

# Effective Teaching Pyramid and Its Impact on Enhancing the Participation of Students in Swimming Classes

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**Abstract**—Instructional or teaching procedures and their proper sequence are essential for high-quality learning outcomes. These actions are the path that the teacher takes during the learning process after setting the learning objectives. Teachers and specialists in the education field should include teaching procedures with putting in place an effective mechanism for the procedure's implementation to achieve a logical sequence with the desired output of overall education process. Determining the sequence of these actions may be a strategic process outlined by a strategic educational plan or drawn by teachers with a high level of experience, enabling them to determine those logical procedures. While specific actions may be necessary for a specific form, many Physical Education (PE) teachers can work out on various sports disciplines. This study was conducted to investigate the impact of using the teaching sequence of the teaching pyramid in raising the level of enjoyment in swimming classes. Four months later of teaching swimming skills to the control and experimental groups of the study, we figured that using the tools shown in the teaching pyramid with the experimental group led to statistically significant differences in the positive tendencies of students to participate in the swimming classes by using the traditional procedures of teaching and using of successive procedures in the teaching pyramid, and in favor of the teaching pyramid. The students are influenced by enhancing their tendency to participate in swimming classes when the teaching procedures followed are sensitive to individual differences and are based on the element of pleasure in learning, and less positive levels of the tendency of students when using traditional teaching procedures, by getting the level of skills' requirements higher and more difficult to perform. The level of positive tendencies of students when using successive procedures in the teaching pyramid was increased, by getting the level of skills' requirements higher and more difficult to perform, because of the high level of motivation and the desire to challenge the self-provided by the teaching pyramid.

**Keywords**—Physical education, swimming classes, teaching process, teaching pyramid.

## I. INTRODUCTION

LIKE the food pyramid, which was agreed that it determines the proportions of healthy food per capita, as a model that enables everyone to follow for a healthy life, the author has designed a teaching pyramid, which includes teaching procedures proportions determine the shape of the pyramid from the bottom up.

Physical Education is aiming to develop students' physical competence and knowledge of movement and safety, and their ability to use these to perform in a wide range of activities

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associated with the development of an active and healthy lifestyle. It also develops students' confidence and generic skills, especially those of collaboration, communication, creativity, critical thinking and aesthetic appreciation. These, together with the nurturing of positive values and attitudes in PE, provide a good foundation for students' lifelong and life-wide learning.

For the teaching process to be productive, a strategy must be prepared. At the same time, this strategy should not be constrained to the potential of the teacher and creativity in the work, but to be the basis from which to build in the process of creativity and development ideas [3].

### *Effective Teaching Pyramid*

Through the scientific and practical experience of the author in the field of pedagogy, and the production of PE lesson, has been prepared educational pyramid [4], which determines the procedures of the basic gradient ratios of the largest in the base and moves to the top of the pyramid in less and fewer proportions. The pyramid has five levels:

1. Information 40%: It is the total of what the teacher should give the students, like the facts and laws and rules concerning the skill or educational material targeted by the educational process.
2. Training 30%: A performance opportunity that should be provided to the students who are targeted of the educational process, including the frequency and opportunity for active participation in the performance.
3. Success experiences 15%: These are successful performance opportunities that must be provided to all members of the class's students, and the provision of these opportunities depends on the experience of the teacher and creativity in the output of the educational unit to provide the student that opportunity before the end of the unit.
4. Self-competition 10%: The educational process is the process of self-challenge to the student before it is the process of challenging others. From the fact of taking into account individual differences, we should minimize the activities that motivate students to challenge and compete with each other at first, but this stage should be an opportunity to learn about the potential of the student and the extent of development in the target skill.
5. Compete others 5%: It is the last stage or the last measure, which is located at the top of the pyramid as evidence of high level, in addition to the lack of targeting during the

educational process. The challenge of a colleague or the others is one of the procedures that must be specific use in the entire educational process.



Fig. 1 Effective teaching pyramid

This study was conducted to investigate two aspects;

1. Role of effective teaching measures in enhancing students' participation and their continued physical activity,
2. The impact of using the teaching sequence of the teaching pyramid in raising the level of enjoyment in swimming classes.

## II. METHODS

### A. Subject and Setting

The sample of the study was chosen by deliberate method, which consisted of 180 children belonging to children centers in Sharjah/United Arab Emirates, with the age ranging between 12-14 years. The sample was divided in to 2 groups (90 experimental - 90 control), as shown in Table I.

TABLE I  
SAMPLE OF THE STUDY

Groups	Centers	Students
Experimental group	Al Riqaa	30
	Helwan	30
	Al Malecha	30
Control group	Al Heera	30
	Al Batayeh	30
	Al Thimeed	30

### B. Measure

The measure of enjoyment in sports activities (PACES) expressed by the author (Appendix No. 1) is a 16-item scale that assesses enjoyment for physical activity by asking participants to rate "how you feel at the moment about the physical activity you have been doing". 8 items are negative (2, 3, 5, 7, 10, 12, 13, 16), and 8 are positive (1, 4, 6, 8, 9, 11,

14, 15).

The questionnaire forms are distributed to the kids after every 12 classes, once a month, and over four months [1], [2].

### C. Practical Tools

Swimming was chosen as a physical education activity. The skills consisted of:

1. Get used to and trust the water,
2. Teach all types of buoyancy,
3. Teach of all types of gliding,
4. Teach kick for backstroke,
3. Teach the arms movements for backstroke.

The curriculum lasted four months.

### D. Curriculum Implementation

The curriculum was implemented on the study sample, by dividing the sample into two control and experimental groups as follows:

- A. Control group: The control group was taught based on the educational experience of swimming teachers, using traditional teaching methods. Graduation is done by teaching skills according to their logical gradient. Classes were considered as an additional physical activity. Note that the control group is subject to instructional classes, 3 lessons per week for 60 minutes per lesson.
- B. Experimental group: The members of this group were taught based on the educational hierarchy in the teaching pyramid and the percentages specified for each stage where the procedures and the nature of all teachers working with this group were identified in the implementation of the concept of education according to the teaching pyramid. It should be noted that the experimental group is subject to teaching sessions, 3 lessons per week for 60 minutes per lesson.

### E. Statistical Tools

SPSS, V. 24.0 was used to process the data, and the T-test was used for differences between two identical samples.

## III. RESULTS

After each month (12 classes), we distributed the questionnaire form to all students in both groups and get the answers to measure their feeling when they participate in the activities. The answers were shown in Tables II-V.

## IV. ANALYSIS OF THE RESULTS

The results of the samples were analyzed statistically, by studying the answers of the negative and positive questions separately.

### A. Control Group

When comparing the results of the control group, through the responses to the positive and negative questions between the first and fourth months, it was found that there are statistically significant differences showing the decrease in the desire to participate in the activity. This gives evidence that the traditional methods used were not motivating them, as

shown in Fig. 2.

TABLE II  
FIRST MONTH OF THE CURRICULUM

No.	When I do sports/ swimming I feel	Control group			Experimental group		
		A lot %	Some %	Never %	A lot %	Some %	Never %
1	Enjoy in practice	63	24	13	59	34	7
2	I feel boring	8	21	71	15	21	64
3	I don't like it	7	30	63	22	20	58
4	I feel that it is likable	61	22	17	59	20	21
5	Not funny at all	6	15	79	15	26	59
6	Give me good energy	69	22	9	55	24	21
7	Make me sad	4	8	88	4	41	55
8	very attractive	54	33	13	59	11	30
9	completely comfortable	65	20	15	54	20	26
10	I don't gain any new from it	6	11	83	15	26	59
11	I feel excited	56	17	27	53	16	31
12	I feel disappointed	15	34	51	24	27	49
13	I never interest about it	6	24	70	4	27	69
14	I feel successful	51	24	25	45	18	37
15	I have a good feeling in general	62	27	11	64	11	25
16	I feel like I want to do something else	4	5	91	4	25	71

TABLE III  
SECOND MONTH OF THE CURRICULUM

No.	When I do sports / swimming I feel	Control group			Experimental group		
		A lot %	Some %	Never %	A lot %	Some %	Never %
1	Enjoy in practice	65	25	10	69	25	6
2	I feel boring	10	19	71	4	20	76
3	I don't like it	5	34	61	4	20	76
4	I feel that it is likable	62	20	18	70	21	9
5	Not funny at all	7	18	75	3	20	77
6	Give me good energy	65	27	8	74	23	3
7	Make me sad	7	11	82	4	5	91
8	very attractive	59	31	10	77	11	12
9	completely comfortable	66	24	10	71	21	8
10	I don't gain any new from it	9	16	75	3	3	94
11	I feel excited	62	17	21	69	24	7
12	I feel disappointed	21	30	49	10	20	70
13	I never interest about it	9	9	82	3	9	88
14	I feel successful	50	30	20	61	35	14
15	I have a good feeling in general	61	29	10	73	19	8
16	I feel like I want to do something else	7	11	82	3	4	93

### B. Experimental Group

When comparing the results of the control group, through the answers to the positive and negative questions between the first and fourth months, it was found that there are statistically significant differences showing the increased desire to participate in the activity. This gives evidence that the use of teaching methods and tools for the teaching pyramid was motivating and encouraging members of the group to participate in the activity, as shown in Fig. 3.

TABLE IV  
THIRD MONTH OF THE CURRICULUM

No.	When I do sports / swimming I feel	Control group			Experimental group		
		A lot %	Some %	Never %	A lot %	Some %	Never %
1	Enjoy in practice	60	20	20	74	23	3
2	I feel boring	13	29	58	4	18	78
3	I don't like it	16	30	54	5	25	70
4	I feel that it is likable	50	31	19	72	18	10
5	Not funny at all	20	23	57	5	24	71
6	Give me good energy	51	24	28	71	22	7
7	Make me sad	13	19	68	4	9	87
8	very attractive	55	30	15	73	13	14
9	completely comfortable	53	23	24	78	16	6
10	I don't gain any new from it	10	15	75	5	15	80
11	I feel excited	58	17	25	78	15	7
12	I feel disappointed	39	23	38	11	23	66
13	I never interest about it	10	13	77	7	10	83
14	I feel successful	42	19	39	70	26	4
15	I have a good feeling in general	50	22	28	74	20	6
16	I feel like I want to do something else	12	26	62	6	7	87

TABLE V  
FOURTH MONTH OF THE CURRICULUM

No.	When I do sports / swimming I feel	Control group			Experimental group		
		A lot %	Some %	Never %	A lot %	Some %	Never %
1	Enjoy in practice	37	17	46	74	25	1
2	I feel boring	25	33	42	2	2	96
3	I don't like it	15	29	56	2	3	95
4	I feel that it is likable	65	19	16	94	5	1
5	Not funny at all	17	33	50	2	5	93
6	Give me good energy	44	25	31	88	11	1
7	Make me sad	9	25	66	1	2	97
8	very attractive	41	36	23	87	10	3
9	completely comfortable	53	15	32	91	7	2
10	I don't gain any new from it	23	17	60	3	4	93
11	I feel excited	36	13	51	93	5	2
12	I feel disappointed	66	10	24	5	10	85
13	I never interest about it	14	21	65	1	2	97
14	I feel successful	40	25	35	85	14	1
15	I have a good feeling in general	31	27	42	91	7	2
16	I feel like I want to do something else	25	15	60	1	2	97

### C. Differences between the Groups

By comparing the responses of the control and experimental groups in the negative and positive questions for the fourth month of the curriculum, it was found that there are statistically significant differences in the desire to participate in the activities after four months of participating in swimming classes. The positive response rate of the experimental group is higher than the control group, which confirms the effectiveness of using the proposed teaching pyramid to increase the desire and motivation to participate in the activity (swimming classes) as shown in Fig. 4.

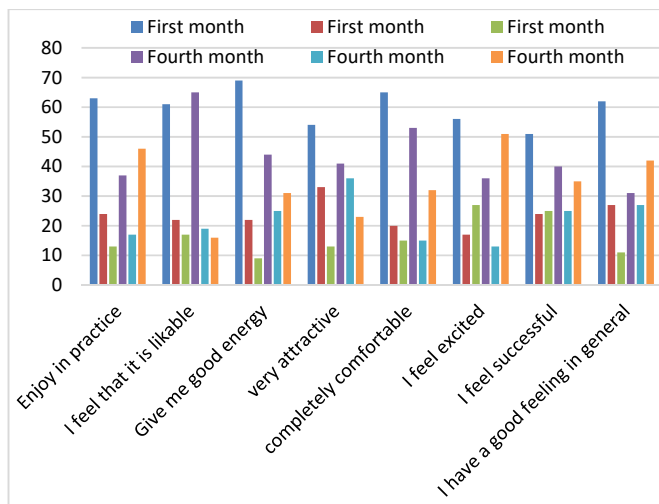


Fig. 2 Answers to the positive questions of the control group in the first and fourth months

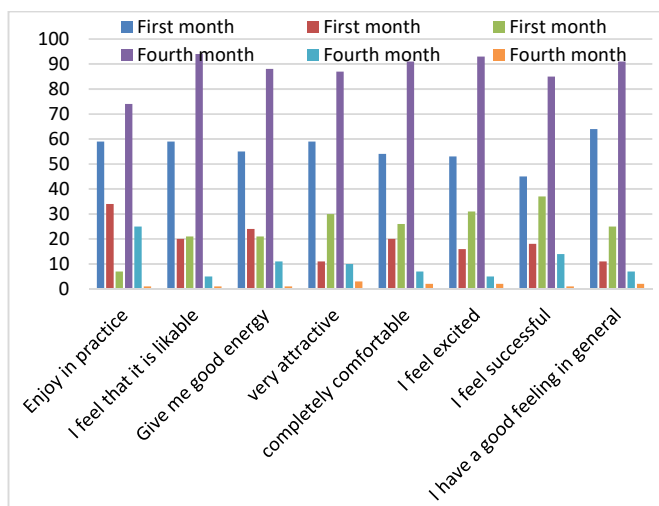


Fig. 3 Answers to the positive questions of the experimental group in the first and fourth months

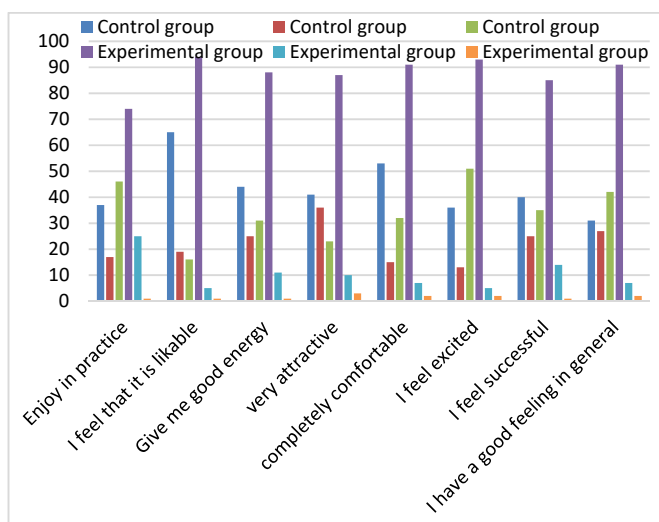


Fig. 4 Answers to the positive questions of the control and experimental groups for the fourth month

## V. CONCLUSIONS

1. There are statistically significant differences in the positive tendencies of students to participate in the swimming classes by using the traditional procedures of teaching and using of successive procedures in the teaching pyramid, and in favor of the teaching pyramid,
2. The students are influenced by enhancing their tendency to participate in swimming classes when the teaching procedures followed are sensitive to individual differences and are based on the element of pleasure in learning,
3. As an effect of the high motivation level and the desire to challenge, provided by the teaching pyramid, the results are showing high positive levels of the students' tendency for the experimental group, and less positive levels of the students' tendency for the control group, especially when the level of skills' requirements are getting more difficult to perform.

## VI. RECOMMENDATIONS

1. Using successive procedures proportional to the ideal shown by the teaching pyramid, when teaching most of the skills of individual games, including swimming, because of the consideration of individual differences for students,
2. Focusing on the element of fun during the whole stages of learning and linking educational fun games with the skills targeted by the process of teaching,
3. Providing the element of learning-related to the challenge, in consideration using the self-challenge, not challenging others [5],
4. Conducting similar studies in this field on samples of different age.

## APPENDIX

TABLE VI

THE MEASURE OF ENJOYMENT IN SPORTS ACTIVITIES (PACES)

No.	When I do sports / swimming I feel	Control group			Experimental group		
		A lot %	Some %	Never %	A lot %	Some %	Never %
1	Enjoy in practice						
2	I feel boring						
3	I don't like it						
4	I feel that it is likable						
5	Not funny at all						
6	Give me good energy						
7	Make me sad						
8	very attractive						
9	completely comfortable						
10	I don't gain any new from it						
11	I feel excited						
12	I feel disappointed						
13	I never interest about it						
14	I feel successful						
15	I have a good feeling in general						
16	I feel like I want to do something else						

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