

# The Degree of the Employment of Interactive Smart Board in Education by Secondary School Teachers

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**Abstract**—This study aims to identify the degree of the employment of interactive smart board in education by secondary school teachers. It also aims to identify the impact of each variables: gender, years of experience and educational qualification. To achieve the objective of the study, a questionnaire was designed comprising of 38 items applied to the study sample, which consisted of 93 secondary school teachers. The results of the study showed that the mean of the employment of secondary school teachers to the interactive board in the educational process is 3.65 and the standard deviation is 0.81, which is big, they also revealed that there were no statistically significant differences in the arithmetic mean scores of the employment of secondary school teachers to the interactive board in the educational process due to gender, but there was a statistically significant difference due to years of experience, for those with an experience of less than 5 years, they are more familiar in using technology, and the results also revealed that there were no statistically significant differences due to qualification.

**Keywords**—*Employment; Secondary School Teachers; Interactive Board; Education*

I.

## INTRODUCTION

We live in an informatics era (information and communications), and everything in the accelerated development of those around us, and for this it is necessary to keep up with this development, learner became line with technology to this technological acceleration. The educational process is going according to general societal system, affected by what affects the community of social, intellectual and scientific change, and advancing its lead. Since we live in technology and communications revolution, and what it contained developments and the developments of science and technology, it was necessary for this science to renew and modernize and keep pace with this development and change (Ibrahim & Balawi, 2007). The goals of modern education, to meet the needs of the learners. And it became the integration of technology and education technology in the educational process is part of the needs of learners.

And called on educational technology term educational technologies, which are a subset of the TMS, it is an integrated process (vehicle) include individuals, methods and ideas, tools and regulations to be followed in the analysis of problems, and devise appropriate solutions and their implementation, straightened, and manage in situations where education will be purposeful and directed. It can be controlled, and therefore, it is the management of the educational system components, and development (Al-hileh, 1998). Technology in education has become an important and necessary in the educational process, helping the learner in perceptual development has come from his illustrations and shapes that serve to clarify the written language of the learner, and help means of education technology learner to distinguish things, and is working to teach the learners specific skills, play a role great learner in training on structured thinking and solving problems faced by, It also helps in the ability to taste the development, and the diversity of methods in addition to the diversification of experiences, and the growth of vocabulary, build concepts, and the diversification of evaluation methods to cope with individual differences among learners, and help to keep the impact of the learning of learners for long periods, and also working on the development of learners' tendency to learn and strengthen their attitudes positive toward him. (The importance of education technology in the educational process, 2008). The modern technological means that the teacher can employ them in traditional rows (normal) in a collective manner and create an attractive learning environment, and form an integrated system of hardware and software resources to improve the participation of learners and enhance their performance, the so-called interactive board itself. The teacher used the board Interactive save his explanation for learners, store and print it or send it by e-mail, published online network when needed, and can use most computer software applications, which help in the presentation of the material attractive ways, the board Interactive is a tool of the essential tools in any It needs to use a visual connection (Higgins, 2010), (Morgan, 2008), (Al-rumh, 2006). The researcher believes that the board Interactive influential and wide-ranging impact on the progress of the educational process, facilitate the educational process in schools by provoking dialogue and debate

during the presentation of the lesson, and can that attracts attention and makes the concentration of educated people based throughout the duration of the share of the school, it allows learners to increase activity and dealing. It also helps teachers to explain the plan before the start of the share during the tidying and add some aesthetics of sound and image, it serves all the contents of the lessons and courses. Based on these important, some schools enter the interactive board to its ranks for use in developing the educational process.

### Statement of the Problem

Because of the importance of using smart boards, this study was undertaken to identify the degree of the employment of interactive smart board in education by secondary school teachers. It also aims to identify the impact of each variable: gender, years of experience and educational qualification.

### Questions of the Study

The study tries to answer the following questions:

1. What is the degree of the employment of interactive smart board in education by secondary school teachers?
2. Do the means vary for the employment of interactive smart board in education by secondary school teachers due to gender, years of experience and educational qualification?

### Hypotheses of the Study

To answer the second question, it was converted into the following null hypothesis at the level of statistical significance ( $\alpha \leq 0.05$ )

#### A. First Null Hypothesis

There were no statistically significant differences in the mean scores of the employment of interactive smart board in education by secondary school teachers due to gender.

#### B. Second Null Hypothesis

There were no statistically significant differences in the mean scores of the employment of interactive smart board in education by secondary school teachers due to years of experiences.

#### C. Third Null Hypothesis

There were no statistically significant differences in the mean scores of the employment of interactive smart board in education by secondary school teachers due to qualification.

### Objectives of the Study

This study aims to identify the employment of interactive smart board in education by secondary school teachers.

### Significance of the Study

The importance of the study lies in attempts to identify the employment of secondary school teachers of the interactive board in the educational process which may draw the attention of secondary school teachers of the importance of using interactive board in the educational process.

### Limitations of the study

The study is limited to the following:

1. Human limitations: This study was applied to a sample of secondary school teachers from Al-Quds.
2. Conceptual limitations: the terms contained in the study.
3. Procedural limitations: Statistical methods adopted by the researcher in the data processing, the study sample, tools and the method of their validity and reliability.

## II. THEORETICAL FRAMEWORK AND PREVIOUS STUDIES

Abdel Moneim (2015) aimed to recognize the reality and the obstacles to the use of teachers in UNRWA schools for interactive whiteboard and the effect of each of (specialization and years of experience) in the teacher's response, and included the study population on all teachers of UNRWA in Gaza schools (616) milestone that they have available interactive whiteboard, and consisted of a random sample of (282) teachers. The results showed that the degree of teachers' use of the interactive whiteboard was low, and the degree of importance of the use was great, and the results showed no significant statistical differences between teachers due to specialization in favor of scientific disciplines, the study recommended the need to hold training courses for teachers to introduce the importance of and how to use interactive whiteboard, and the need to encourage teachers on its use. Abu Rizk study (2012) sought to impact the use of interactive whiteboard technology in the development of planning skills to teach Arabic language material for teachers of students in the Department of Professional Diploma in Teaching in Al Ain University of Science and Technology survey, as well as to determine their attitudes towards and the problems they faced while being used as a tool educational, applied to the study (53) of the teachers students, the study found, and no statistically significant differences in the performance of the study sample in the daily planning differences, and in the total daily and annual planning signs together, for the benefit of the performance of the experimental group students. Also showed no statistically significant differences in the performance of the two sets of respondents in the annual planning, the study recommended encouraging faculty to use the interactive whiteboard in education, and providing programs and training workshops to increase the students 'and teachers' skills and raise their efficiency in the use of interactive whiteboard and using them in an effective manner in the educational and scientific and provide the necessary educational resources to help teachers and students to effectively use interactive whiteboard. Bsaiso's study (2013) aimed to recognize the teachers' attitudes towards the use of smart blackboard where in-kind study consisted of 43 teachers from secondary schools Bashir Rais (a) for girls. The results of the study showed that there are positive attitudes towards the use of smart blackboard and teachers with scientific specialization largest

responses of humanities teachers with specialization responses on a scale trends, while equal almost teachers holders in response bachelor's and master's degree, as the results of the study showed no differences in the sample responses towards the use of smart blackboard attributed to age. Hasaballah (2002) aimed to prepare the list of the trend toward smart blackboard and to determine whether to accept or reject students and teachers / Division of mathematics to the use of electronic blackboard in teaching, and determine the dimensions (axes) list, which included the basic dimensions of the field of emotional, is the knowledge. The propensity and conscience. The results showed statistically significant differences between the mean scores of students in applied research group pre and post the list of teachers to students' attitudes towards the use of electronic blackboard in favor of the dimensional application. Gnay and et al. (2005) aimed to explore the views of English language teachers on the use of interactive whiteboard educational material to teach English. To achieve the objectives of the study was the use of a mixture of qualitative data collection tools (interviews, teaching records, and Views classroom). Participants reported that the use of interactive whiteboard leads to improved teaching and learning of the English language through the support of the teacher in the classroom management, and that the use of this technique has a very positive impact on increasing conservation and writing skill development among students. Winzenried et al (2010) sought to explore the views of teachers on the impact of the use of interactive whiteboard in teaching practices. Using the case study method, which focused on six teachers practices for primary and secondary level. The study concluded that all the teachers involved have enthusiasm to use the interactive whiteboard. the study also showed that there are significant differences between the teachers in how to use the interactive whiteboard in education and in the duration of the change in teaching practices as a result of their use. Shana and Ishtaiwa (2011) aimed to describe how to use the interactive whiteboard by teachers of students to the teaching of the Arabic language, and the disclosure of their views on the impact of interactive whiteboard on the teaching and learning of the Arabic language in the quota practical education program in the schools of the UAE. And the study sample consisted of 179 trainees. The researchers found that a small number of participants (14.5%) the use of interactive whiteboard in their teaching of the Arabic language and that their use was modest, where participants focused on used as a display of educational materials rather than use it as an educational tool equal.

### III. METHODS AND PROCEDURES

#### A. Methods

The researcher adopted the descriptive approach, which relies on the study of phenomena as they really

are; this is considered the right approach to such studies.

#### B. Population of the Study

The study population consisted of all 200 teachers.

#### C. Sample of the Study

The study sample consisted of 93 teachers (46.5%) and its characteristics are shown in Table (1).

Table (1): Sample Characteristics

Variable	Level	Number	Percentage %
Gender	Male	51	55%
	Female	42	45%
Experience	less than 5 years	27	29%
	5 years and less than 10 years	18	19%
	10 years and over	48	52%
Qualification	Less than Bachelor	15	16%
	BA	35	38%
	Bachelor higher	43	46%

#### D. Variables of the Study

##### Independent Variables

- a- Gender (Male, Female)
- b- Experience: (less than 5 years, 5 years and less than 10 years, 10 years and over)
- c- Qualification: (Less than Bachelor, BA, Bachelor higher)

##### Dependent Variable

The employment of interactive smart board in education by secondary school teachers.

#### E. Instrument of the Study

The researcher built a questionnaire which contained 20 items as in Appendix (1) by taking advantage of some previous studies, and the reliability of the instrument was achieved through presenting it to a group of experienced and competent arbitrators, the coefficient (Cronbach's alpha) was (0.88).

#### F. Statistical Analysis

Statistical analysis of the data was done by using numbers, percentages, means, standard deviations,

independent (t-test), One way ANOVA, Post hoc (LSD), and the coefficient of reliability (Cronbach alpha) using the SPSS, and the following correction key was adopted  
 mean  $\leq$  2.33 low  
 2.33 < mean  $\leq$  3.66 medium  
 mean > 3.66 big

IV. AND DISCUSSION

RESULTS

1. What is the degree of the employment of interactive smart board in education by secondary school teachers?

To answer this question the researcher calculated the mean and standard deviation, where the mean score was 3.65 and the standard deviation was 0.81, which is medium. And the results revealed that item no. (3), which said that "Working on reducing mental distraction of the students.", had a large mean 4.08 with standard deviation 0.93, item no. (1), which said that "It helps to create classroom conditions desired" had a mean 3.95 with standard deviation 1.09 and item no. (16), which said "It helps failure to classroom management". Had a least mean 2.08 with standard deviation 1.15. As shown in table (2).

Table (2): Means and Standard Deviations

No.	Items	Mean	St. Dev.
1	It helps to create the desired classroom conditions.	3.95	1.09
2	It helps to use appropriate methods to bridge the gap. Between realism desired conditions and circumstances that exist.	8.80	1.08
3	It reduces the mental distraction of students.	3.67	1.15
4	Addresses individual differences among students	4.08	0.93
5	It helps students' interaction with me constantly.	3.65	0.97
6	It helps students in classroom activities.	3.59	1.07
7	It makes me feel that I respect and appreciation from the students.	3.83	1.12
8	It works to create a systematic and effective learning environment.	3.86	1.02
9	It works to reduce stress among students.	3.74	1.12
10	It helps to set the posts of students in the class.	3.79	1.07
11	It works to reduce the negative behavior among students while teaching.	3.72	1.01
12	It helps to reduce behavioral problems.	3.62	1.14

13	It works to avoid falling into academic problems.	3.32	1.26
14	It helps in the design of the subject matter that limits the negative behavior of students.	3.69	1.07
15	It works to set the system in the classroom.	3.81	1.23
16	It helps failure to classroom management.	2.08	1.15
17	It helps in dealing with the realistic classroom conditions that already exist.	3.72	1.02
18	It works to reduce the proportion of high tension and anxiety among students.	3.66	1.17
19	It develops the positive trend in the students' dealing with the teacher.	3.88	1.06
20	It develops the positive trend in the students' dealing with each other.	3.58	1.19

2. Do the means vary for the employment of interactive smart board in education by secondary school teachers due to gender, years of experience and educational qualification?

To answer the second question, it was converted into the following null hypothesis at the level of statistical significance ( $\alpha \leq 0.05$ )

**First Null Hypothesis** which states that there were no statistically significant differences in the mean scores of the employment of interactive smart board in education by secondary school teachers due to gender. To test the hypothesis, the researcher used independent t-test as in table (3)

Table (3): Analysis of the independent t-test due to gender

Gender	No.	Mean	Stan. Dev.	t-Value	D <sub>f</sub>	Sig
Male	51	3.17	0.75	0.38	91	0.38
Female	42	3.57	0.87			

Table (3) shows that the significance of the statistical significance level of 0.38 is greater than the level of statistical significance ( $\alpha \leq 0.05$ ) and it is accepting the null hypothesis that there were no statistically significant differences for the employment of secondary school teachers to the interactive board in the educational process due to gender.

**Second Null Hypothesis**

There were no statistically significant differences in the mean scores of the employment of interactive smart board in education by secondary school teachers due to years of experience.

The researcher calculate the means and standard deviation of the employment of interactive smart board

in education by secondary school teachers due to years of experience as in the table (4)

Table (4): Means and Standard Deviations years of experiences

Variables	Number	Mean	St. Dev.
Less than 5 years	27	3.52	0.84
5 years and less than 10 years	18	3.59	0.78
10 years and above	48	3.74	0.81
Total	93	3.65	0.81

Evident from the table (4) that there are differences virtual depending on variable experience for the benefit of the experience of 10 years and above level, and to find out whether these differences are statistically significant, the researcher applied Analysis of Variance (ANOVA) of the employment of interactive smart board in education by secondary school teachers due to years of experience, as in the table (5)

Table (5): Analysis of Variance (ANOVA) due to years of experience

Source of variance	Sum of Squares	D <sub>f</sub>	Mean Squares	f-value	Sig.
Between Groups	2.47	2	1.23	5.89	0.001
Within Groups	18.86	90	0.21		
Total	21.33	92			

Table (5) shows that the significance of the calculated level of 0.001 less than the level of statistical significance ( $\alpha \leq 0.05$ ) and because of that the null hypothesis was rejected and the alternative hypothesis accepted and to reveal for whom the benefit of those differences was the advanced statistical analysis Post hoc (LSD) was used as shown in table (6).

Table (6): Comparisons posteriori (LSD) due to years of experience.

Level I	Level J	Mean Difference
Less than 5 years	5 years and less than 10 years	-0.11
	10 years and more	0.36*
5 years and less than 10 years	Less than 5 years	0.11
	10 years and more	-0.24

10 years and more	Less than 5 years	-0.36*
	5 years and less than 10 years	0.24

Comparing the first level with the third, it was seen that it was in favor of third. The researcher attributes this result to the fact secondary school teachers with experience Less than 5 years more familiar for using technology.

#### Third Null Hypothesis

There were no statistically significant differences in the mean scores of the employment of interactive smart board in education by secondary school teachers due to qualification.

To test the hypothesis the research calculated the mean and standard deviation as in table (7).

Table (7): Means and Standard Deviations due to qualification

Level	Number	Mean	Standard Deviation
Below B.Sc	15	3.51	0.80
B.Sc	35	3.57	0.84
Above B.Sc	43	4.22	0.46
Total	93	3.65	0.81

To test the hypothesis the researcher used the Analysis of variance (ANOVA) for the the employment interactive smart board in education by secondary school teachers due qualification, as shown in table (8).

Table (8): Analysis of Variance (ANOVA) due to qualification

Source of variance	Sum of Squares	D <sub>f</sub>	Mean Squares	f-value	Sig.
Between Groups	0.73	2	0.36	1.88	0.15
Within Groups	17.44	90	0.19		
Total	18.17	92			

Table (8) shows that the significance of the calculated level is 0.15, which is greater than the level of statistical significance ( $\alpha \leq 0.05$ ) and depend on that the null hypothesis was accepted.

#### V. CONCLUSION AND RECOMMENDATIONS

The employment of the interactive smart board in education by secondary school teachers is the most important activity in education process, because it create an interactive environment. In this study, the results showed that the employment of secondary school teachers to the interactive smart board in the educational process was big; this confirms the presence of some teachers' skills. The results also showed that the employment of secondary school teachers of the interactive board in the educational process were no statistically significant differences due to gender, but there was statistically significant differences due to years of experiences, for those with experience of less than 5 years more familiar with using technology, and the results also revealed that there were no statistically significant differences due to qualification. Therefore, it is necessary to enhance the usage and employment of secondary school teachers of the interactive board in the educational process in order to develop the educational process.

In light of the above results, the following recommendations have been made by the researcher:

- The use and employment of interactive smart board is important in the educational process.
- Employment of the interactive board may increase teachers' motivation.

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