

## Learning Swimming Strategy of Children Using the Complete Method for Improving Abilities and Physical Performance

Ashraf M. S.

Department of Curricula and Learning Method, Faculty of Physical Education, Helwan Univ., Egypt.

[Adel.ahmed3550@yahoo.com](mailto:Adel.ahmed3550@yahoo.com)

**Abstract: Learning is:** The ability to alter behavior in the basis of experience. It has many benefits: recreational, psychological, physiological and health. The purpose of the study was to express of learning program on some abilities and physical performance of children. The experimental method was used, 20 child were randomly selected, aged 9 y., they were not regular swimmers, they were subjected to 3 months swimming learning in swimming pool at El Zamalek club, using the complete method of teaching in the summer of 2013. A performance test and ability one were performed in a shallow and deep pool. Results indicated an increased percent of performance and abilities of the children after the learning swimming program. The researcher came to the conclusion: 1. A significant percent of children learned basic swimming skills. 2. The program led to increased confidence in water. 3. The program improved abilities and physical performance. **Recommendation:** it is recommended to begin swimming in children through learning and playing not through competition.

[Ashraf M. S. **Learning Swimming Strategy of Children Using the Complete Method for Improving Abilities and Physical Performance.** *J Am Sci* 2016;12(3):89-92]. ISSN 1545-1003 (print); ISSN 2375-7264 (online). <http://www.jofamericanscience.org>. 12. doi: [10.7537/marsjas12031612](https://doi.org/10.7537/marsjas12031612).

**Keyword:** Learning swimming, abilities, physical performance.

### 1. Introduction:

Learning may be defined as the ability to alter behavior on the basis of experience, and memory is the ability to recall past events at the conscious or unconscious level. The two are closely related (Ganong, 2000), (Maglisho, 1993).

There are five types of swimming: 1- Recreation swimming 2- Competitive swimming 3-Handicapped swimming 4-Rythmic swimming and 5-Learning swimming, the latter type aimed to benefit efficiency and swimming methods in light of safety, recreation and peace. It is the first phase to reach higher levels. It is very important to: student sport or military, for divers and fishing (Elkot, 1998). He also added that learning swimming may help to recognize the other types of swimming preceded, in two principles needed, safety and peace. Learning swimming is the principle to training swimming Scott et al (1994).

#### The importance of learning swimming had many benefits and skillness:

1. Recreational and social benefits
2. Behavioural benefits and personality
3. Psychological benefits by curing many Psychological problems.
4. Skillness in different sports and health and competition
5. Physiological benefits of different organs and physical fitness, health to the practitioner and his tissues and help to have more endurance (Kazem, M. 1989).

About the suitable age for learning swimming (El-Kot, 1997) stated that it is 6 years old and two

more years to improve performance. Krawczyk and Crekalska (1997) reported that in polish literature the average age of teaching how to swim is 4-5 years old children. They found that the effects of teaching swimming at this stage of life are related to age. After the swimming course older swimmer achieved better results.

#### Research problem:

The problem of evaluation as well as conditions of learning how to swim need to be addressed. The literature concerning swimming is vast but there are few papers on research of effectiveness and conditions of learning how to swim among 9 year old children. At this age children improve their skills of learning new motor, activities which go together with improving mechanisms of controlling motories and abilities to combine and coordinate many motor activities.

The above – mentioned issues made the researcher of the study to choose the head line of this study in teaching 9 years old children.

The aim of the study is to recognize the effect of learning swimming for improving abilities and physical performance.

#### Hypothesis:

1. There are statistical differences on physical performance after learning program for the sake of post program.
2. There are statistical; differences in swimming abilities after a learning program for the sake of post program.

**Table (1): Basic Variables of the Sample Performing Learning Program (3 months)**

Variables	Mean	St Deviation	Skewness
Age (y)	9.1	1.2	,24
Height (cm)	136.7	3.6	,54
Weight (K)	32.1	1.3	,63

Skewness between ( $\pm 3$ ) indicated homogeneity of the sample

**Table (2): Swimming ability 15 meters before and after learning program in shallow water (1 meter)**

Variables	Before program Mean %	After program Mean %
Crawl stroke Can perform	30%	52%
Cannot perform	70%	48%

**Table (3): Swimming ability 15 meters before and after learning program in deep water (1.8 meters)**

Variables	Before program %	After program %
Crawl stroke can perform	28%	47%
Can not perform	72%	53%

### Methodology [ Material and Methods]

Research Methodology: Experimental method was used of pre and post measurements

Research sample: 20 children were randomly selected, aged 9 years, they are not regular swimmers, they were subjected to 3 months swimming learning in a swimming pool in Cairo Governorate (Elzamelek) swimming teaching method used was the complete method, not the particle method. Homogeneity of the sample of the basic variables of age, height and weight (Table 1).

### Steps to implement research:

Research material was obtained during the test which was carried out in 3 months of 2013 summer in Cairo. On the basis of the material the condition of

general swimming abilities of the 9 years old children was presented.

The test consisted in swimming the length of 15 meters crawl without breaks in a deep (1.8m) and shallow depth swimming pool (1 meter) and percent of the performance or cannot perform was assessed, also learning swimming program for 13 months, twice weekly, each session last 60 minutes of exercise were game like and had to be performed in shallow water and deep water.

### Examples of the learning swimming program on abilities included:

- Learning confidence abilities in water
- Perform recreational play for children

Examples: the quicker swimmer of the pool broad diving under water the longest time

- Playing train
- Diving from outside the pool
- Learn breathing in water inspiration outside the water expiration in water several times
- Playing numbers by fingers showing under water to experience opening the eyes in water.
- Learning the satellite method of float together with different floating methods from steady position face up and face down
- Pushing the wall of the pool with legs.
- Learning how to slide in water – play submarine by throwing things in water and discover it and bring out
- Learn back floating.

### 3. Results

In table (1) Revealed basic variables of the children in age, height, weight to study homogeneity.

In Table (2) (3) Swimming ability 15 meters before and after learning program in shallow water and deep one, indicate a better ability 15 meters crawl stroke for the sake post program.

Table (4,5) Physical swimming performance before and after the learning program in shallow water and deep one in Tuck floating, Jelly fish face up, down, star floating face up, down, satellite floating, indicate a better performance for the sake of post program.

**Table (4): Physical swimming performance before and after the learning program in shallow water**

Variables	Before		After	
	Can	Cannot	Can	Cannot
- Tuck floating %	55%	45%	67%	33%
- Jelly Fish face up	34%	65%	64%	36%
- Jelly fish face down	33%	65%	70%	30%
- Star floating face up	29%	71%	68%	32%
- Star floating face down	27%	73%	59%	41%
- Satellite floating	26%	74%	58%	42%

**Table (5): Physical swimming performance before and after the learning program in deep water**

Variables	Before		After	
	Can	Cannot	Can	Cannot
- Tuck floating %	53%	47%	65%	35%
- Jelly Fish face up	32%	68%	62%	38%
- Jelly fish face down	30%	70%	67%	33%
- Star floating face up	27%	73%	65%	35%
Star floating face down	25%	75%	58%	42%
Satellite floating	24%	76%	56%	44%

**Hypothesis (1) There are statistical differences**

In physical performance after learning program for the sake of post program.

Table (1) represents different method of floating by the students namely Tuck floating, face up jellis fish floating, stars floating, face up stars floating and face down and satellite floating.

All these tests were performed once in shallow water and a second time in deep water before and after the learning swimming program.

An increased numbers of children performed the different tests after the learning swimming program which indicated the positive effects of the swimming learning program leading to better performance due to more confidence and a more acclimatizing with the pool water. The numbers of children performed better in shallow water than in deep water.

The Physical performance noted in this paper was in agreement with the study of Zaki (2009), Harrison (1996), Suchman (2001), all agree that the learning program may affect the Physical performance due to its effect on different system of the body, CNS, Skeletal system and endocrine leading to the positive effect on the performance of the participant.

Viviani (2006) reported that neuroscientists, examine the brain by using new technologies in adults and in children, they are expected to reveal not only the systems involved in movements, but also how the brain processes movement information./ Biophysicists study how to harvest energy from locomotion, and create low – energy devices (Kuo, 2005, Rome et al, 2005). All these cross- disciplinary work has greatly improved our knowledge on the various aspects of movement, together with the work of computer scientists program computers and create devices to try to mimic natural biological movements, and in the process try to model what babies do when they acquire walking. All these trials tried to reveal the systems involved in movements to make use of these information about movements to improve physical performance. So, by learning swimming through teachers to deliver the technique and by the help of

different scientists, all these effort built basis for improvement of performance.

Hypothesis (2) There are a significant statistical differences in swimming abilities after a learning program for the sake of post program

Somatic motor activity depend upon the pattern and rate of discharge of the spinal motor neurons and homologous neurons in the motor nuclei of the cranial nerves. These neurons are the final paths to skeletal muscles. As far as movement is concerned, the motor cortex of the brain modulates the activity of the lower levels, organizes complex acts and the execution of precise movements (Ghez and Krakauer, 200).

That means that the CNS and specially the brain involved in learning swimming, and improvement of swimming ability reported in Table (2,3), after a learning program to 9 years old children in also related to the action of CNS which modulates, the activity of the lower limb and produce the improvement. As was indicated by the numbers of children increased in crossing the distance of the test.

Central Nervous system takes part in movement control. In difficult moves, it is responsible for realization. The more efficient in CNS, the quicker is maximal result. The study on motion, and on rhythmicity keeps within the bounds of one field of knowledge.

The need of researching results from the relationship between rhythm and biomechanical parameters of movement, neurophysiology emotions, etc. The basis of unrestricted move is unconditioned reflex (Grottel, 1984). Adolpts (2003) And even to any move is made a choice of speed, rhythm, strain, distance (Billinski and Dagmara, (2006). (Barret, 2010).

From the proceeded discussion the (2) research hypothesis were realized.

**Conclusions**

1- The increased swimming abilities after learning swimming program this means a significant percentage of children learned basic swimming skills (Davids et al, 2006).

2- The learning program had a positive effect on decreasing stress, increasing fitness and help of the children swimming abilities.

3- The learning program had a positive effect on physical performance.

#### Recommendations:

1- It is Recommend to begin swimming through learning and playing not through competition, which will be in later stage of childhood.

2- In swimming pool children could spent good time and know new environment.

3- Children could take care of their personal hygiene in swimming pool.

#### References

1. A dolphs, R (2003) Cognitive Neuro Science of human Social behavior Neuro Science 4, 165.
2. Barret, T. (2010) Textbook of Physiology Human Kinetics, USA.
3. Billinski, W and Dragmara, C. (2006) Biomechanical analysis of movement memory in the context of rhythm ability 24 Int Council for Phys. Activity, Fitness Research, Poland.
4. Davids, K, Bennett, S, Newell, K (2006) Movement System Variability Human Kinetics
5. El Kot, M (1998) Swimming between theory and experiment El Azizia, Zagazig. EGYPT.
6. Franco, Viviani (2006) Psychobiology and Movement 24<sup>th</sup> Int. Council for Phy. Act. And Fitness Research, Poland.
7. Ganong, W (2000) Review of Medical Physiology A Lange Medical Book, USA.
8. Ghez, C and Krekauer, J (2000) The organization of movement Neural Science, New York, USA.
9. Grottel, K (1984) The basis of unrestricted move AWF, Poland.
10. Harrison, J (1996) Instructional Strategies for secondary school 4ed Brown & Benchmark, USA.
11. Kazem, M. (1982) Swimming Sport (Learning – training) Dar El Fekr El Arabi, Cairo.
12. Krawczyn, Z and Czekalska, J (1997) The efficiency of teaching of swimming children in age 4-5 years Physical Education 5, 12.
13. Kuo, A (2005) Harvesting Energy by improving the economy of Human Walking. Science, 309, 1686.
14. Maglisho, E (1993) Swimming even Faster Mag field public. Co, USA.
15. Mogios, V (2006) Biochemistry of exercise Human Kinetics, USA.
16. Rome, I, (Flynn, L., goldman F. (2005) Generating energy while walking with loads Science 309, 725.
17. Scott, K, Powers, T, Howley, P. (1994) Exercise Physiology Brown, Benchmark, USA.
18. Sharkey, D (2002) Sports hematology Sports Med. 29,27-28.
19. Suchman, F. (2001) Students responses to active learning strategies in a lecture introductory microbiology course Bioscience, 17, P 21.
20. Zaki, A. (2009) The effectiveness of using concept maps strategy to improve performance of some motor skills and cognitive achievement in physical education method. PHD Fac. Of Physical education, Alex. Univ.

2/28/2016