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THE EFFECTS OF TEACHING PROGRAM BASED ON COGNITIVE RESEARCH TRUST STRATEGIES ON PERFORMANCE LEVELS OF SWIMMING

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Abstract

Purpose. The development of thinking skills helps in and outside the classroom. Although the main purpose of teaching De Bono thinking skills in education is to improve students' performance and achievement, such skills will also help them in the outside world. Hence, this study aimed to explore the effectiveness of training programs based on court strategies on the performance level of back swimming.

Methods. (40) Undergraduate male and female, mean age 17.4 years from faculty of Physical Education Mansoura University. Divided into equally to two groups, the experimental group comprised of (20) students. The subjects in this group participated in the swimming pool in the CoRT program for eight weeks; group two participated in the swimming class with traditional method (teacher instruction) as a control group. Parameters assessed the high, weight, age and academic level. And all of them were beginners (not practiced swimming sport before).

Results. Results indicated that significant differences were found among the groups in the performance level of back swimming and improved significantly were found among the groups in performance levels of back swimming.

Conclusions. In conclusion, the CoRT strategies could develop the performance level of back swimming for undergraduate students

Key words: CoRT program, Thinking Skills, back swimming.

Introduction

Being a successful swimmer is not just something you do in the water. It follows you everywhere you go in life. Being successful in the pool means thinking successfully out of the pool as well. It means expecting the best - of yourself and of others. It means never being satisfied with anything that is second-rate, but demanding excellence of yourself in all areas of your life. Powerful thoughts. The easiest way to be successful at anything is to become a successful person. This means thinking and behaving the way a successful person would think and behave - and this will always bring good results. When you immerse your subconscious mind into a pool of new thoughts - filled with power, strength, excellence, courage etc., it will begin to automatically steer you in the direction of success. (Craig, 2007)

Development of human thought is gaining its currency. The aim of the educational quality assurance was to enable the learners to think, analyse, create and reflect. However, it was found that the achievement in the learners' ability to think, analyse, synthesize and reflect was low or 18.74%. The percentage of learners to classify and compare information was only 26.24%. The percentage of learners to initiate, predict and determine the target was 36.75%. The root cause could be that teachers did not realize the way to develop the

thinking process. Most of them based the teaching process on the subject matter; as a result, it turned out that the learners who were traditionally taught were unable to deal with the problems in a real world. (Cooper, 2010)

Through different learning and teaching activities, students acquire knowledge about the correct techniques for different swimming strokes and seek ways to improve on specific weaknesses. This cultivates their critical thinking skills. They can also use information technology such as the Internet to collect information and analyse different topics connected with swimming to report on what they have learnt. For example, they may be interested in the characteristics of the buoyancy of our body in water, the origins and development of different strokes, how to choose suitable strokes to match the individuals' physical qualities, etc.

CoRT Program is designed to teach students a set of thinking tools that allow them to get rid consciously patterns of conventional thinking and accepted, in order to see things clearer and wider and development look creative more to solve problems, and learn this program students become thinkers well and striking. It's currently used widely in the world in the courses direct teaching of thinking, where the use of more than seven million students from primary to university

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education in more than thirty countries, including the United States, Britain, Canada, Australia, New Zealand, Venezuela, Japan, Bulgaria, India, Singapore and Malaysia. (Walid, 2004):

Thinking is a process that accompanies humans permanently. Due to humans' need for it, critical thinking skill became a contemporary issue in education because the individual who has this skill is able to think independently, take right decisions and support the social, political and economic systems in his or her community (Cooper, 2010). So, the Knowledge Economy Project focused on critical thinking as one of the strategies of teaching (Eggen, & Kanchak, 2006). Generally, Social Studies curricula and History curriculum, specifically, are considered the fields that focus on critical thinking skills due to the fact that History course help the learner develop his or her critical thinking and solve problems (Zarrillo, 2003). Consequently, educational institutions took care of enriching textbooks and school curricula with critical thinking skills since this is an important part of the process of education development and as an aim among many of education quality (White, 2000). The importance of critical thinking is embodied in the individual's ability to judge, understand, apply, evaluate and compare things and study facts and organize and categorize thoughts to get to the accurate and correct solution (Segal et al., 1985). This means that critical thinking consists of many skills: inference, recognition of assumptions, deduction, interpretation and evaluation of arguments (Lefrancois, 2005). These skills need a thinking development program (Bono, 1994). And, CoRT program is considered the most frequently used programs all over the world in the contemporary time and it consists of six units: breadth, organization, interaction, creativity, information and feeling and action (Bono, 1986).

Mental skills are a rational and reflective mental act on the issues, arguments with utter prudence on the basis of knowledge, ideas and experiences in order to reach a reasonable conclusion. A Mental skill is an advanced level of exercising a mental activity based on the rational principles. It is a crucial tool in learning and leading a valuable life. Several of scholars commonly view that a critical thinking is essential to generate a maximum benefit to learners. It can be used in living a life in the present day world in a creative manner (Lohman, & Woolf, 2001). More importantly, a mental skill plays a vital role to enable a person to think creatively, act reasonably and solve problems more effectively. An ecclesiastical study combined with a formal education is conducted for the Monastic Order. The educational pattern is modeled on the curriculum designated by the Ministry of Education.

History course is taken as one of the courses that contribute in shaping the individual personality and helps in research, correct planning, criticizing, deducing, comparing and getting the lessons (Paul,

1993). Also, the study of history gives the individual the chance to acquire thinking skills, specifically, critical thinking skill (Bono, 1987). Paul emphasizes that citizenship is embodied in the citizen who has critical thinking skill especially in the age of globalization and technological advancement in which information resources are varied and this gave the importance of relating CoRT program with developing critical thinking skills (Tripp, 1980).

The initial lesson in learning the CoRT Program is to become aware of our habitual reactions and to apply the decision to stop. Once we have learned to prevent an unthinking reaction we can choose to apply a response based on reasoned judgment. Responding in this way requires us to attend to ourselves in the present moment. Stopping unthinking habits put us in the position of being able to exercise choice rather than be subservient to unchecked automatic reactions. The radical difference between our normal patterns of behaviour and the process of thinking in activity can be illustrated by the following model. In this model we see how one pathway leads to a pattern of habitual reactions which result in a 'vicious spiral' of misuse, tension and pain. Conversely, by learning to break the habit, we enter into a 'virtuous spiral' of awareness and the freedom to act in a healthy way.

It's not easy to remain constantly alert to ourselves in this way. We are creatures of habit, and not used to the idea that we can renew our self-awareness from second to second. Inevitably, we find ourselves slipping back into habitual reactions and unthinking habits. However, through the practice of the AT it becomes easier to notice the signs of misuse and to respond in an appropriate way. (Craig, 2007)

In physical education lessons, great emphasis is placed on developing the collaboration skills, communication skills, creativity and critical thinking skills. Aesthetic appreciation is also very important. For example, students can learn through physical activities to cooperate with team members and from that point develop their collaboration skills. They can learn to control their emotions when facing unfavorable situations in competitions and thus improve their ability to solve problems. Generic skills and aesthetic appreciation are best cultivated gradually through different learning and teaching activities and situations. The effects of learning and teaching can be observed and improved through different modes of assessment.

Thinking Skills are the mental processes we use to do things like: solve problems, make decisions, ask questions, make plans, pass judgments, organize information and create new ideas.

Often we're not aware of our thinking - it happens automatically - but if we take time to ponder what's going on then we can become more efficient and more creative with our minds.

Due to the importance of thinking for the community and individual, And an important goal of education is



helping students learn how to think more effectively. The demand of the necessity to include thinking skills in university curricula increased specifically History curricula as they are important in making students acquire the mental skills such as analysis, elicitation, interpretation and problem solving in a more effective way. Particularly, students, in our faculty of physical education face many lives and classroom stress that need to think to solve and know what the situation include exactly and this requires focusing hugely on developing thinking skills. Hence, this study aimed to explore the effectiveness of training programs based on CoRT strategies to develop thinking skills and performance level of back movements in swimming.

Material and methods

Participations

(40) Undergraduate male and female, mean age 17.4 years from faculty of Physical Education Mansoura University. Divided into equally to two groups, the experimental group comprised of (20) students. The subjects in this group participated in the swimming pool in the CoRT program for eight weeks; group two participated in the swimming class with traditional method (teacher instruction) as a control group. Parameters assessed the high, weight, age and academic level. And all of them were beginners (not practiced swimming sport before).

All subjects were free of any disorders known to affect performance, such as bone fractures, osteoporosis, diabetes and cardiovascular disease. The participants did not report use of any anti-seizure drugs, and alcohol. And all participants were fully informed about the aims of the study, and gave their voluntary consent before participation. The measurement procedures were in agreement with the ethical human experimentation.

Instruments

Mental strategies test

Design this test each of (A. Mohamed & M. Magda 2002) using a set of reference testing in this area, in order to measure (how to use the player for some strategies mental conditions training and competition), this test contain (9) nine dimensions, namely (building Goals ,self- talk , arousal - positive thinking - control emotional - mechanism - words mood - retail performance - think of duty skill), and includes all after these dimensions on the (8) eight items - except (positive thinking) comprising the (4) Four items only measure each strategies mental conditions both competition and training, and there are statements in the direction of the dimension and the other in the opposite direction dimension, and therefore ensure the test (68) words, and respond to expressions test done on a scale of five (5) gradients (never - rarely - sometimes - often - always). The researchers has Excluding phrases conditions of competition and limit

it only to phrases conditions of training to become total phrases scale (34) a. Has ranged correlation between the degree of each phrase and the overall degree of after to find a true internal consistency of the test between (.578 - .822) in the previous studies, as has been found reliability coefficient test using retail midterm by applying the test (15) players, the value of coefficient ferry link between marital and individual scale in previous studies 0.781, The researcher has to find true internal consistency of the application (20) a student from the same research community, was to find correlation coefficients between scores in each phrase with a total score of its own specified.

The back swimming skills

The participant should be comfortable with face in the water and able to:

- Diving
- Floating and progressive paddle stroke,
- Swim 15ft
- Front and back without assistance.
- Stroke mechanics
- Treading water
- Progressive diving skills
- Underwater swimming skills
- Endurance.

The training program which is based on CoRT strategies:

The researchers designed a training program based on CoRT strategies. After finishing the preparations of this training program, it was referred to 14 specialized referees in the field of social studies curricula and their teaching methodology. In the light of the referee's suggestions,

Infusion across the curriculum. 'The Thinking Curriculum'

Encourage questioning, especially the use of open-ended questions

Encourage thinking aloud to help monitor reasoning and express opinions

Strategies for making group discussion purposeful and promoting a range of speaking and listening e.g. pair talk, listening triads, envoys, snowball, circle time, rainbow groups, jigsaws etc.

Independent and collaborative learning activities, which are linked to improving pupils' self-esteem, allows them to share and discuss strategies

When teachers pose oral questions 'Thinking Time' could be increased

Information and communication technologies provide logical frameworks for enhancing children's thinking, either through individual interactions with computers and multimedia or opportunities for collaborative learning through networks.

Embedding in particular subjects:

A strategy in which every teacher asks 3-5 questions for students to answer at the beginning of every lesson



to remind them of what they learned yesterday, last week 3-4 months ago or even a year ago.

Incorporate thinking skills into Personal and Social Education course from S1-S4; to ensure success staff should volunteer for the role and be interested in the approach

Swimming teaching which focus on the skills required to solve the problems rather than the answers, per se and encourage 'situated learning' i.e. the use of swimming in a real context

Collecting evidence, problem solving, analysis and interpretation are thinking skills well embedded in the teaching of History

Social Studies encourage concept development, the development of the student's vocabulary for talking about thinking

Using talks and group work for generating and evaluating alternative solutions encourages thinking skills in Geography.

Procedures:

Preparing the study tools (CoRT program and the test of mental strategies)

Referring the study tools to the referees to make sure of their viability and truth

Applying and implementing the study tools on the piloting for the calculation of stability

Conducting the pre-test of critical thinking on the subjects of the study

Conducting the study by the researcher. That is the experimental group were taught through the CoRT program and the controlling one was taught through a usual method

Conducting the post-test of critical thinking on the subjects of the study

Doing the statistical analysis and discussing the results

Statistical analysis

All statistical analyses were calculated by the SPSS statistical package. The results are reported as means and standard deviations (SD). Differences between two groups were reported as mean difference $\pm 95\%$ confidence intervals (meandiff $\pm 95\%$ CI). Student's t-test for independent samples was used to determine the differences in mental parameters between the two groups. The $p < 0.05$ was considered as statistically significant.

Results

Table 2. Mean \pm SD and " T" sign. Among two groups (experimental and control) in mental strategies and performance level of swimming skills

Variables	Experimental group		Control group		T sign.
	Pre	Post	Pre	Post	
Building Goals	10.25 \pm 2.36	14.36 \pm 1.69	10.69 \pm 2.09	10.95 \pm 2.04	Sign.
self- talk	7.23 \pm 0.89	8.42 \pm 0.95	7.15 \pm 0.77	7.23 \pm 0.77	Sign.
Arousal	11.78 \pm 1.47	13.07 \pm 1.04	11.35 \pm 1.89	11.39 \pm 1.28	Sign.
Positive thinking	10.91 \pm 2.11	13.14 \pm 2.69	10.41 \pm 2.36	10.34 \pm 2.67	Sign.
Emotional control	10.25 \pm 1.69	11.39 \pm 1.68	10.59 \pm 1.77	10.62 \pm 1.99	Sign.
Mechanism	12.36 \pm 2.54	14.16 \pm 2.84	12.44 \pm 2.12	12.49 \pm 2.71	Sign.
Words mood	11.23 \pm 1.69	13.25 \pm 3.45	11.63 \pm 1.99	11.89 \pm 2.69	Sign.
Retail performance	10.68 \pm 2.63	12.41 \pm 2.45	10.77 \pm 2.78	10.78 \pm 2.24	Sign.
Think of duty skill	12.09 \pm 2.87	14.16 \pm 2.11	12.14 \pm 2.49	12.19 \pm 2.06	Sign.
Performance level of swimming skills	3.26 \pm 0.9	5.00 \pm 0.80*	3.3 \pm 0.8	4.79 \pm 0.60*	Sign.

Table 2 showed that.

Significant differences were found among the groups in mental strategies

Significant differences were found among the groups in back swimming level.

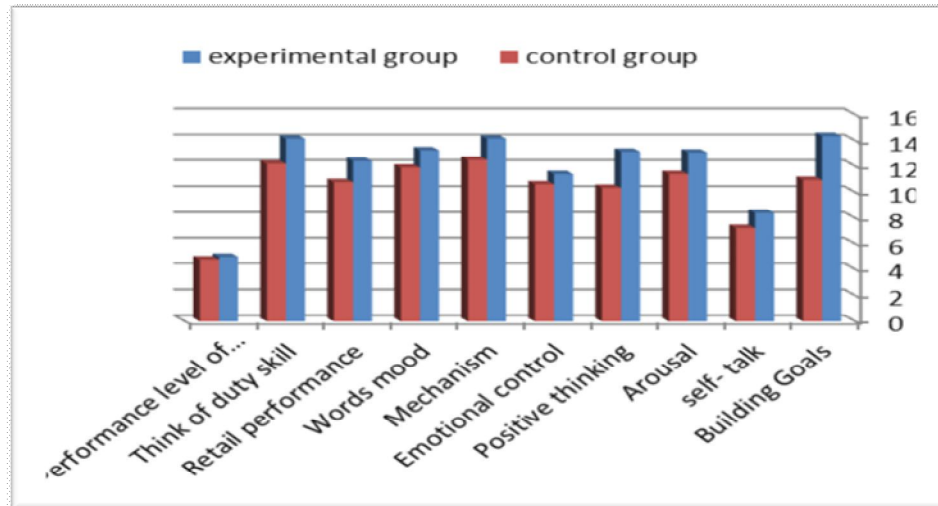


Fig. 1 explain the differences between two groups in mental strategies and the performance level of back swimming

Discussion

Based on the results of this study the t-test showed a statistically significant difference between the post measurements in the experimental group in all mental strategies factors and the performance level of back skills in swimming.

It seems to the researcher that the reasons of these results are: The accurate organization by presenting the training program might have contributed in spreading factor of suspense and draw the attention of students. The researcher noticed that during the application of the study that student showed positive reactions. History course-specially the selected unit-contains lots of difficult concepts that need to be facilitated for students to comprehend. The CoRT program might have contributed to a huge extent in clarifying these concepts and this issue might develop critical thinking skills for students. The CoRT program includes many activities which resulted in having fun, excitement and curiosity for students. The researcher's notes during the application supports this hypothesis as students showed noticeably active interaction with these activities which was reflected positively on their critical thinking. And, the researcher refers this to planning the lessons according to a CoRT based program with more focus on critical thinking skills and applying it in a classroom with more focus on the teaching method that encourages critical thinking as a method of researching and problem solving. This encourages moving students' thinking towards higher thinking skills. (Segal, et al. 1985)

Probably the easiest way to do this is to hang around successful people! For instance, if you are an excellent

swimmer, it is reasonable to say that if you constantly hung around with people you would begin taking on their habits of success, and eventually your results would escalate dramatically.

Of course, you don't have to be in their company to do this; you can find out what the successful swimmers do and begin to make some of their success habits your own. They call this 'modeling success' - which (in swimming) means to copy successful swimmers of your choice and begin to take on some of their success habits which you like, or can identify with.

Another simple way to do this is to ask you regularly "how would handles this?" The chances are that if you take the option you consider they would take, then it will probably be the right one. Begin taking the powerful option, by thinking big and expecting the best.

Alexander frequently said that only by stopping the wrong can better use emerge, and in the AT great importance is attached to this principle. As the pupil progresses, understanding of what 'stopping' entails maturing and deepens. It doesn't mean doing nothing at all so that you collapse in a heap. It relates specifically to stopping the familiar, unwanted and unnecessary habits of our physical and mental responses. Only in this way can we recognize how habitual these patterns are, and be empowered to overcome them so that we can live our lives with a new and more creative awareness. (Zarrillo, 2003)

Begin also knowing from now on that YOU are in control of your own thoughts. You and only you. Always. You never need to ever get angry or frustrated again - it is all up to you what you choose to think. No-



one can ever bother you again, or make you intimidated, anxious, fearful, etc. - unless you let them. You have total control over the way you think and act - you are not at the mercy of the world, as so many people seem to think. Take back your power instead of giving it to others, and know that nothing need bother you ever again. Better still; know that it will only bother you if you allow it to bother you.

Through CoRT strategies in various forms of practices, competitions and related activities, students have opportunities to observe each other and learn to identify the aesthetic elements of fellow students' performances in different activities such as the display of different swimming strokes or synchronised swimming, reflect on them and share their views with each other. This way you remain in complete mental control - and when you control your mind, you control your body as well. The swimmer who manages their thoughts and life the best outside the pool, will probably also manages their swims best in the pool. The top swimmers have to become absolute masters at handling outside pressures such as media attention, public expectation, as well as the usual stuff like training, meets, friends etc - and this is what you need to be able to do also, in order to succeed.

The physical and psychological reinforcing stimuli that students receive are similar regardless of their gender. All of these factors did not show differences between the genders · The present study findings agree with the study (Walid, 2004) that indicted and showed the out performance of the way of learning using the CoRT program in developing critical thinking skills for the students comparing it with the standard method.

Conclusion

In conclusion, the CoRT strategies could develop the performance level of back swimming for undergraduate students

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