

STUDENTS' ACCEPTANCE IN USING IPAD FOR MEANINGFUL LEARNING EXPERIENCE: A PRELIMINARY ANALYSIS

Ahmad Shaarizan Shaarani,¹ Norasiken Bakar,² Aida Nasirah Abdullah,³
Maslita Abd Aziz⁴ and Wan Sazli Nasaruddin Saifudin⁵

¹²⁴⁵Faculty of Information and Communication Technology
Universiti Teknikal Malaysia Melaka, Malaysia.

³National Defence University of Malaysia
Kuala Lumpur, Malaysia.

E-mail: shaarizan, norasiken, maslita, wansazli@utem.edu.my; aidanasirah@upnm.edu.my

ABSTRACT

Nowadays learning has become more essential towards human beings. The ways of learning changes across the years as the technology grows. Tablet has become one of the most important items that every student should have. Students prefer to bring their tablet to classroom rather than bringing their laptop. This is due to the light weight of the tablet itself. One of the most famous tablets is the iPad. The aim of this paper is to conduct a study based preliminary analysis for the students' acceptance in meaningful learning using iPad. In this preliminary study, a set of online questionnaire as distributed to 106 diploma students and 84 degree students from the Faculty of Information and Communication Technology (FTMK) of Universiti Teknikal Malaysia Melaka (UTeM). This paper shares the preliminary findings on the perceptions of the students on the use of iPad in the learning and teaching process. All the collected data has been analysed using the pie chart. The results show that most of the students have agree that use of iPad enhance their learning experience.

Keywords: *engaging, using iPad, iBook, acceptance, meaningful learning, flipped learning*

1.0 INTRODUCTION

Students in this area are the generation Y or gen-Y kids, a generation that grew up with technologies (Grail, 2011). For them technologies are the most important things in their live (Bakar & Badioze Zaman 2007). They use iPad for doing assignment; searching information and socializing where back in the old days students have to do things manually. One of the characteristic of the gen-Y is they do not like to read especially if the reading materials contain a lot of static text and images (Eisner, 2005). For them it is very boring and they fancy things which they can interact with. The use of conventional textbooks as learning method will make gen-Y students a hard time to understand, feel bored and loses focus in class. The style of learning causes them to have little involvement during the learning process (Mary & Shalini, 2015).

Gen-Y is a generation that grew up with technology such as laptops, hand held tablet and smartphones. Tablets and smartphones are parts of their life and they prefer to communicate with others through free chatting applications rather face-to-face contact or phone call (Barseghian, 2011). Students in higher education institutes do their assignments by using laptop or computer. They do not need to write their assignments by hand and they are not in the era where they need to go to the library to get the information. This is the era where they can get the information on the fingertips through internet.

Tablet has become one of the most important items that every student should have. Students prefer to bring their tablet to classroom rather than bringing their laptop. Students are more comfortable with e-learning and mobile technologies reported more learning and a greater likelihood to use iPads as instructional technology in the future (Diemer, Fernandez & Streepey, 2014). This is due to the lightness of the tablet itself. One of the most famous tablets is iPad, which are produced by Apple Inc. The advanced feature and durability of iPad has made it one of the famous tablets among the lecturer and students (Wilson, 2012). By using the iPad in learning, students can easily seek information instantly and by doing this it will ease the learning process (Fievez and Karsenti, 2013). Moreover, the learning material that contains in iPad itself is very interactive and engaging. One of the examples to this approach is the application called iBook, where all the information is presented in an interactive way in order to make students engage with it (Foon Hew, 2015).

Besides that, iPad can also be used as teaching tools (Webb, 2012). By using iPad, the lecturers can easily create their notes in iBook author and customize the content to become more interactive for the students. Other than that, by using iPad lecturer can make the learning to be hands-on process rather than spoon feed teaching. Thus, it makes the students be independent and self-taught. Based on Anu and Caitlin (2012) in Scan stated that by using iPad in learning it can make the learning become more and more interesting and engaging. Besides that, they also stated that by using iPad in learning, student could have better understanding due to the interactivity of the content in the iPad.

1.1 Aim of study

This research is to identify the students' acceptance in meaningful learning experience using iPad and flipped learning strategy in UTeM. UTeM has provided 500 iPad at each of the faculty and center for teaching and learning purposes. Centre for Resolution & Introduction Technology (CRIT) has helped lecturers in developing e-content that iBook by subject selected by the faculty. The resources and apps that can be used on the iPad are not limited to iBook only but may include various other resources and apps. The objective of this paper is to conduct a study based on preliminary analysis for the student acceptance in meaningful learning experience using iPad.

2.0 METHODS AND MATERIALS

ADDIE Model is use to conduct the study. This model consists of five phases which are Analysis, Design, Development, Implementation and Evaluation (Bakar & Badioze Zaman 2007). The ADDIE Model is a step by step process for helping instructional designers plan and creates training programs with frameworks (Ngussa, 2014). In each phase, the instructional designer makes decisions that are critical for ensuring the effectiveness of the instructional experience.

The instruments that are used in this preliminary analysis are observation, questionnaire and online survey. All these instruments are used to gain information on students' perception on the use of iPad in teaching and learning session in the class.

In order to observed students behaviour towards learning with iPad, each of the students in the sample class had be given an iPad. Each of the class was taught with different subjects. More than 80% of the students were using the iPad in the Learning & Teaching slot.

About 190 students have participated in the survey. This is generated using Google Docs to allow easy access for students to answer the questions. A total of 106 diploma students and 84 degree students from the Faculty of Information and Communication Technology (FTMK) of Universiti Teknikal Malaysia Melaka (UTeM) take part in the survey. Among the participants, 102 of them were female while the rest were males. The online survey is consists of 38 questions, to investigate students' views and opinions that contributed to the preliminary analysis. The purpose of this survey is to obtain information about students' views and perceptions on the usage of iPad in learning and teaching (L&T) process in UTeM.

The data collected are analysed using pie chart. All the instruments are used to identify the effectiveness of e-content and learning tools in teaching and learning process. The survey results should serve to promote teaching and learning using iPad amongst students in UTeM. Data obtained from this survey will help the course developer and university to improve course design, delivery and effectiveness as it covers aspects like infrastructure, pedagogy, curriculum, content, teaching and learning outcomes (Bakar & Badioze Zaman 2005).

3.0 RESULTS AND DISCUSSION

The results for this preliminary analysis were generated once the students have answered the online survey. Finding showed that some students were eager and enjoyed learning with the presence of iPad while the others didn't seem to fancy it much. Researchers hope that the result from the information will help to use iPad successfully and can achieve the objective of university in Malaysia in the use of Computer Aided Learning. The results from the online survey are shown in Table 1 until Table 20. Only 20 related topics are highlighted in this paper. For each of the table, the frequency is not tally with the total number of respondents which are 190 all together, this is due to missing respondents (not all the respondents answered to all 38 questions that listed in the survey).

Learning using the iPad meets the students' learning needs

Table 1: Learning using the iPad meets my learning needs

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	4	2.5				
Disagree	13	8.2				
Neither disagree nor agree	51	32.1	3.53	4.00	4.00	.86
Agree	77	48.4				
Strongly agree	14	8.8				
Total	159	100.0				

From Table 1, most of respondents (n=77, 48.4%) agreed that learning using iPad meets their learning needs. Followed by (n=51, 32.1%) who neither disagreed nor agreed, (n=14, 8.8%) strongly agreed and only (n=13, 8.2%) plus (n=4, 2.5%) who does not believed that iPad could meet their learning needs. Result revealed that most of the respondents perceived that using iPad is important and meet their learning needs with mean (*M*) value of 3.53 and Standard Deviation (*SD*) of 0.86.

Learning activities sequence via the iPad helps the student understand of the subject

This is to know whether the sequence of activities related with subject content using iPad is helpful and can increase respondents' understanding. The results shows that most of the respondents (n=77, 46%) agreed with this statement, 55 respondents or 34.8% answer neither agreed nor disagreed. With the *M*=3.61 and *SD*=0.81, the result indicate that the sequence of the subject content inside iPad have an effect on students' understanding of any particular subject matter.

Table 2: The sequence of learning activities via the iPad helps my understanding of the subject matter

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	2		1.3			
Disagree	9		5.7			
Neither disagree nor agree	55	34.8		3.61	4.00	4.00 .81
Agree	74	46.8				
Strongly agree	18	11.4				
Total	158	100.0				

Quizzes in the iPad enhanced students' understanding of topics covered

Table 3: The quizzes via the iPad enhanced my understanding of the topics covered

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	3	1.9				
Disagree	9	5.7				
Neither disagree nor agree	54	34.4	3.58	4.00	4.00	.82
Agree	76	48.4				
Strongly agree	15	9.6				
Total	157	100.0				

From Table 3 we know that (n=76, 48.4%) of respondents agreed with this statement, followed by (n=54, 34.4%) neither agreed nor disagreed, (n=15, 9.6%) strongly agreed, (n=9, 5.7%) disagreed and (n=3, 1.9%) strongly disagreed with the statement that quizzes via iPad could enhanced their understanding of the topic covered. With the M=3.58 and SD=0.82, study indicate that preparing quizzed inside the iPad could increase level of understanding of certain topic.

Assignments given via the iPad helped students' achieved the learning objectives

Table 4: Assignments given via the iPad helped me to achieve the learning objectives

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	7	3.7				
Disagree	18	9.6				
Neither disagree nor agree	77	41.2	3.35	3.00	3.00	.88
Agree	73	39.0				
Strongly agree	12	6.4				
Total	187	100.0				

Table 4 indicate that the highest perception if any assignments are given via iPad could help achieve learning objectives is neither agreed nor disagreed with (n=77, 41.2%), follow with only (n=73, 39%) respondents answered agreed, (n=18, 9.6%) disagree and the rest answered strongly agreed or strongly disagree with the statement. In general, the total number and percentage of agree plus strongly agree is still high (n=85, 45.4%), where the $M=3.35$ and $SD=0.88$. Again the result illustrate that providing assignment through iPad also can achieve learning objectives.

Students' activities accomplishment

Table 5: Using the iPad during Learning & Teaching (L&T), I am able to accomplish the activities on my own

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	3	1.6				
Disagree	13	7.0				
Neither disagree nor agree	81	43.3	3.45	3.00	3.00	.80
Agree	76	40.6				
Strongly agree	14	7.5				
Total	187	100.0				

This is to measure whether respondents were able to accomplish their task using iPad as a medium for learning purposes. Result show that (n=81, 43.3%) reply neither agreed nor disagreed with this statement, (n=76, 40.6%) agreed, (n=14, 7.5%) strongly agreed, (n=13, 7.0%) disagreed and only (n=3, 1.6%) disagreed. Again the result indicates that most of respondents believe iPad can be used as a medium to accomplish their assignments or tasks given by their lecturers.

iBook inside the iPad usage for Learning & Teaching (L&T) purposes

Table 6: Do you use the iBook inside the iPad for Learning & Teaching (L&T) purposes?

	Frequency	Percent	Mean	Median	Mode	SD
Yes	99	52.4				
No	90	47.6	1.48	1.00	1.00	.50
Total	189	100.0				

As illustrate in Table 6, about half (52.4%) out of 189 respondents mentioned that they used an iBook to study. Most of the students who take part in this study does not have their own iPad, instead they used the iPad provided by the faculty at the lab. Due to this constrain, they do not have enough time to explore the iBook for any particular subject.

Content in the iPad is clear and understandable

Table 7: The content used for the iPad is clear and understandable

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	5	2.7				
Disagree	14	7.4				
Neither disagree nor agree	59	31.4	3.54	4.00	4.00	.85
Agree	95	50.5				
Strongly agree	15	8.0				
Total	188	100.0				

Table 7 shows the distribution of respondents by the statement ‘The content used for the iPad is clear and understandable’. The results disclose that more than half (n=95, 50.5%) of the respondent agreed with this statement, (n=59, 31.4%) neither agreed nor disagreed and (n=15,

8.0%) strongly agreed. With mean value, $M=3.5$ and $SD=0.85$, without any doubt that the content related to learning and teaching inside the iPad were understandable and can be follow the respondents.

The content used for the iPad is well organized

Table 8: The content used for the iPad is well organized

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	2	1.1				
Disagree	12	6.4				
Neither disagree nor agree	58	30.9	3.62	4.00	4.00	.78
Agree	100	53.2				
Strongly agree	16	8.5				
Total	188	100.0				

Table 8 shows the distribution of respondents by the statement ‘The content used for the iPad is well organized’. The results showed that (n=100, 53.2%) respondents agreed, (n=58, 30.9%) neither disagreed nor agreed, (n=12, 6.4%) disagreed and only (n=2, 1.1%) strongly disagreed with this statements. The result specify that the learning and teaching content used for these particular students were well organised.

The used of multimedia elements in the course in interesting

Table 9: The used of multimedia elements in the course in interesting

	Frequency	Percent	Mean	Median	Mode	SD
Disagree	1	.5				
Neither disagree nor agree	29	15.3	4.08	4.00	4.00	.65
Agree	112	59.3				
Strongly agree	47	24.9				
Total	189	100.0				

When using iPad as a medium, the multimedia element is important to create engagement with the course. From table 9, it is clearly captured that (n=122, 59.3%) of the participants agreed, (n=29, 15.3%) neither disagreed nor agreed, (n=47, 24.9%) strongly agreed and only (n=1,

0.5%) participant disagreed. With the $M=4.08$ and $SD=0.65$, confirm that multimedia play an important factor to attract participants' attention in any particular course offered.

Students' agreements on video activities are useful for learning

Table 10: Video activities are useful for my learning

	Frequency	Percent	Mean	Median	Mode	SD
Yes	87	49.2	1.51	2.00	2.00	.50
No	90	50.8				
Total	177	100.0				

Table 10 shows the distribution of respondents by the statement 'Video activities are useful for my learning'. The results showed that a total of 87 of the students (49.2%) chose "Yes" while a total of 90 students (50.8%) chose "No". With $M=1.51$ and $SD=0.5$ indicates that from respondents' point of view video activities inside iPad does not really effect their learning process.

Students' agreements on forum activities are useful for learning

Table 11: Forum activities are useful for my learning

	Frequency	Percent	Mean	Median	Mode	SD
Yes	153	83.6	1.16	1.00	1.00	.37
No	30	16.4				
Total	183	100.0				

From Table 11, we aware that the distribution of respondents by the statement 'Forum activities are useful for my learning'. The results confirm that only (n=153, 83.6%) agreed with this statement and only (n=30, 16.4%) does not agreed. Result implies that participants prefer to have forum as one of the important activity for learning process.

Students' agreements on assignment activities are useful for learning

The next question is regarding assignment as one of the activities for learning using iPad. Table 12 present the distribution of respondents by the statement 'Assignment activities are useful for my learning'. The results confirmed that a total of 149 respondents (81.0%) agreed and only 35 respondents (19.0%) does not agreed with this statement with $M=1.19$ and $SD=0.39$.

Table 12: Assignment activities are useful for my learning

	Frequency	Percent	Mean	Median	Mode	SD
Yes	149	81.0	1.19	1.00	1.00	.39
No	35	19.0				
Total	184	100.0				

Students' agreements on quiz activities are useful for learning

Table 13: Quiz activities are useful for my learning

	Frequency	Percent	Mean	Median	Mode	SD
Yes	170	89.9	1.10	1.00	1.00	.30
No	19	10.1				
Total	189	100.0				

Table 13 refers to the distribution of respondents by the statement 'Quiz activities are useful for my learning'. The results indicate that a total of 170 respondents 89.9% agreed and only 10.1% does not agreed. Again, same as assignment, quiz as well important and preferred by most of the students.

Students' agreements on group activities are useful for learning

Table 14: Group activities are useful for my learning

	Frequency	Percent	Mean	Median	Mode	SD
Yes	139	75.1	1.25	1.00	1.00	.43
No	46	24.9				
Total	185	100.0				

Next question is regarding using group activities for learning purposes. Table 14 prove that 139 respondents (75.1%) agreed with this statement and only 46 or 24.9% of them does not agreed with $M=1.25$ and $SD=0.43$.

Interactive presentation activities are useful for my learning

Table 15: Interactive presentation activities are useful for my learning

	Frequency	Percent	Mean	Median	Mode	SD
Yes	149	81.4	1.19	1.00	1.00	.39
No	34	18.6				
Total	183	100.0				

Table 15 shows the distribution of respondents by the statement ‘Interactive presentation activities are useful for my learning’. The result clearly shows that 81.4% of respondents agreed and only 18.6% does not agreed. With $M=1.19$ and $SD=0.39$ presents that interactive presentation is another important element in learning process.

Students’ agreements on self-learning activities are useful for my learning

Table 16: Self-learning activities are useful for my learning

	Frequency	Percent	Mean	Median	Mode	SD
Yes	184	97.9				
No	4	2.1	1.02	1.00	1.00	.14
Total	188	100.0				

From Table 16, most of the respondents (n=184, 97.9%) preferred to have self-learning activities.

iPad enhances students’ learning experiences

Table 17 again confirmed participant perceived that using iPad can enhances their learning experiences. The is because (n=99, 53.2%) agreed and (n=17, 9.1%) strongly agreed with this statement. The mean value for this question is $M=3.62$ and Standard Deviation value is $SD=0.82$.

Table 17: The iPad enhances my learning experiences

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	5	2.7				
Disagree	8	4.3				
Neither disagree nor agree	57	30.6	3.62	4.00	4.00	.82
Agree	99	53.2				
Strongly agree	17	9.1				
Total	186	100.0				

Students' learn more effectively using an iPad

Table 18: I learn more effectively using an iPad

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	3	1.6				
Disagree	15	7.9				
Neither disagree nor agree	68	36.0	3.53	4.00	4.00	.84
Agree	85	45.0				
Strongly agree	18	9.5				
Total	189	100.0				

Out of 189 respondents who respond to the question whether they learnt more effectively using iPad, the survey indicates that (n=85, 45%) agreed, (n=68, 36%) neither disagreed nor agreed, (n=18, 9.5%) strongly agreed, (n=15, 7.9%) disagreed and (n=3, 1.6%) strongly disagreed with this statement.

Learning via iPad is fun and enjoyable

Table 19: Learning via iPad is fun and enjoyable

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	2	1.1				
Disagree	5	2.7				
Neither disagree nor agree	44	23.4	3.91	4.00	4.00	.81
Agree	94	50.0				
Strongly agree	43	22.9				
Total	188	100.0				

Table 19 shows the distribution of respondents by the statement ‘Learning via iPad is fun and enjoyable’. The results clearly indicates that (n=94, 50%) agreed, (n=44, 23.4%) neither agreed nor disagreed, (n=43, 22.9%) strongly agreed, (n=5, 2.7%) disagreed and only (n=2, 1.1%) strongly disagreed with this statement. Result ($M=3.91$ and $SD=0.81$) strongly confirmed that students like to learn by using iPad. They think it was fun and enjoyable experience.

Students’ who would suggest to other students to use the iPad in learning

Table 20: I would like to suggest other students to use the iPad as well in their learning process

	Frequency	Percent	Mean	Median	Mode	SD
Strong disagree	1	.5				
Disagree	9	4.8				
Neither disagree nor agree	43	23.0	3.90	4.00	4.00	.84
Agree	89	47.6				
Strongly agree	45	24.1				
Total	187	100.0				

Table 20 shows the distribution of respondents by the statement ‘I would like to suggest other students to use the iPad as well in their learning processes’. The results indicate that (n=89,

47.6%) agreed with this statement, follow by (n=45, 24.1%) strongly agreed, (n=43, 23%) neither agreed nor disagreed, (n=9, 4.8%) disagreed and only (n=1, 0.5%) strongly disagreed. The study confirmed that most of the students who have experience using iPad for learning and teaching would recommend to others.

4.0 CONCLUSION

The results shows that some questions regarding the iPad such as “The sequence of learning activities via the iPad helps my understanding of the subject matter” has the highest percentage of disapproval from the students’ perspective. The possible reason that had been discusses in this paper regarding the matter is students find it hard or uncomfortable to the lack of experience in dealing with the device, as the device is quite new to them. Most of the students does not have their own iPad. They just use the iPad provided by the faculty during learning and teaching sessions. This constrain block the overall learning process because they cannot explore all the features in the iBooks and other apps. In general, the objective of this study which is to conduct a preliminary analysis for the students’ acceptance in meaningful learning experience using iPad had been achieved. Most of the students confirmed that this new experience of using iPad for learning purpose is very interesting and helpful for them. Result of this preliminary study can be used to enhance the learning and teaching process in UTeM.

5.0 ACKNOWLEDGMENTS

The authors would like to take this opportunity to highly appreciate the cooperation and the opportunity given by Universiti Teknikal Malaysia Melaka (UTeM), the lecturers who gave their full support in this research and all the respective students for their helps in obtaining the data for the research. Not forgotten UTeM Research and Innovation Management (CRIM) for funding this research, project reference PJP/2014/FTMK (12D) C-ACT5/S01373.

REFERENCES

- Amirtha Mary T. and J. Florence Shalini (2015). ‘Are Students Engaged in Classroom Teaching?-Delving into Flipped Learning Model’
- Anu, V. & Caitlin, S. (2012). ‘iPad in the Classroom’. Retrieved from <http://wic.library.upenn.edu/multimedia/does/ipadpilotreport.pdf>
- Bakar, N., & Badioze Zaman, H. (2007). Development of VLAB-CHEM for Chemistry subject based on Constructivism-Cognitivism-Contextual approach.School of Electrical Engineering and Informatics, Institue Teknologi Bandung, p. 568-571.

- Bakar, N., & Badioze Zaman, H. (2006). Development and Design of 3D Virtual Laboratory for Chemistry Subject based on Constructivism-Cognitivism-Contextual Approach. In *Innovations in 3D Geo Information Systems* (pp. 567-588). Springer Berlin Heidelberg.
- Bakar, N. & Badioze Zaman, H. (2005). *Analisis Awal Makmal Maya Bagi Pengajaran Kimia (Asid, Bes dan Garam)*. In: *Konvensyen Teknologi Pendidikan Ke-18 Inovasi Teknologi Instruksional Dalam Pengajaran dan Pembelajaran*, 16 - 19 September 2005, Hotel Grand Continental Kuala Terengganu, Terengganu.
- Bergmann, J. & Sams, A. (2012). 'Flip your classroom: Reach Every student in Every Class Every Day.', International society for Technology in Education.
- Diemer, T. T. , Fernandez, E., and Streepey J. W. (2012). 'Student Perceptions of Classroom Engagement and Learning using iPads', *Journal of Teaching and Learning with Technology*, 1(2), 13-25
- Educause.(2012). Tablets and iPads | Educause.edu. Topic Primier. Retrieved from <http://www.educause.edu/library/tablets-and-ipads>
- Eisner, S. P. (2005). 'Managing Gen Y', *SAM Advanced Management Journal* 70 (4): 4–15
- Hashim (2014). 'Preliminary Study on Teachers' uses the iPad in Bachelor of education program at a private university in Malaysia
- Karsenti, T. and Fievez, A. (2013). 'The iPad in education: uses, benefits, and challenges: Preliminary Report of Key Findings'
- Khe F.K. (2015). 'Towards a Model of Engaging Online Students: Lessons from MOOCs and Four Policy Documents', *International Journal of Information and Education Technology*, 5(6)
- Kristy. (2012). 'Use of Tablet Technology in Classroom', Retrieved from <http://www.tale.edu.au/tale/live/teachers/shared/>
- Ngussa, B.M. (2014). 'Application of ADDIE Model of Instruction in Teaching-Learning Transaction among Teachers of Mara Conference Adventist Secondary Schools, Tanzania', 5(25)
- Perez,W. and Dong, J. (2012). 'Flipping the classroom: How to embed inquiry and design projects into a digital engineering lecture.', Paper presented at ASEE PSW Section Conference, California Polytechnic State University, San Luis Obispo
- Webb, J. (n.d). 'The iPad as a tool for Education-A case study.', Retrieved from <https://www.naace.co.uk/publications/longfieldipadresearch>
- White, T. (2010). 'Will iPads transform med school?', Retrieved from <http://med.stanford.edu/news/all-news/2010/09/will-ipad-transform-med-school.html>
- Wilson, I. (2012). 'Ipad in Schools.', Retrieved from <http://www.ipadineducation.co.uk/>