Evaluation of using iPad in Classroom Learning and Teaching

By: Dr. Fatina "Moh'd Saber " Quniebi
PhD in Curriculums and Instruction
Ministry of Education- Jordan

Abstract
This study aimed to evaluate the experience of using iPad in classroom learning and teaching. The study methodology was (qualitative quantitative). The study used questionnaires and interviews to collect data. The study participants consisted of (55) teachers, and (143) students from the upper grades of Primary stage (8th ,9th and 10th grades) studying at a private school and who use iPad in the learning –teaching process. The result indicated that the most important advantages of iPad were navigating the internet quickly to search for more information that enrich the lesson ,the smaller size of the iPad, its light weight and handling the screen easily .In addition ,The students found that although the school bag can be dispensable, many negative aspects were noticed such as distracting students, being busy with games and websites, being occupied with irrelevant topics, the penetration of protection and access to banned sites. Teachers on the other hand, found the negative aspects of using iPad represented mainly in weakening students' writing abilities and bad handwriting.

1. Introduction

The technical components used in teaching and learning have witnessed noticeable increase along with the development of the basic infrastructure of Information technology and telecommunication at schools. Digital learning content and software concerned with schools, interactive board, in addition to portable telecommunication technology has been increasingly used at schools because of their efficiency. The role of virtual learning which began to be used in different methods has been acknowledged as a complementary of traditional learning.(The United Nations,2007)
The call to integrate information technology and telecommunication in education has recently become louder, because it, as reported by the UNISICO Institute for Statistics,(UNISCO,2008) enhances and expands learning opportunities. It improves the outcomes of the learning process, realizes equality in learning opportunities and leads to learning comprehensiveness that help students acquire the skill of dealing with various electronic devices and programs. Eyadat(2004) emphasizes that information technology and telecommunication , through its qualities and properties, enables it to achieve numerous aims of individualized instruction. This helps students in reacting effectively and positively to the learning material.

Burden et al, (2012) carried out a study that aimed to evaluate the use of iPad in education .The team carried out a study case about adopting portable technology in eight individual learning sites in Scotland. The study data was collected through a primary and final survey of students and parents opinions, interviews with schoolteachers and principals, interviews with local authority's officials, focus groups of students in each school and observation of each class by the study team. The study results showed that the use of iPad facilitated the learning process and achievement of a number of components included in the general framework of the approach. The adoption of using the iPad in the classroom made it possible to access the internet, which made a wide range of interactive

learning activities available in a way that has never been before. The use of iPad has also encouraged teachers to discover certain alternative activities for learning.

Naace, (2012) carried out a study about the use of iPad at Long field Academy which is a mixed school with 11-18 years old students. Most of the students own iPads and teachers use iPads regularly in teaching. The study followed the survey method. Opinion polls of students, staff and parents' opinions were carried out. The study results indicated that the use of the iPad had a significant positive effect on students' learning English, Math and Science. Teachers stated that that using the iPad mitigated the workload because it is easy to use and cost effective. The iPad was used in doing the homework in addition to the accompanying activities. Students' motivation towards learning also increased upon using the iPad and their work quality, educational progress and co-operative work level improved. Students and staff stated that they work with more efficiency when they use the iPad.

Valstad, (2012), conducted a study that aimed to evaluate the tablet appropriateness to classrooms, the advantages and negatives of using them and whether they increase students' learning motivation. In order to carry out the study, (15) students and (5) teachers were provided by iPads. These iPads had a PDF copy of the school textbooks. Quality data was collected by observation, focus groups and interviews. The collected data received more analysis and discussion. The results showed that using tablets at the classroom had some advantages with some negatives. Tablets are appropriate, convenient regarding size and readability. Tablets provide multi media that represent the content and give students alternatives and choices of expression that increase their motivation. Using tablets has the negative of the need for extensive training to exploit all the device potentials. Tablets also have the negative of lacking the educational content since they do not offer anything new to students except for the portable copy of the textbook.

A study was conducted by Clarke, Svanaes, & Zimmermann,(2013), to evaluate the use of tablets in (3) secondary schools in Britain. Tablets were distributed on students. A fourth school was selected as a control group that does not use tablets in education. Interviews were made with school principals in addition to using class observation to collect data. (18) Focus groups were formed from students, parents and teachers. Results indicated having many advantages including increasing motivation, parents' participation and teachers' ability to follow up students' progress with more proficiency; increase co-operation between students and teachers and students and students. The use of tablets showed that it gives students a feeling of integration in learning regardless of the socioeconomic status or the achievement level. Tablets provide a new educational model of student-centered learning. Nevertheless, the results revealed some fears regarding students being busy and their effective management of time.

Ward, Finley, Keil & Clay (2013) from Washington University carried out a study that aimed to investigate the advantages of using tablets at classroom for the primary and secondary stages for science, technology, geometry and math. The lessons of (food chain) and (Predators) were designed by using the iPad. They taught these lessons to three classes under the environment headlines. Each class consisted of (30) students with (6) iPads. The results of the questionnaire analysis indicated that using activities based on the iPad contributed in fostering students' participation and their enjoyment of learnings in addition to increasing building concepts among them.

Fischer, Smolik & Galletta (2013) carried an exploratory study to investigate the possibility of using tablets in high leaning. Three cases that cover model school tasks were studied. The study depended on interviews of focus groups and a longitudinal test study of a group of users for more than five months at North America University. Data analysis showed that tablets, in addition to laptops were useful in students' comprehension of the learning materials, in co-operative activities and social interaction. Nevertheless, they require more improvement and producing more e-books and electronic contents.

2. Research Questions

The purpose of the was to evaluate the experience of using the iPad in education and classroom learning through answering the following questions:

1. What are the advantages of using the iPad in the learning-teaching process from teachers perspectives?
2. What are the advantages of using the iPad in the learning-teaching process from students perspectives?
3. What are the negatives of using the iPad in the learning-teaching process from teachers perspectives?
4. What are the negatives of using the iPad in the learning-teaching process from students perspectives?

3. Methodology

3.1 Design

The study followed both qualitative and quantitative approaches:

- Analytical Descriptive Approach that depends on studying the phenomenon as it is in reality to be accurately described to illustrate its characteristics. This is expressed qualitatively. This gives us a numeric description that illustrates the amount, size, or degree of the phenomenon's connections with the other different phenomena (Ebeidat, 1987) .To investigate the advantages and negatives of using the iPad in the teaching- learning process, two questionnaires that were developed specially for this study were applied in order to get quantitative data. The data was analyzed using descriptive statistics to get the results.
- Case study approach to investigate the points of view of the parties of the teaching and learning process related to the advantages and negatives of using iPads. This was achieved by carrying out interviews with teachers and students at school to get qualitative data about using iPad at that school. The data was analyzed using qualitative data analysis methods in order to get the results.

3.2 Participants

The study subjects consist of (55) teachers who use iPad in the teachers and learning process in the scholastic year 2013/2014, and of (143) female and male students of upper primary classes (8th, 9th , and 10th) who use iPads in the teaching and learning process. All of the study subjects responded to the questionnaire.

To conduct the interviews, (18) female and male teachers were intentionally selected based on their desire and agreement to record the interviews, and by nomination of the school principals. These teachers have employed iPads in teaching for one year at least. The study subjects were intentionally selected from the students' participants consisting of (28) female and male students with the help of teachers. Their personal desire was taken into consideration   and thus they reserve the right to withdraw from the interview at any time.

3.3 Research Tools

3.3.1 Questionnaires
Two questionnaires were constructed (for teachers and students) with the aim of answering the study questions in the areas: the advantages and negatives of using iPads in the teaching and learning process from the he perspectives of teachers and students. For this reason, the questionnaire was divided into two areas as shown in table (1).The items of each topic were drafted. After preparing the questionnaires in their initial form, they were shown to arbitrators, who are specialized in curriculum, teaching and teaching technology. They are from the teaching staff of some universities and educational supervisors working in the educational field to gauge the appropriateness of the questionnaire items to the study topic, and items belonging to the topic they are designed to measure, in addition to language clarity and accuracy. The modifications recommended by arbitrators were carried out by eliminating some items and modifying others and adding a number of items. Table (1) shows the distribution of the questionnaire items in its final form and the number of items for each area.

Table (1)
Items distribution according to topic

Topic	Item No.	
	Teacher questionnaire	**Student questionnaire**
Advantages of using iPad in teaching and learning	**13**	**10**
Negatives of using iPad in teaching and learning	**12**	**11**
Total Items	**25**	**21**

To guarantee **Questionnaires Validity** The questionnaire was shown to arbitrators, to get recommendations and remarks, modifications were carried out by eliminating some items, modifying others, adding a number of items and auditing items to produce the questionnaire in its final form, Reliability was calculated by using two methods: First, reapplication. Second, Cronbach's Alpha Coefficient.

- Calculating reliability by using reapplication
  The questionnaire was applied on a random sample of the study populations, consisted of 15 teacher and 20 student. The questionnaire was applied once again after two weeks on the same sample. Pearson co-efficient was calculated between the sample response in the first application and its response in the reapplication. Table (2) shows Pearson coefficient in each area. The value of the stability realibility co-efficient of the teacher questionnaire was (74.0), and for the student questionnaire was (0.81).

Table (2)
Calculating Reliability by reapplication and Cronbach's Alpha

Topic	Teacher questionnaire		Student questionnaire	
	Re application	Cronbach's alpha coefficient	Re application	Cronbach's alpha coefficient
Advantages of using iPad in teaching and learning	*0.75	*0.91	*0.93	*0.72
Negatives of using iPad in teaching and learning	*0.66	*0.91	*0.97	*0.91
Total Reliability	*0.74	*0.85	*0.81	*0.78

*Significant at 0.05

- Calculating reliability by using Cronbach's Alpha Coefficient
  The questionnaire was applied on a random sample of the study populations. The random sample consisted of 15 teacher and 20 student. The value of internal consistency was calculated by using Cronbach's Alpha Coefficient for the teacher questionnaire in general and was (0.85) and (0.78) for the student questionnaire. This percentage is acceptable for the study purposes and indicates that the study's instrument is reliable and we can depend on the results. All Cronbach's Alpha values for all areas were high ranging between 0.64 – 0.93.

3.3.2 Interviews
Two models of the interview sheets were developed for the two-targeted categories (teachers and students) with the aim of getting qualitative data necessary to answer the study questions of the advantages and negatives of using iPad in the teaching and learning process from the perspectives of teachers and students. Semi-structured interviews and in- depth interviews were used. Interview questions were prepared in advance and were developed after revising the literature concerned with kinds of interviews and ways of conducting them, and by referring to the aims of these interviews and the study questions. The questions were initially written and shown to experienced arbitrators to give their remarks and suggestions about drafting, language accuracy, and the relation of the questions to the study questions and the interview aims. In the light of their remarks, a number of questions were omitted and other questions were rewritten and ordered in a way that fits the study questions. Some language modifications were carried out in addition to modifying some questions during the procedures of the study implementation. The teacher interview sheet consisted of (13) questions that covered five areas related to the use of (iPad), (advantages and negatives). The student interview sheet consisted of (8) questions that dealt with the (advantages and negatives).

4. **Results and Discussions**
Study results will be dealt with according to the study questions, which are as follows:

4.1 **what are the positives of using the iPad in the learning-teaching process from the teachers perspectives?**
The results of this question were divided into two parts:
The questionnaire results and the interviews results.

4.1.1 Quantitative Data(Questionnaire)

To know the positives of using the iPad in the learning-teaching process from the teachers perspictives, the means and standard deviation were calculated of teachers' responses to the items of the topic of "the positives of using the iPad as shown in table (3).

Table (3)
Degree of Approval on the items of the positives of using iPad in the learning-teaching process from the teachers perspectives

Order	Item	Mean	Approval
1.	iPad enables me to navigate internet easily	4.40	High
2.	Small size of iPad with light weight and easily handled and used	4.33	High
3.	Easy handle of the screen by touch	4.20	High
4.	iPad provides a high degree of safety for the operating system that ensures difficulty of virus attack.	4.18	High
5.	Long life battery of iPad allows free movement and accomplishment of more daily work.	4.04	High
6.	iPad provides the ability of taking notes on slides and special programs	4.02	High
7.	Soft wares and apps to enhance self-learning	3.96	High
8.	iPad presents the learning material in an interesting way	3.95	High
9.	IPad provides wireless communication with data projector.	3.95	High
10	IPad can be easily linked with external accessories such as the projector and the external headset.	3.87	High
11	iPad saves using paper and pencils	3.84	High
12	Software are easily prepared and uploaded on tablets	3.82	High
13	iPad facilitates teachers' follow up of students' progress	3.53	Medium
	Total	4.01	High

Table (3) shows that the means of the advantages of using the iPad from the teachers' point of view was high. (12) items obtained high estimation, while (1) item only obtained a medium estimation. The highest means of the advantages of using the iPad from the teachers perspictives was for the item " iPad enables me to navigate the internet", followed by the item " small size of iPad with light weight and easily handled and used". The lowest means of the advantages of using the iPad was for the item, "iPad facilitates teachers' follow up of students' progress.' This was the only item that received medium estimation.

4.1.2 **Qualitative Data (Interviews)**

To know the teachers perspectives about the advantages of using iPad, the following question was asked during the interviews; "what are the most important advantages of using iPad in the teaching and learning process?"
Table (4) shows the results of analyzing teachers' responses.

Table (4)
Descending order Percentage of the advantages of using iPad from the teachers perspectives at interviews

No.	Advantages	Frequency	%
1.	Thrill, fun and excitement in presenting lessons by sound, image and motion	8	29%
2.	Quick navigation of the internet to search for information that enhance lessons	6	21%
3.	Students became more positive, interactive ,self-reliant and more motivated	5	18%
4.	Concepts and information are easily explained because of using multi-media and senses. A learner sees, hears and participates.	5	18%
5.	Easy and quick swap and presentation of worksheets, providing feedback and continuous contact between teachers and students.	4	14%
6.	In information and knowledge, get implanted in students 'brain. What is explained by using iPad cannot be forgotten.	4	14%
7.	Saving students' and teachers' time and effort.	3	11%

Table (4) shows that the highest percentage was (29%) for "thrill, fun, and excitement in presenting lessons by sound, image and motion.'

Female teachers answered:
"For presenting the scientific material in an interesting and exciting way for students. I divided the 45 minutes. The first five minutes are revision of the previous lesson, then a ballad and some questions .Fifteen minutes for presenting the new lesson. After that enhancing the material. I send work sheets to the students. I receive feedback."

"Information has become needlessly crammed. The iPad has shortened a lot of information. The internet provides us with the main ideas and a topic summary such as "keynotes" which resembles the "Power Point". We display the lesson in a nice enhancing method. There is animation and motions."

"It made teaching interesting. Before the iPad, we used to take active learning courses and co-operative learning. The iPad facilitates this process. If the student is attracted to the lesson, he never gets distracted."

This is followed by a percentage of (21%) for the item:" Quick navigation process, browsing and tours to search for information to enhance the lesson."

We present below some of the male teachers' answers to the advantages of searching for information:

"Fixing information. Things explained on the iPad can't be forgotten because the student can touch the material by his hand specially three dimensional materials. Students cannot forget them all through their life. He can touch the material realistically. Sources of getting information get more for all senses".

"IPad is a means to help students at class. It is a means to help students to get information easily. It attracts students' attention. This facilitates teachers' searching for information. It makes the classroom atmosphere full of communication between the teacher and student, in addition to having feedback".

"More participation and interaction of students. They search for information with more self-reliance. Other students rely more on teachers.'

"It facilitates sending worksheets on the Dropbox. I correct them at home at my ease. I send them back again and follow up the papers and books at home."

A percentage of (18%) s for the item:
"Students have become more positive, interactive, self-reliant and more motivated."

One of the teachers stated that:

"Students' enthusiasm for learning is more. Their acceptance of science is more. Now students are motivated because they found something interesting to come to school for. They don't come because their parents want them to do so."

Another teacher stated that:
"The plentiful alternatives towards teaching. Individualizing learning in a more competent way. Motivation towards learning and self-learning".

A percentage of (18%) for the item:
"Concepts and information are easily explained because of using multi-media and senses. A learner can see, hear and participate".

Teachers answered that:
"Easiness of getting information and attracting students' attention. Teachers can easily get information which make it easy for teachers and students to communicate."
"IPad saves a lot of explanation. A lot of time is needed to explain and imagine the subject. Students may know in a simple and facilitated way".

A percentage of (14%) for the item:
"Easy and quick swap and presentation of worksheets, providing feedback and continuous contact between teachers and students."

Teachers answered that:
"I use the dropbox to send homework and follow them up. I send worksheets so that they do them and send them so t marking can be on the same iPad."

"I sent the worksheets through good reader. I send any enhancing information through beautiful software such as electronic reader and CBC."

" Sending worksheets by the showbiz program."

It has become clear from what has been mentioned that teachers use several software to swap worksheets with students such as: dropbox, good reader, and electronic reader. Students send the worksheets back after doing them.

4.2 what are the advantages of using iPad in the teaching – learning process from the students perspectives?

The results of this question were divided into two parts: the questionnaire results and the interviews results.

4.2.1Quantitative Data(questionnaire):

To answer that question, the means and standard deviation were calculated of students' responses on the items of the topic of the "positives of using the iPad".

As shown in table (5) the means of the advantages of using the iPad from the students' **perspectives** was high. All (10) items obtained high estimation. The highest means of the advantages was of using the iPad from the students **perspectives** was for the item "small size of iPad with light weight and easily handled and used", followed by "easiness of dealing with the screen by the one touch technology". The lowest means of the advantages of using the iPad was for the item, "iPad presents the learning content in an interesting way".

Table (5)
Degree of Approval on the items of the positives of using iPad in the learning-teaching process from the students perspectives

Order	Item	Mean	Approval
1.	The small size of iPad with light weight and easily handled and used.	4.74	high
2.	Simple dealing with screen through the one touch technology	4.64	high
3.	Ease of preparing and downloading software	4.36	high
4.	Ease of linking iPads with auxiliary devices such as projectors and external headset.	4.34	high
5.	Use of several various applications in presenting the learning material	4.23	high
6.	iPad battery long life which allows free movement and accomplishment of more daily work	4.20	high
7.	We can access the teaching materials "lectures-teaching multimedia" anywhere at any time.	4.03	high
8.	Students are given more responsibility and self-learning in the learning process.	3.99	high
9.	Easy communication between students and teachers	3.95	high
10.	The learning content is presented in an interesting way	3.86	high
	Total	**4.23**	**high**

As shown in table (5), the means of the advantages of using the iPad from the teachers' **perspectives** was high. (12) Items obtained high estimation, while (1) item only obtained a medium estimation. The highest means of the advantages of using the iPad from the teachers **perspectives** was for the item " iPad gives the chance to navigate the internet", followed by the item " small size of iPad with light weight and easily handled and used". The lowest means of the advantages of using the iPad was for the item, "iPad facilitates teachers' follow up of students' progress". This was the only item that received medium estimation.

4.2.2 Qualitative Data (Interviews)
To detect the advantages of using iPads in teaching and learning, students' answers to the question :" How did the use of the iPad influence your learning positively?" was analyzed. The results showed the following advantages:

Table (6)
Descending order Percentage of the advantages of using iPad in teaching and learning from students perspectives at interviews

No.	Advantages	Frequency	%
1.	Study is more enjoyable and thrilling	10	36%
2.	Dispensing of school bags	7	25%
3.	Ability to navigate internet and enhance reading and research	4	14%
5.	Participation and positive interaction with the lesson	3	11%
6.	Variability of applications	2	7%
7.	Continuous communication with teachers and colleagues	2	7%

Students' answers show that the highest advantage of using iPad in teaching and learning for a percentage of (36%) was that studying became more thrilling and enjoyable. A student answered, "The iPad lesson is more active with better team work."

Other students answered by saying:
"It has many applications which makes study more enjoyable".

Other students answered:
"IPad is more encouraging for us to study. It is more convenient and enjoyable".
"I study more and I can open some websites".
"I learnt how to use the technology. As for studying, I participate more because iPad makes more active. I can communicate with my friends".

The second advantage of (25%) was related to dispensing of schoolbag.

A student answered, "*IPad relieves us from the schoolbag".*

With a percentage of (14%): "The ability to navigate internet, reading enrichment and research".

Students reported*," internet applications and programs. Mostly Good reader and Internet".*

"IPad has an access to internet. You can see things related to history and social studies. As for the book, it is dull".
With a percentage of 11%, "Participation and positive interaction with the lesson".

A Student answered," Your interaction in the classroom gets better."

With a percentage of (7%), "the variability of applications and constant communication with teacher and colleagues."

Students answered:
"I can communicate with my friends".
" It has many applications and programs".

It has become clear from students' response that they care about joy and excitement in the lessons that enable them to use the tablet. They are aware of increasing active participation and teamwork. Although we expected that students might point out to communication with colleagues by using means of social media, this response was repeated twice only. The topic of dispensing the schoolbag and students' relief of carrying books by replacing them with the tablet is repeated here.

The results of this study agree with the UNESCO, 2013 call to employ the benefits of portable devices in learning, to facilitate self- learning by the virtue of its being portable and cost effective; provide feedback, instant evaluation and feedback. They also provide the opportunity to learn anywhere at any time, which ensures using the classroom time productively, and in a way that helps teachers to use the time allocated for teaching more effectively.

These results agree with the results of the study carried out by t Uzoglu & Bozdogan,2012 that showed that the most important advantages of using iPad in teaching science and technology is that lessons become more enjoyable by using pictures and animation, in addition to promoting students' interest in science and technology.. The results of this study also agreed with the results of Valstad, 2012 study which showed that the iPad is convenient and appropriate because of its size and easy reading. It provides multimedia to represent the content in a way that increases students' motivation by giving them alternatives and choices for expression.

4.3   What are the negatives of using iPad in the teaching and learning process from the teachers perspectives?

The results of this question were divided into two parts: The questionnaire results and the interviews results.

4.3.1Quantitative Data(questionnaire)

To answer this question, the means and standard deviation were calculated of teachers' responses to the items of the topic of "the negatives of using the iPad".

As shown in Table (7) the means of the negatives of using the iPad from the teachers' **perspectives** was high. (10) Items obtained high estimation, while (2) items only obtained a medium estimation. The highest means of the negatives of using the iPad from the teachers **perspectives** was for the item " iPad weakens students' writing ability along with bad handwriting" ,and " wasting time in troubleshooting technical failures", followed by the item " loss of notes and homework in case of the device breaking down". The lowest means of the negatives of using the iPad was for the item, " iPad restricts teachers' roles in guiding students which influences their behavior and morals". And the item," iPad leads to teachers' difficulty of class room management ", which received a means of (3.31).

Table (7)
Degree of Approval on the items of the negatives of using iPad in teaching and learning from the teachers perspectives

Order	Item	Mean	Approval
1.	Weakens student's writing ability and bad hand writing	4.25	high
2.	Wastes time when troubleshooting technology problems	4.25	high
3.	Loss of notes and homework in case of the device breaking down	4.13	high
4.	iPad causes some health problems resulting from constant exposure to rays	4.09	high
5.	Having a lot of technical failures that may hinder the learning process	4.05	high
6.	iPad contributes in distracting student's attention	3.96	high
7.	Having difficulty in dealing with some applications(such as Office)with the impossibility of doing without them	3.93	high
8.	Students get occupied with irrelevant topics	3.91	High
9.	Individual work increases student's social isolation	3.87	High
10.	The difficulty of transferring materials and large size files from and to the device because it can't be connected with any external storing medium and because of the difficulty of using portable memory (flash)	3.87	High
11	IPad restricts teachers' roles in guiding students, which influence their behavior and morals.	3.58	Medium
12	The use of iPad leads to teacher's difficulty of classroom management	3.31	Medium
	Total	**3.93**	**High**

4.3.2 Qualitative Data (Interviews)

To know the point of view of teachers about the negatives of using iPad, the following question was asked during the interviews; "what are the most important negatives of using iPad in the teaching and learning process?"

Table (8) shows the results of analyzing teachers' responses.

Table (8)
Descending order Percentage of the advantages of using iPad in teaching and learning from the teachers perspectives at interviews

No.	Negatives	Frequency	%
1.	Students' distraction and being occupied with social media and with irrelevant topics	7	39%
2.	Students penetrate protection and access banned websites .It is difficult to block such websites (no matter how much we try to block them .It seems impossible .students hacked the school website and stole the marks. A student hacked the Tawjihi website.	3	17%
3.	An additional strain and load on teachers to prepare lessons ,consuming teachers' time and effort in preparing interactive software and worksheets	2	11%
4.	Difficulty of class management, student control and drawing students' attention ,wasting the lesson's time	2	11%
5.	Retreat of students' writing abilities and bad handwriting	2	11%

It is clear from table (8) that the most important negatives were "Students' Distraction and being occupied with social media and irrelevant topics", with a percentage of (39%).

We present below some of the teachers' remarks about the negatives:

"Students' distraction "
"The issue of arousing students' interest in the learning material, because students face distractions in more than one direction. He accessed the Facebook during the math lesson to make "like" and "share". We face this problem inside the classroom. If he had a high motivation for learning, he would sign out from the Facebook to focus on the lesson."

"The first difficulty is that the iPad is available in students' hands. They get distracted. Secondly, teachers cannot control students. If there is internet, students get busy with it. The Wi-Fi should be turned off. Some websites such as the Facebook should be blocked so that students cannot access them. Games require follow up from teachers, which means an additional effort. It is an additional load on teachers."

Although students continuously live up with the iPad, they became captivated to this device; therefore, teachers complain from students' distraction and being so busy or absent-minded with no concentration at all. They do not pay attention and they are not present with their full energy to understand lessons. This big problem exhausts teachers when they try to make students concentrate, or regain their attention whenever they get far away from the lessons. They are only present in their bodies, while their minds, thinking and awareness are absent.

This is followed by a percentage of (17%) for the item," Students penetrate protection and access banned websites. It is difficult to block such websites".
" Students penetrated the protection software and hacked the blocked websites.. There is no way of protection. We changed the password, but they hacked it in seconds. Students consider penetrating protection as a kind of challenge. The solution: wrong thinking. Community culture. Directed media".

This quotation illustrates the difficulty of controlling students. In spite of having protection software, students were able to penetrate them to access banned websites. This sets the school and the teachers in front of another problem of the difficulty of blocking some websites, which negatively affect students at critical age.
It is followed by a percentage of (11%) for the item" An additional strain and load on teachers to plan for lessons. It consumes teachers' time and effort in planning interactive software and worksheets".

"It strains teachers in planning. It is an additional load on teachers. Your whole day is busy in preparing and searching. We even spend our free time asking and looking for".

"Games require teachers' follow up. They also require more effort .It is an additional load on teachers.'

It has become clear from teachers' responses that school principals demand teachers to plan for the ordinary lessons and for the iPad lessons in addition to training on preparing software and interactive books and applications and enrichment lessons and other loads that consume a great deal of their time. This takes them away from their tasks in the classroom. Some of these tasks had gone beyond the some teachers' abilities in addition to wasting their time such as the control of students' use of the iPad in playing during the lesson.

4.4 what are the negatives of using iPad in the teaching and learning process from the students perspectives?

4.4.1 Quantitative Data(questionnaire)
To answer this   question, the means and standard deviation were calculated of students'' responses to the items of the topic of "the negatives of using the iPad".

As shown in Table (9), the means of the negatives of using the iPad from the teachers' point of view of students was medium. (3) Items obtained high estimation, while (8) items obtained a medium estimation. The highest means was for the item "loss of notes and homework in case of the device breaking down". This is followed by," Students use iPad for purposes other than studying which leads to wasting students' time". The third item that received a high estimation was ," Technical failure that hinder the learning process". The lowest means of the negatives of using the iPad was for the item, " Teachers' difficulty of classroom management and student control ".

Table (9)
Degree of approval on the items of the negatives of using iPad in teaching and learning from the students perspectives

No.	Item	Mean	Approval
1.	Loss of notes and homework in case of the device breaking down	4.03	High
2.	Students use iPad for purposes other than studying which causes waste of students' time in chatting and playing	3.78	High
3.	Technical failure which hinders the learning process	3.76	High
4.	Limited storage capacity .some of the large materials and local libraries cannot be stored.	3.62	Medium
5.	Students get busy with things other than the learning tasks during the lesson	3.61	Medium
6.	Bad health effects resulting from rays ,sight wearing ,obesity and others	3.57	Medium
7.	Students are distracted	3.50	Medium
8.	Weakens students' writing abilities and bad handwriting	3.38	Medium
9.	Other learning sources might be more scientifically accurate than the internet	3.36	Medium
10.	Increases students' social isolation	3.33	Medium
11.	Teachers cant manage or control the class	3.07	Medium
	Total Items	3.55	Medium

4.4.2 Qualitative Data (Interviews):

To answer this question, the means and standard deviation were calculated of students'' responses to the interview question, "how did the iPad negatively influence your learning?"

Students' responses were concentrated on their being busy and distracted from learning for various reasons including fun, playing, iPad failure, attention distraction, internet and applications slowness which causes boredom.
Table (10) shows the percentages and frequencies of students' responses.

Table (10)
Descending order Percentage of the negatives of using iPad in teaching and learning from the students perspectives at interviews

No.	Negatives	Frequency	%
1.	Wasting time and being occupied by playing and fun and attention distraction during the lesson	15	54%
2.	IPad did not negatively affect my study	8	29%
3.	Numerous failures leading to interrupting study and slow internet and applications	5	18%

As shown from table (10), the highest percentage was because of playing.

Students answered as follows:
"*M y study hours get less because I spend so much time in playing*".
"*IPad distracts and wastes my time. When it breaks down, it needs a week to be fixed. When it is tangled.*"

"*IPad distracts us with games. There is a war game, which all students play on the internet. We need a Wi Fi to play it all the time.*"

This is followed by a percentage of (18%) for the item," There are numerous failures leading to interrupting study."

" *Forgetting the password locks the device and it remains for a whole day to be fixed at the technology section*".

"*Applications are slow and cause boredom*".

While (29%) of students reported that using the iPad did not have any negative effects on their learning.
It is clear from the students' responses that they realize the role of the iPad in distracting their attention and being busy with the electronic games. Students complained of technical failures that lead to interrupting students from studying. It was noticed that in some lessons, students didn't use the iPad because it was being fixed. At the same time, students don't bring their textbooks and so they are unable to carry on the lesson.

As for the negatives of using the iPad in the teaching and learning process, both teachers and students agreed that the use of the iPad leads to students' distraction. Students being busy with games and social media and other irrelevant matters can explain this result. Students' familiarity with this technology in general, and so their ability to penetrate the protection programs and accessing banned websites and the school's inability to block such websites can explain such result. Meanwhile, teachers found out that using the iPad has the negative of weakening students' writing abilities that leads to bad handwriting. This can be referred to students' dispensed using pens and papers and used finger touch instead.

We can add to this students' care in the topic of the internet and applications slowness. This causes boredom and reluctance of studying. Downloading interactive books that contain images and sound

requires high communication ability. This is influenced by the great number of students in addition to losing notes in case of the device breaking down.

In an investigation carried out by Harmoudi, 2013, she found that introducing such modern technologies has raised fears of "setting the endless internet world including its poor and rich materials at a finger touch of a child". Moreover, the extensive use of such devices may make students lose essential skills such as handwriting by and the ability for shorthand. This is exposed to being weakened because of using modern technology. The frightened base their fears on the fact that being attached to electronic devices and virtual society may weaken the ability to communicate with others by the pass of time, in addition to causing students to sit for long hours causing them to catch neurological and physiological diseases.

These results agree with the results of Uzoglu & Bozdogan,2012 study that the most expected negatives of using iPad in teaching science and technology is reducing social interaction among students, and the students' heath damage because of the spread of the iPad rays such as eye damage as result of being exposed to such devices for long hours.

These results can be explained by the fact that using the iPad has many positive points, but it has some negatives. Its introduction in the process of teaching and learning requires careful attention and good planning to intensify the advantages that may be employed in improving learning outcomes and to avoid or limit negatives.

Recommendations

- importance of training teachers and making them aware of how to use the iPad and its practical applications that can be employed in explaining lessons and communicating with students. This enables students academically, technically and educationally.
- Schools have to strive for spreading the culture of using the iPad among teachers and students since it is one of the basic steps to secure the success of using it. This can be achieved by holding introductory seminars about how to use the iPad and about the positive aspects that students may reap when they use it. Moreover, training courses may be held on how to use the software of teaching applications to intensify the positives of using the iPad.
- Securing the efficiency of employing the iPad in teaching and learning requires providing the applications in Arabic, computerizing the school syllabuses and providing interactive books for the study materials. This can be achieved by providing students with an electronic form of the textbooks.
- It is necessary to prepare students for the advantages and qualities of using iPad in teaching and learning, to enlighten them of the vital role that the iPad may play in improving the teaching outcomes while focusing on their roles and responsibility in dealing with the tablet and its role in the potential change of the teaching and learning process.

References

Al-Harmoudi, Lamya'(2013).iPad is transformed into the child's shadow wherever they go with rising fears of negatives, **Al-Etihad Newspaper**,UAE. Publication Date: Sunday,17/11/213.

Burden, Kevin, Hopkins, Paul, Male, Dr Trevor, Martin, Dr Stewart, Trala, Christine. 2012. iPad Scotland Evaluation. Final Report October 2012. Faculty of Education, The University of Hull.

Clarke, B., Svanaes, S., & Zimmermann,s. (2013) **One-to-one Tablets in Secondary Schools: An Evaluation Study**. Retrieved from http: //1to1guidebook.org/wp-content/uploads/2013/01/FKY-Tablets-for-Schools-Stage-2-Report-July-2013-FINAL-2.pdf

Ebeidat, Thouqan, Adas, Abdul-Rahman & Abdul-Haqq, Keyed (1987).**Scientific Approach: Concepts, methods and Instruments**. Dar Al-Shourouq, Amman.

Fischer, Nikolaus; Smolnik, Stefan; and Galletta, Dennis, **"Examining the Potential for Tablet Use in a Higher Education Context"** (2013). Wirtschaftsinformatik Proceedings 2013. Paper 1. http: //aisel.aisnet.org/wi2013/1

Naace (2012), **The iPad as a tools for education - a study of the introduction of iPads at Longfield Academy, Kent**. Online at http://www.naace.co.uk/publications/longfieldipadresearch.

UNESCO,(2013). **The Guidelines Highlight The Benefits Of Mobile Learning For Development And Provide Policy Recommendations For Its Advancement In Education And Training**. Retrieved March 28, 2014 from: http: //unesdoc.unesco. org/images/0021/002196/219641E. pdf

Uzoglu, M. & Bozdogan, A. (2012). An examination of Preservice Science Teachers' views related to use of tablet PCs in science and technology course in terms of different variables. **Mevlana International Journal of Education**;2(1):1-14.

Valstad , H. (2011). **Introducing The iPad in A Norwegian High School, How Do Students and Teachers React to This Technology, Norwegian University of Science and Technology**, Department of Computer and Information.

Ward, N. D., Finley, R. J., Keil ,R. G., & Clay, T. G. (2013). Benefits and Limitations of iPads in the High School Science Classroom and a Trophic Cascade Lesson Plan. **Journal of Geoscience Education:** November 2013, 61(4): 378-384.

The United Nations(2007).**Information Technology and Communication for development in Western Asia.** The Economic and Social Commission for Western Asia (ESCWA), New York,(8).

Smadi, Abdallah & Darabie',Maher(2004).**Psychological and Educational Evaluation and Assessment between Theory and Practice**. Dar Wae'l for publishing, Amman.