The Effect of the Five Fingers Strategy and Traffic Signals Strategy on Physics First Grade Intermediate School Students' Achievement and Personal Intelligence

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Abstract: *The aim of this research is to know the effect of two strategies of active learning, the five fingers and traffic signals, on the first grade intermediate level student's achievement and personal intelligence. The research sample was chosen from the Al- Mansour intermediate school for boys, including (101) students divided into three groups chosen randomly which represented the first experimental group (32) students, the second experimental group (34) students, and the control group (33) students. To achieve the research aims, the research prepared a physics achievement test containing (26) items, and a personal intelligence test containing (20) items. The psychometric characteristics, of the tests were checked up the following results were achieved: There were statistically significant differences at the level (0.05) between the mean scores of the students in achievement to both experimental groups and the mean scores of the students in achievement of the control group. There were no statistically significant differences at the level (0.05) between the wean scores of the students in personal intelligence in all three groups.*

Keywords: The five fingers strategy, Traffic signals achievement, personal intelligence

1. Research Problem

Depending on the seeker and experience through discussion of some physics teachers and exchange views with them, and look at the records of grades, and meet a number of parents, it turns out that there is a clear decline in the level of attainment and difficulties in learning and teaching of this article especially the first intermediate grade students, because they are studying physics as a separate list by themselves for the first time, the results of some studies have indicated that this reduction in collection is the result of using normal teaching methods in our schools, which were the cause of inactive students inside the classroom , so the student role is turn to only listen and receive information only without contributing actively in the course of the lesson as a whole (Abdal, 2012) and (Al-Zubaidi, 2012) and (alharishaui, 2014).

Teachers ' discussion also showed that lack of attention to multiple intelligences and special personal intelligence back to uninformed teachers, teaching methods and techniques depend entirely on them without concern for the diverse student abilities, which prevents the achievement of its objectives, which requires providing strategies, methods and modern methods in teaching physics help increase academic achievement and the development of multiple intelligences and thinking and positive trends.

In order to address these effects and ensure strategic use of pilot researchers considered active learning strategies and their ((five fingers and stoplights)) which may be linked to improve students ' achievement and their intelligence profile, so the current search problem can be formulated by answering the following question:-

What is the effect of five fingers strategy and traffic signal on the students of **first grade intermediate school** for physics and their intelligence?

2. Significance of Research

There is no doubt that upbringing cannot achieve its goals without using the through education, because the education field is capable of creating an educated human personality, education today means all actions performed by the teacher to achieve specific goals and make student learning and be able to modify his behavior in light of what he learned from teaching and lessons gained from experience and skills (Khatib, 1996, 26).

Active learning is one of the modern trends in teaching, designed to achieve maximum growth could reach every learner in every aspect of the mental, psychological and social growth and physical health (Alzaidy, 2010, 24), which gives the learner an integral role in organizing the educational process and developed and be an active participant not negative, move the master of cued to the Planner and facilitator for education and the educational process.

View Bedeer (2008) that students can get sufficient reinforcements on their understanding of new knowledge to reach an outcome or idea through active learning force them to retrieve information from memory and attitudes linked to the fact that they use so they show their potential and learning capacities, and this enhances their self reliance. And increases their ability to understand knowledge and build meaning and retention and change the image of the teacher as the sole source of knowledge (dir, 2008, 38)

Bedouin mentions (2010) that there are obstacles to achieving an active learning environment, including strict adherence to traditional education, resistance to change, as well as the absence of incentives, poor skills to implement new strategies, and fear of losing exactly within the class, including applying active learning inside the classroom such as lack of time allotted to the application, and the need for preparation and planning, and the relatively large numbers of students, lack of sources and material assistance. (Badawi, 2010, 25)

Since teaching physics is facing many problems contributed to nature and most abstract concepts in it, as the trend in taught nowadays is to use the traditional method that adopt indoctrination and conservation resulting in weakness of their familiarity with the article and their reluctance and lower educational attainment.

Physics can contribute to the development of thinking and creativity but developed methods taught that help students to study the physical phenomena of objective scientific study physics study becomes meaningful, and therefore benefit from active strategies that invites the teacher to stop looking at the content on that article to save and remember and work to develop the mental abilities of students and teach them in a way that excite the mind and stimulate him and train him to think, take multiple intelligent level.

And many researchers believed that widespread use of IQ in educational process has many students in schools as failures in education or with learning difficulties and became later experts is due to them, leading to interesting educational applications for worldview pluralism of intelligence (multiple intelligences theory) by Gardner as input for education reform and elimination of problems arising from widespread use of IQ.

Personal intelligence and a multi الذكاءت includes the ability to understand emotions and intentions, goals and ability to form honest about oneself and to learn good person and make decisions based on these objectives informed and accurate knowledge, as well as directing the feelings and thoughts, needs and deal with these emotions consciously. And thinking deep reflection within themselves. (Naser, 2008:104). the following section has summarizes significantof the current search:.

1) The importance of active learning strategies (five fingers strategies and traffic signals) to create an active learning environment makes permanent student activity and active participants, which helps to increase the efficiency of the educational process.
2) Educate teachers and physics teachers in educational institutions of the importance of active learning strategies in learning and teaching processes including (five fingers strategies and traffic lights).
3) The current research has awakened physics teachers and researchers need to pay attention to students ' multiple intelligences and personal intelligence in particular.
4) Current research may encourage researchers in educational field to conduct more research and studies on active learning strategies (five fingers strategies and traffic signals) with other dependent variables.

Aim of research: research aims to know:
The effect of applying the two strategy (five fingers and traffic signals) in the collection of the first intermediate students of physics and their intelligence profile.

Research hypothesis: to achieve the goal of following the zero hypothesis developed research:
1) There are no statistically significant differences at a level (0.05) between averages of three groups students grades, achievement test for physics.
2) There are no statistically significant differences at a level (0.05) between averages of three groups students degrees scale personal intelligence.

Limit search: current research is limited to:
1) A sample of first-graders at the middle school day average in Karkh Directorate General for first academic year breeding (2014-2015).
2) The last three chapters of Physics book for the first grade school year due to teaching average (2014-2015).

3. Definition of the Terms

- Strategy: defined by:
- Zaiton (2001, 279) as ' a set of actions planned in advance and for the implementation of teaching in order to achieve certain objectives in accordance with the available potential.
- AlHela (2008, 150) as ' a set of actions and activities and methods chosen by the teacher or planning to follow one after another in sequence using the possibilities to help requested on mastering the objectives '.

Procedural definition: — the ' action group organization in all teaching elements during two phases of planning and implementation through adopting a number of decisions necessary to employ active learning measures. '

The researchers did not find a unified and accurate definition for each of the five fingers strategy and strategy traffic signals, so procedural definition is as follows.

Five fingers strategy: one active learning strategy that invest the five fingers of the hand movements and student instruction activities specific to each position of the tutorial.

Traffic strategy: active learning strategies are based on using color cards traffic lights (red, green, yellow) in the student's confidence in the accuracy of the Serenade expression answering questions and activities by the teacher during teaching position.

Qualification: It defines as the following:
-Alzaghloul (2007, 87) that ' result student learns after traversing the educational experience, to see how successful the strategy developed by the teacher to achieve his goals and up learn '

Alam (2009, 201) that (achievement or performance in a particular skill or group of knowledge or acquired knowledge or skill developing in different areas of study, and in test scores or marks established by the teacher to request or both.

Procedural definition: is the first grade students of grades on achievement test paragraphs that will apply at the end of the experiment.

Personal intelligence Mayer * salovey, 1990 define it as the ability to understand emotions and self-organized to promote both emotion and thinking, (* Mayer salovey, 1990)

Procedural definition: it is the student's ability to self regulateranting as measured by degree obtained by answering the test clauses prepared by the researchers for that purpose.

4. Theoretical Background

Addressing the psychological and educational studies and research topic of intelligence as the ability to learn, and Gardner has chosen a different direction from the rest of the researchers tried to explain the nature of intelligence when presented the theory derived his theory of multiple intelligences as noticeable to individuals with superhuman abilities in some mental abilities and don't get into IQ tests up or below average grades, which may make them classified as mentally handicapped (Peregrine Falcon, Rami, 2010 : 56).

Multiple intelligences theory of universals, one that intelligence is not inherited, and that each person possesses a number of intelligences, not intelligent and could draw this profile for each person, and the eight intelligences disparity among everyone and not someone's profile is similar to someone else's profile, you can get high quality learning if appropriate education for their people of brightness, as strong intelligences can be invested to develop the weaker intelligences.

Multiple intelligence types
- Verbal Linguistic Intelligence
- Mathematical Intelligence Logical
- Visual Spatial Intelligence
- Bodily – Kinesthetic Intelligence
- Musical Intelligence
- Interpersonal Intelligence
- Naturalist intelligence
- Personal Intelligence

Active learning strategies:
Sees (Al agil, 2013) that employ active learning strategies action helps develop social relationships among students each and their teacher, and increases the students ' integration at work giving pleasure and joy and develop self-confidence and ability to express public opinion as well as its motivation; in mastering learning and development trends and educational values of the educational institution to achieve them (Al-akeel, 2013, p 12) And the researchers will display straighten used in this research is consistent with the teaching of Physics:

First five fingers strategy based on the idea of an investment in the movements of fingers and educational activities, the main proceedings

A-Introduction of the lesson include:
1) the role of the teacher: teacher lesson explains the way he sees fit for the topic and then ask the students to determine their answer and achieve the objectives of the lesson, fly to discuss and comment on the answers.
2) student role: to respond individually if confidence is high the answer through the use of the fingers and the hand is lifted individually for each student, as follows:
   - Raise the five fingers if there is high confidence that he has achieved the goals of the lesson.
   - Raise three fingers in the case achieving certain goals (medium).
   - Catching five fingers in case only one goal

B- Responses
If the teacher answer questions there are three responses
1) Raise five fingers if sure answer
2) Raise three fingers if you know part of the answer
3) Catching five fingers when not know to answer teacher discuss and comment on the answers.

Traffic strategy and strategic
the idea on the demand of students to determine how much confidence they achieve goals, or how much confidence they own when their answer to a question posed by their teacher, using traffic signals and the goal of training students self-management strategy can be implemented at any time it deems appropriate, the teacher summed up both roles procedures teacher and student embodied by the following steps:

A-Introduction Lesson
The role of the teacher: teacher lesson explains the way he sees fit for the topic and then ask the students to determine their answer and achieve the objectives of the lesson.

B-Course Lesson
Role of the student: the student respond individually if high confidence to answer through colored cards given to him
- If your confidence is high the answer and he scored goals * if he feels he has achieved one goal or not.
- In the case of answering questions posed by the teacher there are three student responses
- Raises green card if certain of the answer.
- Raised the yellow card if you know part of the answer.
- Raises the red card if not to know the answer with teacher discussion and comment on the answers.
- The strategic idea on the teacher asked students to determine the extent of confidence in their compliance with goals or how their confidence when ysaelhm teacher individually or collectively, and intended to train students to determine how much confidence lesson objectives, either for its execution time is at the end of the lesson and after achieving its objectives.

Search Procedures
Depend on the experimental method because the method is suitable for achieving the objectives of the research, so this chapter an overview of research methodology and procedures of selection of experimental design and determine the research community and specified equal groups and identify research requirements and procedures

for the application of the strategies and tools and statistical methods used in data processing.

Experimental Design
Choose a design researcher equal groups exactly micro-type test post in this design the experimental groups are subjected to independent variables (strategic five fingers and traffic lights) while the control group studying the regular way and the chart (1) shows that

Chart 1: Experimentaldesign distribution

Dependent variable	Independent variable	groups
Collection test post Personal intelligence	Five fingers strategy	Experimental 1
	Traffic signal strategy	Experimental 2
	Traditional way	control

-Research community and Sample:
Intermediate students research community represents Mansour boys of the General Directorate of education school year's first lieutenant (2014-2015), the researcher found cooperation from management, and the school has eight people for first grade average, and the adoption of random drawing was selected, Division (b) of (39) is the first student pilot and Division (d) consisting of (40) students are the second and Division (e) of (40) students are the control group after excluding repeaters and students who have fallen behind on the performance of a test sample also became the only statistical table (1.)

Table 1: Research sample

Sample number	Unlikely number	Total number	Division	group	No.
32	7	39	B	First group	1
34	6	40	D	Second group	2
35	5	40	H	Third group	3
101	18	119		total	

A keen researchers before starting the experiment on equal research groups in some variables that are believed to affect the integrity of research, these variables (age, level of intelligence, science degrees for the previous year). A chronological age calculated in months: students ages calculated up to months (1/2/2015) and using variance analysis (ANOVA), the results showed that the calculated F value (0.503) is less than the value indexed for F was (3 101) at the level of statistical significance (0.05) and the degree of freedom (98, 2) indicating the lack of statistically significant differences between the three groups in this variable, this means equality groups in chronological age.

C-Personal Intelligence
Personal intelligence meter dish prepared by the researchers for that purpose on the three research groups, after analysing the data obtained was found to F value calculated (0.191) is less than the value indexed F (3.101) at the level of statistical significance (0.05) and the degree of freedom (98, 2) indicating the lack of statistically significant differences between the three groups in this variable, this means equal in three research groups.

Adjust the conditions of experiment and prevent accidents associated with.
The intended sample of incidents during the duration of the experiment may prevent them from the experiment, and the sample for any accident or variable affects the dependent variable along with the impact of the experimental variable, as follows:

- Teaching (experience): instructor lesson three groups after his training according to plans by the Finder to adjust a variable experience and individual differences between teachers making the experience a degree of accuracy and objectivity.
- Duration of time: the long timeline are equal for all research groups Alp groups.
- Course content: the content of the subject was the same for the whole three groups of chapters, and appropriate teaching plans were prepared for each group.
- Allocation of quotas: quotas adopted periodically, three people fairly interactive classes run weekly seminars.
- Waste is Demo: the impact of a number of students leaving or dropping out during the experiment, the experiment was not exposed to situations of leave or members of research groups from the school except for cases of absence from always blended in almost equal groups-set measuring tools: the researchers has applied its uniform measurement tools for you not in groups (academic achievement and personal intelligence), as the researcher correct answers students himself to patch standards established for each tool and as the optimal answer .

Research Requirements

Current research requests a set of requirements for the purpose of implementing the research procedures and kits:

1) Identify Scientific Article
Select the last three chapters of the physics book for the first intermediate classes taught during the second semester of the school year (2014-2015) and by the annual plan developed and directed by the needs of educators.

2) Formulate behavioral purposes:
Researcher formulate behavioral purposes depending on the content of educational material covered by the duration of the experiment, which consists of (130) behavioral purposes and (119) cognitively purpose according to the classification of ' bloom ' first three levels of knowledge (remember, understanding, and application) and (6) and communication purposes (5) emotional purposes.

Behavioral uses were presented with a copy of the book Physics for first class in intermediately stage due to a group of experts in the field of education and teaching methods of Physics (1). To indicate their views on the accuracy and coverage of educational content and appropriate for the level. In the light of expert opinions and observations have been reworking some adjustments proposed on others, bringing the final number (130) served reject valid returned as received approval (80%) Or more of the opinions of arbitrators extension (2).

3) Preparation of teaching plans

Been set up (16) teaching plan for each group depending on the strategy used, so teaching article assessments for the last three chapters of the book Physics for first grade average decision, these models were presented plans at a group of specialists and experts in the field of education and teaching methods of Physics (1). To demonstrate their opinions about her suitability for teaching strategy and article content and behavioral purposes, based on the observations raised and fixed proportion (80%) The consensus in the light of this ratio was amended some plans to take final appendix.

Tools of Research a Search

The researchers prepared tools for measurement of variables: educational attainment, personal intelligence, as follows:
First: the achievement test: researcher by following the following steps:

1) identify the main objective of the test: is achievement first graders in average temperature and thermal properties of classroom content and material transformations of the book Physics for the academic year 2014-2015 according to behavioral uses for that content.
2) determine the number of paragraphs test: the researchers used a number of professors and teachers who study physics for having first intermediate behavioral uses the content of the book Physics for first grade average and agreed to determine the achievement test paragraphs b (26) test paragraph only.
3) prepare the test map (specifications): in the light of the academic content weights set number of pages for each of the seasons covered and behavioral uses weights by three levels (38%) The level and remember (42%) and absorption (20%) The level of sophistication by j s, as shown in table 2.

Table 2: Experimental achievement test map

total 100 %	Aims Level			Percentage	Pages Number	Subject	Chapter
	Application 20%	Comprehensive 42%	Remember 34%				
	Number Of Paragraphes			32%	11	Temperature	5
9	2	4	3				
9	2	3	4	27%	9	Temperature Properties of the Material	6
8	2	3	3	41%	14	Material Changes Statues	7
26	6	10	10	100%	34	Total	

The wording of paragraphs: paragraphs achievement test as the primary component of (26) paragraph according to the indicators in table specifications, and adopted a formula (multiple choice) and achievement testing paragraphs were dispersed between the levels of the cognitive domain (remember, assimilation and application), the researchers make a standard mode for correct answers about the achievement test also comes one (correct answer on each paragraph of the test, and zero for the wrong answer and abandoned, thus testing college class ranged from a minimum of 0 to a maximum of 26.

Honesty testing: verification of content was truly tested display with article content and behavioral specifications and uses a range of specialists in physics and physics teaching methods, (1) to reconsider some paragraphs test based on their observations and opinions, and kept on test paragraphs got 80% or more as a deal between the opinions of specialists according to the equation of Cooper.

Application was exploratory in two phases: A-the achievement test application on the first exploratory sample: The test is applied on a reconnaissance of the sample average of first graders (30) students in non-intermediate boys/the core sample for the purpose of ascertaining calculating the time required to answer, clear paragraphs and understanding of students. Time was calculated by calculating the average time it took the first three students and another three students (35) minutes. B-the achievement test application on the second exploratory sample: The test is applied on an exploratory sample consisted of (100) student of first intermediate class average Mansour for boys is a sample search.

Statistical analysis of test: analysis of paragraphs is a screening test, or individual responses on each paragraph of the test. This process includes detecting level (difficulty) and force (highlight paragraphs) and effective alternatives in paragraphs test. (Zawbai et al, 1981:74) so researchers following: sponsoring students ' answers (100) downward paper as scores were chosen by 27% of answers in receiving the highest score, which represents the Supreme group as well as 27% of responses were selected with less grades which represent the minimum package. Statistical analyses were as follows:

a) Calculation of the level of difficulty
That paragraph, which is good which difficult factor ranges between (0.20-0.80) (mados et al, 1983:107), since the coefficient of difficulty accomplishing test paragraphs of this research worth between (0.22 – 0.40) so it's good and proper difficult factor paragraphs compared with the above criterion. attachment (4)

b) Factor of discrimination
Discrimination was calculated for each paragraph of the achievement test, and found that their value ranging from (259.0 – 815.0) (4).

Brown notes (Brown 1989) that the test paragraphs longer good if the discriminatory power of the vertebrae (20.0) and above (Brown, 1981:104)

As the power of the achievement test paragraphs highlight more than (20, 0), so the researchers keep all test paragraphs.
C-wrong alternatives effectiveness: the effectiveness was calculated wrong alternatives, and found that they are all

false negative alternatives attracted a number of minimum group students more senior group of students so I came back all wrong effective alternatives , as shown in appendix(4).

1. Stability Testing

Firming type adopted homogeneity using Kiodr– Richardson equation, 20 for the internal compatibility scale or homogeneity of the test substance (virkson, 1991:530) because it is suitable for paragraphs that answers (0, 1), and surely the achievement test (0.830). Therefore the reliability coefficient of the test well is recalling (Awda, 1998) an inhaler testing if stability coefficient (0.67) over good (Awda, 1998:146).

Thus the test is ready for application ,as shown in appendix (5)

2-Personal Intelligence Scale Building:

The scale is built in accordance with several steps are:
a) Identify personal intelligence concept and its components:
b) After that the researchersselect personal intelligence concept as shown (select terminology) identified the following components:-
- Self-awareness: it isAppears in each person consciousness characterized by cognitive strengths and weaknesses in his plans and objectives.
- Reflection: Appears in each person consciousness features gnostic imaginations and intuition or the prediction.
- Independence: it Appears in each activity features Gnostic self –reflection, that would depend on the scale passages derivation.

Building of paragraphs:

For the purpose of formulating the scale passages, a researcher on a number of metrics related to multiple intelligences in General and especially personal intelligence standards contained therein, and one of the most important metrics used by the Finder are:
- Multiple intelligences (2001, Chan): this measure consists of (21) paragraph spread over seven intelligences (3) paragraphs, had to scale two alternatives: (apply, doesn't apply). (Chan,2001,pp.215-23‹)
- -Multiple intelligences (2002, Hanley et al) this measure consists of (35) spread over seven intelligences (5) paragraphs, was to measure five alternatives are: (strongly agree, agree, disagree, unsure, strongly disagree) (2002, p.163-180, (Hanley et al-multiple intelligences (Rashid, 2005) this measure consists of (96) spread over eight intelligences (12), and the five-scale alternatives: (applicable to a large degree, fairly applied, fairly tightly, tightly, never does not apply). (Rashid, 2005, p 176.
- Multiple intelligences (Ibrahim, 2008) consist of (144) and several paragraphs of personal intelligence scale within it (17), has four alternatives to answer is: (Ibrahim, 2008, 82)

It was drafted (30) in the light of the theoretical framework of the theory of multiple intelligences, as all paragraphs phrased positively, any negative paragraph spread over its components (10) a paragraph for each component and given

three alternatives to answer (agree, I don't know, not agree) to match the age and level of mental research sample, given degrees (2, 1, 0) for each of the alternatives answer (agree, I don't know, don't agree), respectively, put int instructions which took into account the answer should be clear, and noted that the researcher is For the purposes of scientific research and asked the responder to mark (X) under a proper replacement before each paragraph of paragraphs without leaving any paragraph and included an example shows how to answer on the scale.

Verfication the scale and its validity

Ebel (1972, Ebel) mentioned that the best way to extract the truth is a virtual number of experts and specialists to determine how representative of standard paragraphs for the feature that needs to measure. (1987, p.55, Ebel) based on this initial image scale introduced to experts in education and Psychology (1) in the light of their observations and opinions have adjusted some paragraphs and similar paragraphs were deleted with other paragraphs in question and kept (20) and got an agreement rate (80%) And more, this researcher adopted a criterion for the validity of the paragraph in the measure for measure. (Bloom et al, 1983, p 126)

The exploratory of the application

To find out how they measure and paragraphs explicitly instruct answered and the response alternatives, selection, as well as the time it takes to answer, to achieve that the scale was applied on Monday 11/1/2015 on a sample of (100) students were chosen at random from the sample medium search is victorious, and asked them to read the instructions and paragraphs and inquire about any ambiguity, it was found that paragraphs standards and the instructions were clear and understandable, either time taken by students in answering the eight scales, vertebrae between (25-35) min median (30) minute statistical analysis of paragraphs: paragraph analysis process known as study to evaluate its effectiveness through student response to each paragraph separately, and in this respect refers Abel (1972, Ebel) that the aim of this action is to maintain good paragraphs on the scale. (1972,p.392,Ebel)

Discriminatory strength of paragraphs:

Correct of answers is done after students arranged the papers of the highest to the lowest degree, Francistown (27%) Graduate degrees (27%) From the lower echelons of the represented two extremes, where this percentage represents the best ratios for comparison between two groups, and after using t-test (T-Test) two separate finding differences between top and bottom group averages, this action showed that the t-value is an indicator to distinguish each paragraph by comparing indexed value, all paragraphs function at a level (0.05) degrees of freedom (52), extension (6)

Verification of construction

The discriminatory power of paragraphs leave the extent of homogeneity in the measured phenomenon designed to measure, since there may be discriminatory power close paragraphs but measure different behavioral dimensions, use find (Internal Consistency) is one of the facets of sincerity construction. (Anastasi, 1976, p.154), and on this basis it has

been faithfully construction account for the scale through the following methods:

a) The connection between thedegree of paragraph with the total degree of the scale:
Correlation was calculated between each paragraph and the total degree according to CX e Pearson correlation, correlation coefficients ranged between (0.284-0.610), and all transactions a statistically significant at a level (0.05) degrees of freedom (98) equals (0.196) (6 a).
b) The connection between the degree of paragraph with the total degree of the scale that each paragraph is related to:

For extracting connectional relationship between the degree of each paragraph and the component, the researchers used. Pearson correlation coefficient, the results showed that all paragraphs function at a level (0.05) degrees of freedom (98) equals (0.196), if all the values of the calculated correlation coefficients greater than the value of the correlation coefficient, table as shown in appendix (6A))

Reliability
Reliability using Alpha cronbachformula to estimate reliability coefficient values, which measure the consistency and coherence between paragraphs. (Return wemlkaoi, 1992, pp 195) to verify the consistency of the scale applied cronbach Alpha formula sample grades, was correlation coefficient (0.855) this is an indication of the internal consistency of the scale. Thus the scale is ready for its final form (20). And his grades ranging from (0, 20), average assumption (10) degrees, as shown in appendix (7).

Procedures for the application of search experience
1) Experience continued study and separation is the second semester of the year 2014/2015 2. Search experience began on Tuesday 17/02/2014
2) Teaching research groups by the instructor after his training on teaching strategies and plans approved and under the supervision of a researcher with the reality of sessions a week over 10 weeks.
3) The students were tested in the collection test on 4/5/2015.
4) The students were tested and measured personal Intelligence Brigade on 5/5/2015.

5. Statistical Methods
After collecting and analyzing data using statistical pouch (SPSS) for measuring search variables I have students Research sample (first class in intermediate stage) using many ways descriptive and analytical statistics:

Arithmetic averages and standard deviations, F- unilateral variance analysis and F-value and the value of Shaivism. And Pearson correlation coefficient.

6. Presentation and interpretation of results

I- View and interpret the results of the collection
After applying the experiment and test of three research groups students achievement test, arithmetic averages were calculated research groups to verify the first hypothesis which States ((no statistically significant differences at a level (0.05) between averages of three groups students grades, achievement test for physics.)) , As in table (3)

Table 3: Arithmetic for three research groups in the achievement test

The normal group	2nd experimental (traffic signals)	1st expermintal (five fingers)	Data
35	34	32	Total Number
18.14	21.0	22.4063	mean
3.264	2.964	1.932	Standard deviation

Shown in table (3) that the average score for the first pilot group that studied the according to strategy (five fingers) (22.4063), while the average score for the experimental group II examined the according to strategy (traffic signals) was (21.0) and average officer examined the regular way (18.14).

To test the moral differences between the three groups have used unilateral variance analysis equation. (One Way Analysis of Variance), it was found that there is a trail between the three groups moral significant , calculated F value equal to (6.103) largest indexed value (3.11) extracted by degrees of freedom (2, 98) when the level indication (0.05), indicating the presence of statistically significant differences between the three research groups at the collection variable to the students, as in table (4).

Table 4: Results of analysis of variance and F value and statistical significance for the three research groups in the achievement test

Significance At level 0.5 .	F value		Mean of squared value	Summation of squared value	Freedom degree	Source of differences
	tabular	calculated				
significant	3.11	20.356	159.523	319.045	2	SST between the groups
			7.837	768.004	98	SSE inside the groups
				1087.050	100	totalSST

According to the results shown in the table (4) differences between the means of the first experimental group students grades examined five fingers strategy and experimental group II examined the strategy of traffic lights and the average control group that studied the regular way regarding the collection.

An equation has been used (Scheffeequation) for comparisons between groups to see the differences between the means , to specify the differences between the averages of the three groups grades as in table (5). .

Table 5: Even comparison for the groups

Control group	2nd experimental	1st experimental	group
4.26339*	1.40625	------	1st experimental
2.85714*	-----	-1.40625	2nd experimental
	2.85714*	4.26339*	Control group

Shown in table (5) that the difference between the first and second experimental groups has not significant level (0.05), when balancing the first experimental group and the control group demonstrated that the difference has a significant level (0.05) for the benefit of students of the first set. When balancing the second experimental group with a control group found that the difference between the two groups at statistically significant (0.05) for the benefit of the second experimental group.

And in the light of the findings of the first zero hypothesis rejects which stated the lack of statistically significant differences between the connected collection grades among students in the experimental group who studied five fingers strategy, and the second group students who have studied strategy of traffic signals and control group students who have studied in the traditional manner.

The reason of exceed the experimental group students than is due first and second experimental group lesson students use their fingers and five traffic signals on control group that studied her students the way normal collection degrees post, that the presence of active learning in accordance with the strategies and cooperation between students and their teacher through colored cards and involved the use of fingers led to establishment of relations governed by love and enjoy the article and avoids indoctrination which left a positive impact on student achievement of the first and second pilot groups.

The lack of differences between group first experimental studied physics using five fingers strategy and second pilot group that studied physics to use traffic lights in collection strategy, this result may be due to the strategies (traffic signal five fingers) involved in active learning and make students active learners through effective participation leading to equal two students go through first and second collection.

Personal Intelligence Results and its discussion
After applying the experiment tested three groups students with personal intelligence scale to check the second hypothesis, which States ((no statistically significant differences at a level (0.05) between averages of three groups students degrees scale personal intelligence.)) were calculating arithmetic for grades three research groups, table 6 shows that.

Table 6: Arithmetic means of three research groups in personal intelligence scale

The normal group	2nd experimental (traffic signals)	1st expermintal (five fingers)	Data
35	34	32	Total number
16.6571	19.6765	19.9375	Means
3.71755	3.60740	3.16164	Standard deviation

Shown in table (6) that the average first expermtal group that studied on five fingers strategy approved personal intelligence (19.9375) while the average grades of the second experimental group that studied the according traffic strategy (19.6765) and average control group (16.6571), and the moral test differences between groups in three personal intelligence variance analysis used unilateral statement, table 7 shows that

Table 7: Unilateral variance analysis results for the three groups personal IQ scores

Significance At level 0.5 .	F value		Mean of squared value	Summation of squared value	Freedom degree	Source of differences
	tabular	calculated				
دلة ىوتسمدق ةلد 0.05		9.218	113.736	2	227.471	Between groups
			12.339	98	1209.202	Inside groups
				100	1436.673	tatal

Shown in table (7) that the value calculated in the amount of F value(9 223) greater than tabular F value (3.11) extracted by degrees of freedom in (2, 98) when the level indication (0.05), indicating the presence of statistically significant differences between the three research groups in a variable personal intelligence and detection of sources of differences between three groups, the average scores were used to determine the direction of Shaivism equation differences between medians as per **table (8)**

Table 8: Even comparison groups

Control group	2nd expermintal	1st expermintal	group
3.28036*	.26103	------	1st expermintal
3.01933*	-----	-.26103	2nd expermintal
	-3.01933*	-3.28036*	Control group

Shown in table (8) to the difference between the middle two personal intelligence scores first and second experimental is

not statistically significant at (0, 5), the difference between Middle intelligence first pilot groups and personal officer is d and for group one difference between IQ scores two personal Mediterranean pilot officer second is d and for the second group.

In the light of the findings of the zero hypothesis rejects the second provides that no statistically significant differences between the connected personal intelligence scores among students in the experimental group who studied five fingers strategy, and the second group students who have studied strategy of traffic signal and control group students who have studied in the traditional manner.

Researchers finds that fact than the first and second experintal groups students who have been taught to use active learning strategies (stoplights and five fingers grip) are better than the control group students who were taught the regular way in personal intelligence may be attributed

this result to use colored cards and fingers in the answer and participate actively in learning has a positive impact on students ' attention and perception

7. Conclusions

In the light of the results of research within the researcher concluded his research that:
1) There is a positive impact of active learning strategies (traffic signal and five fingers) in the collection of the first grade students in physics.
2) There is a positive impact of active learning strategies (traffic signal and five fingers) in personal intelligence first graders average.

8. Recommendations

1) Training teachers of physics and to use their traffic lights and five fingers in teaching through participation in training courses for the use of these strategies so that they can help students rely on these activities in the learning process which increases their effective participation in lessons.
2) Learn the physics departments students in the colleges of education and basic education in the course of preparation, training strategy of traffic signals and five fingers and how teaching plans in the future to "recruited their teaching of physics in various grades.

9. Propositions

1) Studies on the use of their traffic signals and five fingers vitdris physics and measuring their impact on other variables such as skills beyond knowledge and inclination values and trend of physics.
2) A study to investigate impediments to applying my strategy stoplights and five fingers in physics teaching in junior and senior high schools for girls and boys.
3) Studies on the effect of teaching by using their stoplights and five fingers in other subjects .

References

[1] Badawi, Ramadan said (2010) active learning, 1, Dar Al fikr publishing, Oman, Jordan.
[2] Bdir. Karreman (2008) active learning, 1, Dar es Salaam March for publishing and distribution, Oman, Jordan.
[3] Jaber Abdel Hamid (2003): multiple intelligences and develop and deepen understanding, Arab thought House, Cairo.
[4] Gibran, lonely (2002) active learning as a real learning centre, information and Coordination Center publications, RAM Allah, Palestine.
[5] Al- hela, Mohamed Mahmoud, (2008) design education (theory and practice), providing Mohamed Diab Al-Azzawi, 4, March for publishing and distribution, Oman, Jordan.
[6] al-Khatib, Ahmed Ashour (1996) proposed to the Arab teacher preparation strategy for the twenty-first century, Journal of future studies, issue one, Assiut University, Egypt.
[7] aldardeer, Abdel Moneim Ahmed (2004): contemporary studies in cognitive psychology, 1, kutub, Cairo.
[8] Alzaedy, Fatima Khalaf Allah, Amir (2010) impact of active learning in the development of innovative thinking and academic achievement in science in third grade average requests public schools in the city of Mecca, unpublished thesis, Faculty of Education University of Um Al-Qura, Mecca.
[9] Alzaghloul, Imad Abdul Karim woshakr his mind (2007) classroom teaching psychology, 1, Dar es Salaam March for printing and publishing, Oman, Jordan.
[10] Zayton, Ayesh Mahmoud, (2001) methods of teaching science, 4, Dar El shorouk for publishing and distribution, Oman Jordan.
[11] Saadah, Jawdat, et al (2006) active learning between theory and practice, publishing house the rise, Oman Jordan.
[12] Saadah, Jawdat, et al (2011) active learning between theory and practice, Oman Jordan. Dar El shorouk for publishing and distribution.
[13] Mohamed Abbas, Khalil, Mohamed Mustapha Labsi (2007): curriculum and methods of teaching math to basic stage. I 1, March, Oman
[14] Assewry, Latefa Abdallah Ahmed , laheq Al Sultan (2008): a study of the differences between parameters of high and low qualified chemistry in multiple intelligences and its relation to academic achievement in high school in Asir, (unpublished master), College of education for girls, King Khalid University.
[15] Al agil, Huda Ibrahim (2013) after activation of active learning in secondary schools on the outcome of the educational process for 2013/2014, Office of education, Department of education news County, Eastern Province, Saudi Arabia.
[16] Allam, Salah ELDIN Mahmoud (2009) measurement and educational evaluation in the teaching process, 1st. March for printing and publishing, Oman, Jordan.
[17] Alawneh, Shafiq peasant, portentous Yusuf balawi (2006): preferred learning styles and multiple intelligences among students of Yarmouk University, educational and psychological Sciences, Faculty of education, University of Bahrain, volume XI, p (2).
[18] Katamy , Yusuf, and Rami Yousef (2010): social intelligence for children theory and practice, 1, March, Oman.
[19] Mohamed, Nabil Companion (2011): multiple intelligence, purely House, Oman.
[20] Naser, Ehsan Silverline (2008): prediction of academic achievement in the light of the theory of multiple intelligences and information processing, educational and psychological Sciences (61) Baghdad
[21] Harmon, Merrill (2008), strategies to stimulate classroom learning, translate Dhahran schools, educational book House, Chicago
[22] Anastasi , A.:(1976) **Psychological Testing**.New.York.MacMillan Publishing Co.Inc
[23] Chan.D.H:(2001)AssessingGiftedness Of Chinese Secondary Students In Hong Kong, A multiple Intelligences perspective, **High Ability studies**, vol.(12),NO(2).pp.215 - 234
[24] Gardner ،Howard (2003) :**Multiple intelligence After Twenty years**،peper presented at the American

Educational Research Association ،April ،21،chicago I \\ inors

[25] Eble,R.L :(1972) **Essentials Of EducationalMeasurment**.New Englewood, Cliffs – Hall,Inc.

[26] Hanley,C;Hermiz.;Lagioig-Peddy,j.;Levine-Albuck.v.: (2002) Improving Student Performance interest and achievement in social studies using multiple intelligence. **Journalof Humanistic EducationandDevelopment**,32,pp.163 – 180.

[27] Mckinny(2001)Active Learning Available at:www.cat:ictu/edu/teaching tips/handsout/newactive.

[28] Walter ،&Gardner ،H. (1984) :**The Development and Education at intelligences**،CERIC decument reproduction service .No . 254545 .