioning fosters the thinking ability of the pupils. Bloom (1956) classified questions in to three kinds in view with the educational goals. They are low level questions, medium questions and high level questions. A teacher must be skilled in the usage of the questions. As questions are the vital part of teaching, a teacher must be skilled in using them. Only then the quality of education will improve (Hollingsworth 1982) another research says that the teachers who are good at questioning are also good at teaching. (Dr. K. Ramiah) good questioning methods are also considered to be an effective tool in cognitive development.

The teacher should avoid giving long monotony lectures. He should allow pupils to learn by "using the hands on methods," and by giving clear explanations and ask questions properly. The learners will joyously take part in the activity through all these methods. Detailed explanation without adequate activities to the pupils will not be a successful teaching. Dr. K. Ramiah (1998) clearly states this. This is echoed by Jurgen Klinsmann, in his coaching manual for children under the age of 14 years old.

Teaching and learning is not a one-way process; it's a two way process. When the lesson unit is explained through provoking questions it is understood very well. When the pupils are thinking of an answer, the teacher can make it sure that the pupils are concentrating on the lesson unit. Particularly when the high level questions are used in the class the thinking ability is improved in the students and thus improves the teaching and learning activities. For example, it is only through questioning coaches prompt their students to think what they could have done right during a match to avoid conceding a point. There are three stages in the high level questioning. They are Division, Collection and Evolution.

High-level questions can be like this

Division Type Questions

- 1) State the main purpose of P.E. lessons
- 2) What are the techniques or movement that could have been done to "open the court," during a Tennis match?
- 3) Why did the training or match end up like that?

Collection Type Questions

Many answers can be given to these types of question forms. The students have to put on their thinking caps to answers these types of questions from various sources.

e.g. 1) List out ways to improve your physical and mental health?

Evaluation Type Questions

A particular criteria is taken into account when we come to a conclusion e.g. How does playing "Kabadi," improves Rugby skills, why?

Questions like these improve the thinking ability in pupils. Though the lesson is a challenging one, simple scaled down questions about the lesson can be put to the students. One question should be asked at a time. Before the teacher asks the next question, pupils should be given enough time to process the concept of the first question. This helps the pupil to understand the objective properly. It also helps the teacher to find how far the pupil has understood the concept, and the issues which caused hindrance in understanding the lesson objective.

Conclusion

Thinking skill is the basis of teaching and learning process. It can be improved when the teacher deeply thinks over every factor of the process and teaches in accordance with the mood of the learners. Teaching and learning process is a continuous one. Teaching techniques must be formed with this kind of realization and they should adapt to learners requirements. Teaching is done well when the teaching methods are changed in accordance with the time, place and situation. Teaching learning process will be fine when the teachers and students develop thinking skill, which is indeed the basis of every skill.

'Think before you act'

Refernce Books

- 1. Ramiah Kalimuthu, An investigation of teachers' questions and learners' responses during classroom interaction in Tamil secondary classes in Singapore. (PhD Thesis not published) 1996.
- 2. Michael D Williams (Editor). <u>Intergrating Technology into Teaching and Learning</u>, Division of Instructional Science, National Institute of Education, Singapore.1999.
- 3. Robert J.Swartz & Sandra parks, <u>Infusing the Teaching of Critical and Creative Thinking into Content Instruction.</u> Critical Thinking Books & Software, U S A. 1994.
- 4. Hollingsworh, Paul M. Questiong the Heart of Teaching. The Clearing House, 1982.
- 5. Bloom, B.S. (Ed). Taxonomy of Educational Objectives. Handbook. The Cognitive Domain, Longman. 1956