

# THE EFFECT OF THE INTEGRATED STRATEGY FOR SEGMENTED INFORMATION ON THE LEVEL OF HIGH INTELLIGENCE AND LEARNING THE VOLLEYBALL BLOCKING WALL SKILL FOR STUDENTS

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Received: 14 March 2020 Revised and Accepted: 8 July 2020

**ABSTRACT:** The study objectives to identify the levels of intelligence and to know the effect of the integrative strategy of segmented information and to learn the skill of the volleyball blocking wall for the female students, during which the researchers used the experimental method and designed two equivalent experimental groups with the pre and posttests to suit the nature of the problem and reach the achievement of the research objectives. After the research community identified the female students of the fifth grade of middle school (the literary branch) of (40) students, they were divided for the purposes of the research experiment into two experimental groups, with (20) students for each group. A questionnaire on the multiple intelligences scale was distributed to find out the students' intelligence levels, as it included paragraphs for five areas of multiple intelligences, which are (physical - kinetic intelligence, emotional intelligence, social intelligence, self-intelligence, and visual spatial intelligence) and learning the technical performance and accuracy of the barrier skill

*The researchers developed hypotheses for the research, namely*

1. The use of the integrated strategy of segmented information has a positive impact on the levels of intelligence and learning of the volleyball blocking wall skill for students
2. Identifying the effect of the strategy between the two groups and the levels of intelligence in learning the skill of the volleyball blocking wall for students.

After completing the process of testing and measuring the search variable, the results were extracted after statistical treatment, from which the researchers came to several conclusions, namely:

1. There is a positive effect of the integrated strategy of segmented information and the level of intelligence and learning the skill of the volleyball blocking wall in favor of the experimental group with high intelligence.
2. The experimental group with high intelligence excelled in learning the technical performance and accuracy of the volleyball blocking wall skill over the group with the least intelligent.

**KEYWORDS:** Integrated strategy segmented information and intelligence.

## I. INTRODUCTION

In light of the development and scientific progress in recent years, educators have paid much attention to the activities and events that make the student a participant in the teaching and learning process and not like the previous one, as he was only a recipient and only had to memorize and understand. Among the most prominent activities that were recently discovered in the educational process is the use of modern, sophisticated, flexible and easy-to-understand strategies. In order to instill the element of motivation and motivation among students.

As the integrative strategy is one of the modern strategies, which means that learners achieve the greatest possible benefit in their achievement, so that they are not only passive and receptive learners only, but rather be more effective and determined in learning, giving ideas and good thinking, and acquiring correct and useful information that serves the work or duty given to them in order to They become learners, productive collaborators, especially distinguished students, who can gain and understand information with the least time and effort and explain it to students with poor understanding or with an average level and encourage each other

and this is thanks to making the educational material or skill performance and applying it well and in a study atmosphere dominated by thrill and excitement in order to achieve the best results.<sup>1</sup>

The integrated strategy for the disaggregated information is by dividing the students in the sport education lesson into main and sub-groups, where each group includes (5-6) students and giving them a part of the skill, and after understanding the part and applying it, it is explained to the subgroups, thus the parts of the skill will be fully understood and mastered. As for "the concept of intelligence is seen as a latent ability that depends on genetics as well as on correct growth and development and on a healthy environment and food, and since intelligence is a latent ability, it can be modified by excitement like any other characteristic.<sup>2</sup> Therefore, the growth of intelligence and its access to the latent ability may be affected by environmental stresses and stresses, and we see that a person who has a noticeable lack of general intelligence is gifted in any of the private fields. The volleyball game needs instructional strategies that are compatible with the nature of its various basic skills, including the blocking wall skill, which is one of the skills to be studied in the curriculum of the Ministry of Education and Higher Education, hence the necessity to conduct such a study in order to reach knowledge of the impact of the strategy on the levels of intelligence in learning the skill And its positive reflection on the technical performance and accuracy of the students.

**II. RESEARCH METHODOLOGY AND FIELD PROCEDURES**

**Research Methodology**

In solving its problems, all scientific research resorts to choosing an approach that fits with the nature of the problem. Accordingly, the researchers used the experimental method and the design of the two equivalent experimental groups.

**Community and sample research**

The research community was identified with the fifth year middle school students, who were (120) students, after which a sample representing the community was selected and numbered (40) students and distributed randomly into two experimental groups for each group of (20) students.

**Homogeneity of the research sample**

The researcher found the homogeneity between the two groups in the variables (height, weight and age), where the mean of height (159.7000), the standard deviation (4.18912) and the skew coefficient (0.243) were shown. As for the weight, the mean of (58.9000), the standard deviation (10.98437) and the torsion factor were recorded. As for the mean for age, it was recorded (17.0250), a standard deviation (0.42290), and the skew coefficient (0.170). The sample members as shown in Table (1).

**Table 1.** Shows the homogeneity of the research sample: the mean, the standard deviation, and the torsion coefficient

Variables	Units	Mean	Median	SD	Skewness	Standard error
Length	Cm	159.7000	160.00	4.18912	-0.243	0.37
Weight	Kg	58.9000	58.00	10.98437	0.795	374
Age	Year	17.0250	17.00	0.42290	0.170	374

**Means of gathering information, devices and tools used in the research**

- Scientific observation.
- Arab and foreign sources.
- Previous studies.
- Information network (internet).
- Personal interviews with professors and relevant experts
- Multiple intelligences scale
- Tests and benchmarks.
- Auxiliary work team
- Medical balance of the type (Unicef) count (1).
- A digital electronic stopwatch (1/100) of a second to measure and calculate time for tests that need time (German industry).
- Hand calculator type (Porpo), count (1).

- Five computers (DELL) of Chinese origin.
- Sony video camera of Chinese origin.
- (5) flying balls.
- (2) FOX whistle.
- Number of signs (12).
- Sticky tape .
- Tape measure.
- Volleyball court.
- Volleyball net.
- Chalk.

### Field research procedures

#### The validity of the paragraphs of the multiple intelligences scale<sup>3</sup>

After seeing the researcher on many Arab and foreign scientific sources and references, and previous studies related to the research topic, and conducting personal interviews with those with experience and expertise. And to seek their views, and in agreement with the supervisor, and in order to complete the research procedures, and to achieve the goals, the following was done:

1. Determining the scale of multiple intelligences.
2. Preparing multiple intelligences scale.
3. Determine the basic skills of volleyball.
4. Choose tests of basic skills in volleyball.
5. Determining the educational units.

### Pilot study

In order for the researcher to reach objective results, it is necessary for him to conduct an exploratory experiment that can be explored by several indicators that will serve them in achieving the objectives of her research, on the basis that the exploratory experiment is a preliminary experimental study that the researcher conducts on a small sample before conducting a research with the aim of testing the research methods and tools.<sup>4</sup>

Where the researcher conducted an exploratory experiment in order to identify the clarity of the test instructions and its attempts, uncover the unclear attempt, as well as calculate the time spent on answering the test, and in order to conduct a statistical analysis of the test items, as the test was applied to a sample of (10) fifth grade students Preparatory, and they were chosen randomly, and it was found that the test instructions and paragraphs were clear

*This is in order to get to know*

1. The most important obstacles and difficulties that the researcher faces when conducting tests in order to overcome them in the main experiment
2. The extent of the students ' understanding of the vocabulary of the tests and their ability to take them.
3. The suitability of the tools used for the method of work and implementation.
4. The time taken to take the tests.
5. How the work team organizes the testing process.
6. Finding the scientific basis for the tests.

The results of the experiment were very good because of the seriousness of the exploratory sample in the students in conducting research tests and the accuracy and efficiency of the assisting work team in recording the results of the tests.

### Validated the test

The validity of a test or scale means its ability to measure what it was designed (designed) for, and an honest test or scale, then, is that which is able to measure the phenomenon it is designed to measure with sufficient accuracy and does not measure phenomena or features in place of it or in addition to it. The validity of the tests has been verified by finding the apparent or the content by presenting them to a group of experts and

specialists,<sup>5</sup> as these experts and specialists have agreed that these tests are valid for measuring what they are designed for, and as shown in Table (2).

**Stability Tests**

It means that the test is consistent: that the test gives the same results as it is not repeated on the same group in the same circumstances, in other words, if the measurement process of a single individual was repeated, his score would show some consistency, meaning that his score does not change substantially by repeating the test. There are different methods for calculating the test reliability factor, including the test and retest method (adopted by the researchers), as this method requires re-applying the test again to members of the same group after an appropriate period of time while ensuring the availability of conditions similar to the first procedure, and determining the time period depends on the nature of The studied phenomenon, and the studied sample.<sup>6</sup> Accordingly, the researchers conducted the selected tests on (12/22/2019) on a random sample of (10) students from outside the research sample, the sample (survey). Five days after the first procedure, on Sunday (12/26/2019), the procedure was repeated The selected tests are under similar conditions to the first procedure and on the same female students for the second time and as indicated in Table (2).

**Objectivity of the test**

It is the process of evaluating the extent of the independence of the results from the autonomy of the corrector, and accordingly the researcher calculated the objectivity of the selected tests by finding a correlation coefficient by the Pearson method between the results of the two arbitrators who carried out the evaluation process at the same time on the exploratory research sample, which showed the significance of the tests,<sup>7</sup> that the values of (t) The calculated correlation coefficients were greater than its tabular value of (0.632) at a degree of freedom (38) and the level of significance (0.05) for it. The extracted correlation coefficients indicated that all the selected tests have high objectivity. As shown in Table (2)

**Table 2.** Shows the reliability and objectivity of the tests under consideration

Tests	Stability coefficient	Objectivity factor
Technical performance of the block wall	0.82	0.90
The accuracy of the blocking wall	0.82	-

The pilot study of multiple intelligences scale

The scale paragraphs may not be clear to the laboratories as they are clear to the researcher, so the researcher conducted an exploratory experiment on a group of laboratories in order to identify through it the following:<sup>8</sup>

1. Application and time required.
2. Ensure the stability of the scale.
3. The researcher will have practical training to find out the negatives and positives that she faces in conducting the main test.
4. Ensure that the instructions for laboratories are clear.
5. Knowing the conditions for applying the scale and the difficulties associated with it.
6. Knowing the efficiency of the assistant work team.

Accordingly, the researcher conducted her exploratory experiment on a sample consisting of (10) female students from the fifth year of middle school (the biological branch). (70) Ready to be applied to the sample.

**Pre-tests**

The researcher conducted the pre-tests after conducting educational units on middle school students at Al-Masoudi High School for Girls in Babil Governorate for the academic year 2019-2020, as the research sample consisted of (40) students who were divided into two groups for the purposes of the research experiment and giving each student attempts to test technical performance and accuracy of skill Blocking wall.

**The two groups are equivalent to searching**

The researchers conducted parity on the two groups of research in the searched variables and the results were analyzed statistically using the T-test to reach a significant knowledge of the difference between them.

Non-significant differences appeared because the calculated value is smaller than the tabular value at a significance level (0.05) and a degree of freedom (38) indicating The two groups are equal, as shown in Table (3)

**Table 3.** Shows the equivalence in the pre-tests for the two groups of less intelligent and higher intelligence, the mean, the standard deviation, and the value of (t)

Variables	Groups	Mean	SD	(t) value	df	Moral value	Statistical significance
Technical performance of the block wall	The least intelligent	10.74	1.14	1.583	38	0.122	No sig.
	Higher Intelligence	10.18	1.07				
Technical performance of the block wall	The least intelligent	3.35	1.11	1.207	38	0.235	No sig.
	Higher Intelligence	2.94	0.97				

**Implementation of the educational curriculum**

The integrated strategy for segmented information was applied after classifying the students according to multiple intelligences and levels of intelligence, where the sample appeared to us with two levels of intelligence, which are the least intelligent and the most intelligent, and each group includes a number in contrast to the other group, where the least intelligent group appeared to us with (17) students and the highest intelligent group. There are (23) students.

**Post tests**

After completing the implementation of the educational units using the integrated strategy on the research sample in learning the volleyball blocking wall skill, which lasted (3) weeks, at two units per week, the researchers conducted posttests to evaluate the technical performance and accuracy of the blocking wall skill and that all the tests were conducted in the same conditions that were It must be pre-tested for this skill.

**Statistical means**

*The following laws were used:*

- Statistical Package (SPSS).
- The mean.
- Standard deviation.
- Percentage.
- Coefficient of torsion.
- Simple correlation coefficient (Pearson).
- (t) test for cross-linked samples.
- (t) test for independent samples.
- Chi square.

**III. RESULTS AND DISCUSSIONS**

**Table 4.** Shows the differences between the pre and posttests with higher intelligence

Variables	Tests	Mean	SD	(t) value	df	Moral value	Statistical significance
Technical performance of the block wall	Pretest	15.70	3.47	5.165	22	0.000	Sig.
	Posttest	11.74	1.29				
Technical performance of the block wall	Pretest	8.57	2.86	8.337	22	0.000	Sig.

	Posttest	3.57	1.41				
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Table (4) shows the differences between the pre and posttests for the group with the highest intelligence, as the results of the technical performance test for the skill of the blocking wall showed that there are differences between the pre and posttests for the group with higher intelligence, as its mean (15.70) appeared in the post tests and its standard deviation (3.47). As for the pre-test, it was given an mean (11.74) and a standard deviation (1.29), which showed a value of (t) (5.165) at a degree of freedom (22) and an error value (0.000), which gave it a significant significance.

Also, the result of the accuracy test for the skill of the blocking wall had recorded differences between the pre and posttests, the mean of which was (8.57) and the standard deviation (2.86) for the post tests, while the pretests had its mean (3.57) and its standard deviation (1.41), which showed the value of (t) (8.337). And a degree of freedom (22) and an error value (0.000), which gave it a moral significance, and the researchers attributed the emergence of differences between the post test and the pretest for the moral significance to the educational curriculum they used in this skill and for the benefit of the posttests.<sup>9</sup>

**Table 5.** Shows the differences between the pre and posttests for the group with less intelligence

Variables	Tests	Mean	SD	(t) value	df	Moral value	Statistical significance
Technical performance of the block wall	Pretest	1.52	0.37	36.237	16	0.000	Sig.
	Posttest	0.70	0.17				
Technical performance of the block wall	Pretest	0.86	0.21	29.453	16	0.000	Sig.
	Posttest	0.97	0.23				

Table (5) shows the differences between the pre and posttests for the group with the least intelligence, as the results of the technical performance test of the blocking wall skill showed differences between the pre and posttests for the less intelligent group with an mean (1.52) in the post tests and a standard deviation (0.37). He gave an mean (0.70) and a standard deviation (0.17), which showed a value of (t) (36.237) at a degree of freedom (16) and an error value (0.000), which gave it a significant significance.

Also, the result of the accuracy test for the skill of the blocking wall had recorded differences between the pre and posttests, the mean of which was (0.86) and the standard deviation (0.21) for the post tests, and the pretests had its mean (0.97) and its standard deviation (0.23), which showed the value of (t) (29.453) And a degree of freedom (16) and an error value (0.000), which gave it a moral significance. The researchers attributed the emergence of differences between the pre and posttest for the moral significance to the educational curriculum that you used in this skill and in favor of the posttests.<sup>10</sup>

**Table 6.** Shows the equivalence in the post tests for the two groups of less intelligent and higher intelligence

Variable	Groups	Mean	SD	(t) value	df	Moral value	Statistical significance
Technical performance of the block wall	The least intelligent	15.70	3.47	-9.15	38	0.000	No sig.
	Higher Intelligence	23.94	1.52				
Technical performance of the block wall	The least intelligent	8.57	2.86	-6.34	38	0.000	No sig.
	Higher Intelligence	13.12	0.86				

Table (6) shows us the posttests of the two groups of less intelligent and higher intelligence, where we find that the technical performance of the skill of the blocking wall recorded the results of the less intelligent group with an mean (15.70) and a standard deviation (3.47). The higher intelligent group had an mean (23.94) and the standard deviation. (1.52) and the value of (t test) (9.15) and the degree of freedom (38) and the value of error (0.000). The results of the accuracy test of the blocking wall skill were also recorded for the two less intelligent and higher intelligent groups. The less intelligent group gave an mean (8.57) and a standard deviation (2.86). The higher intelligent group gave an mean (13.12), a standard deviation (0.86) and a (t) value (6.34) with a degree of freedom. (38) and the error value (0.000)

If we compare the two mean for the two groups, we find that there are differences, which made the researchers to use the law (t test) for the two groups, as we find that the method (strategy) used by the researchers has left an impact on the higher-intelligent group than the less-intelligent group.<sup>11</sup>

Tables (6,5,4) show that there are significant differences in the results of the above research variables between the pre and post tests and in favor of the post-tests, as well as the values of good percentages of development for the two experimental groups and for the benefit of the more intelligent experimental group and the reason for these differences The regularity in implementing and applying the integrated strategy for segmented information according to levels of intelligence, classifying the sample into levels of intelligence, continuing on educational units and making use of the time invested in performance, which led to an increase in learning and acquiring good information in the technical performance and accuracy of the wall skill. The division of female students into groups in the manner of steps to implement the integrated strategy of segmented information proposed by the researchers helped to improve the level of intelligence of students, especially the group of students with high intelligence, and increase motivation and activity in learning the skill and mastering it. Where the strategy left a positive impact on the two groups, especially the group that was classified with a high level of intelligence.<sup>12</sup> The strategy was characterized by cooperation and synergy between the students of one group in order to achieve one goal that everyone aspires to achieve. This is what the experts confirmed that the student's correcting of her classmates while performing the volleyball blocking skill is one of the important things and the aim is to help the students to each other in order to correct errors during the movement performance.<sup>13</sup>

The researchers believe that the use of such a cooperative strategy, including the integrated strategy for segmented information, helps a lot to feel responsibility and achieve the general goal and the special goal that the Physical Education School and the students aspire to achieve within the same group in order to reach the highest levels and in order to benefit all of them and feel that they are responsible for The achievement of each individual in order to achieve a collective goal and produce a successful physical education lesson at a high level.<sup>14</sup>

The researchers also see the application of the steps of the integrated strategy for segmented information that requires a measure related to the student's mental processes during the physical education lesson because the strategy includes dividing the students into main groups and subgroups called expert groups, where a student is extracted from each group to become the head of the group or the so-called (b) The expert according to the scale of multiple intelligences and levels of intelligence adopted by the researchers in the research,<sup>15</sup> which have a significant and clear impact on the impact of the strategy and the students' learning of the skill of the blocking wall, and this appears through the statistical differences between the pre and post tests for the two groups as well as the explanation of the skill and its presentation by the school in a clear and detailed manner that includes every detail The skill and its parts and directing each student responsible for a part that has a great impact in raising the level of female students in learning, especially female students with a high level of intelligence.<sup>16</sup> As well as the directives and instructions and correcting errors by the school within the applied section of the educational unit, it has a positive effect in improving the learning of technical performance and accuracy of the skill assigned to it, leading to good technical performance, and this gave results of significant post-tests compared to the pre-results and the results of the less intelligent group.<sup>17</sup>

#### **IV. CONCLUSIONS**

1. There is a positive effect of the integrated strategy according to the levels of intelligence and learning the skill of the volleyball blocking wall, and for the benefit of the experimental group with the highest intelligence.
2. The experimental group with the highest intelligence excelled in learning the technical performance and accuracy of the volleyball blocking wall skill.

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