JELTII
Journal of English Language Teaching and Islamic Integration
Vol. 2, No. 2, July 2019

EFL Teachers' Readiness in Utilizing ICT in Blended Learning Class for Internship Students of Vocational High School in Indonesia

Alfiyati
Graduate Program in Language Teaching
Universitas Negeri Malang
Malang, Indonesia
alfiyatimaniz@gmail.com

First Received:	*Revised:*	*Accepted:*	*Published:*
10 May 2019	*25 June 2019*	*22 December 2019*	*15 July 2019*

***Abstract*:** This study aimed to explore the readiness of Vocational High School English teachers who teach internship students by integrating ICT in blended-learning class and the obstacles faced by them. A survey was conducted involving all 100 teachers in vocational high school in Kabupaten Pasuruan. This study informed the researchers that teachers were comfortable with the use of certain applications such as spreadsheet, presentation software, internet and e-mail, social media and even any other free application on mobile phone. The respondents demonstrated a positive attitude towards using ICT as majority of them used ICT for teaching and learning and felt that the connected classrooms can change the way students learn in classrooms. It also explained that a connected classroom could be effective for students' learning to happen. It was also found that the attitudes of teachers on use of ICT vary with their years of experience and level of knowledge on ICT.

Keywords: *ICT, Blended Learning Class, EFL Teachers' Readiness, Internship Students*

INTRODUCTION

Basically, Internship Program or Industrial Work Practices (Prakerin) is a model of implementing education that integrates intact and integrated learning activities of students in schools with the process of mastering vocational skills through working

directly in specific job fields. The method is carried out in order to improve the quality of Vocational High Schools (*SMK*) to achieve relevance between education and labor needs.

Based on Government Decree No. 130 Year 2017, the internship program is a compulsory activity for Vocational High School students. The internship program in 2013 Curriculum is a learning program for vocational students implemented specifically by taking certain time allocations and involving other parties outside the school system. The internship program is a form from dual system education which is one of the characteristics vocational educations, which is to meet the needs of deep learners learning activities in accordance with the reality of the business world and the world industry. The place of implementation of internship is the business world or industrial world (DU/DI) in the form of a Private Company or Government Agencies. The Government Decree No. 60 Year 2014 states that the internship program can be implemented in XI or XII grade by using block system, for half semester (around 3 months). With this system, the learning subjects in groups A and B not integrated in the internship program so that it is carried out in units education (after students return from the internship program at Partner / industry institutions) using only 3 times month only, as well as learning material package expertise.

Since the students do not attend for school in 3 months, the teachers of A and B group subjects must give them assignments in the form of modules during the internship, and it still raises some difficulties in its completion, so that in the future it is necessary to design good and interesting teaching materials / modules, so that it will encourage students to study well although they do not attend real classes. In addition, the other school programs are the Mid Semester Exam (*UTS*) and the Final Semester Examination (*UAS*) that are carried out on every semester. Students who are doing in the internship program in the first quarter will experience difficulty facing *UTS*, due to difficulties in pursuing material after carrying out the internship program, while students who are doing the internship program in the second quarter will be difficult facing *UAS* caused by no activity learning during the internship program. With these problems, additional learning activities are needed to be carried out by A and B group subject

teachers, when students are carrying out the internship program, however the learning activities must not interfere with the running internship program. In monitoring the internship program and the completion of A and B group subjects' modules, the schools usually schedule meetings with students at least once a month. All students attend school to discuss the problems that arise during the internship activities and discuss the modules given by the teachers.

Based on the facts above, Additional learning that can be done when students are in the internship programs is online. Blended learning is an option that can be implemented as a solution to the problems of students participating in the internship program. Blended learning is basically a combination of the advantages of learning that is done face to face (face to face learning) and virtually (e-learning). Online learning or e-learning in blended learning becomes a natural extension of traditional classroom learning that uses face-to-face learning (Izzudin, 2012: 5).

LITERATURE REVIEW

1. Blended Learning

According to Surjono (2010: 6), blended learning is learning combining all forms of learning for example online, live, or face to face (conventional). Moreover, according to Thorne (2003), blended learning is a combination from multimedia technology, video streaming CD-ROM, class virtual, voicemail, e-mail and teleconference, online text animation and video streaming as long as students carry out internship program, the teacher delivers the material and students can still learn to use existing online media. Online media can be e-learning, e-mail, social media, and so on.

Difficulties faced by students cannot be ignored, because it will have an impact on decreasing learning achievement. Looking at the above, it is necessary to understand the potential of students and teachers who are then used to help solve existing problems. School facilities, conditions internet network infrastructure, and learning facilities that students have which should be used to solve problems. The teacher currently has a device a computer in the form of a laptop and is used to using the internet using a

gadget in the form of a Smartphone. Likewise students, more of 95% of students have Smartphone facilities with operating Android system, so that it can be used as a facility learns. The development of information and communication technology (ICT) based teaching materials is an alternative that needs to be immediately carried out by teachers to help students learn independently through internet media. The school certainly must facilitate teachers in preparing ICT-based learning and provide supporting infrastructure, starting from teacher training in developing of teaching materials to internet connection facilities.

It seems that teachers become the main factor that mostly determines educational development and innovation since they are the ones to employ the ICT for the pupose of educational development (Öz, 2014). It is argued that technology has no educational value in itself (Sang et al., 2010). However, their importance of ICT is highly recognized when being used by teachers in the process of teaching and learning (Chiu, 2014). While some studies claim that the presence of technology in the classroom produces a pressure and requires efficient and effective use (Sang et al., 2011), study results showed that these are also connected to teachers' attitudes and their levels of knowledge (Badri et al., 2013; Tezci, 2010). Teachers' positive views towards the applications of ICT or rejecting them all together are affected by their attitudes, (Albirini, 2006) as well as other significant factors such as their information about and experience with ICT (Badri et al,. 2013) their experiences in how to utilize these technologies in classroom environment (Keramati, 2011), information and experiences regarding the various of applications based on ICT, age, self-confidence (Molnár & Benedek 2013; Reading & Doyle, 2013).

2. Teachers' Attitudes towards ICT

The main issue in teachers' decision to use ICT is related to their attitudes. The results of a study by Badri et al. (2013) show that an individual's attitudes have a significant impact on his/her behaviors in ICT use. Teachers' attitudes (positive or negative) effect how they respond to and employ ICT. Therefore, information is needed

about teachers' attitudes for planning about and future investment in ICT (Öz, 2014; Tezci, 2010). In addition,

Keramati et. al. (2011) found that teacher's motivation and training play a substantial role in ICT application in education. Sang et al. 2011 emphasized the strong relationships between computer-related attitudes and computer application in education. Attitudes towards computers affect teachers' acceptance of the usefulness of technology, and also affect whether teachers will integrate ICT into their classrooms. Thus, Teachers' positive attitude can facilitate their use of more instructional technology tools in order to make learning more interesting as well as attractive for their students. However, teachers who have negative attitudes towards technology application in education cannot benefit in this area nor efficiently integrate technology into the classroom. In East Java Province, as a small city in East Java, ICT is rarely used in teaching English. In Indonesia as a developing country, the use of ICT in education by teachers is far from sufficient (Rye, 2009; Yunus & Wekke, 2009).However, very few studies have been reported in this area. Therefore, given the importance of teachers' attitutes and motivation in the application of ICT in education the relationship between motivation and ICT readiness, this area needs to be investigated.

The objectives of this study were to describe teachers' readiness in integrating ICT based on

1) Teachers' experiences in integrating ICT
2) Teachers' skill in integrating ICT
3) School supports in integrating ICT
4) Obstacles faced by the teachers in integrating ICT

METHODOLOGY

The data of this study were collected from Vocational High School English teachers who join the online professional community. The members of the community are from all over East Java Province. From the accessible population (101 teachers),

only 30 teachers (29.7%) sent the feedback of the questionnaire. Therefore, a total of 30 Vocational High School English teachers was selected of the sample of the study.(female=24; male=6). 50% of the teachers in this study were between the ages of 30 to 39 and 30% were between the ages of 40 to 49 years old. Moreover, the data from the questionnaire also revealed that some of the teachers (63.3%) had teaching experience of between 10 to 20 years and most of them (90%) taught internship students and conducted blended-learning (86.7%). Out of 30% of the teachers who used computers/Smartphone with internet in 4 to 6 years, 53.3% used the ICT tools very often.

A set of questionnaire was used in this study. The data collected from the questionnaire explained how the teachers were prepared in using ICT in teaching and learning process in conducting blended-learning class for the internship students and what obstacles were faced by them.The questionnaire was derived into four main parts. Part 1 measured the teachers' experience in integrating ICT (3 items). Part 2 measured the teachers' skills in using ICT (3 items). Part 3 measured the school supports to the implementation of ICT integration (7 items), and part 4 measured the obstacles faced by the teachers in integrating ICT (14 items).

The questionnaire was adapted from several previous studies which have common points and the researcher of this study added and revised some points due to the practicality and the different research setting. The questionnaire was distributed online to several professional online English teachers' communities whose members came from all cities in East Java Province. The researcher used Google Form to create and distribute the questionnaire. Therefore, the respondents had to give feedback in online and Google Form automatically saved all the responses.

FINDINGS AND DISCUSSION

This section presented a summary of the research key findings and discussions of EFL teachers' readiness in using ICT for the internship students in blended learning class and the obstacles they faced. It should be noted that of the 30 respondents who

filled out the questionnaire, 27 (90%) teachers taught the internship students and 26 (86.7%) of them implemented the blended learning class.

Findings

1. Teachers' Experience in Integrating ICT in Blended-learning Class of Internship Students

The results of questionnaire showed that the English teachers who taught internship students equipped themselves with computers/hand phones with internet were 76.6% (23 teachers) and 90% of them used it in the classroom either offline or online. Figure 1 showed that the teachers used ICT in preparing the lesson and used it in teaching internship students in blended-learning class.

Figure 1. ICT-based Activities Implemented by Teachers in Blended-learning Class

In question number 11, it explained that 23.3% of the English teachers had been using ICT in teaching internship students for more than 6 years and 30% used it between 4 up to 6 years. It can be concluded than more than 50% of the English teachers have relatively long period of experience in using ICT. Question number 12 explained that 53.3% of English teachers sometimes use ICT to teach while 40% of them had higher frequency in using ICT for teaching.

2. Teachers' Skill in Integrating ICT in Integrating ICT in Blended-learning Class of Internship Students

The responses of question 20 showed that 43.3% of teachers browsed the internet to prepare the lesson and collect materials to be used in teaching. Moreover, almost a

half of the teachers 46.6% used specific applications to make presentation during the class. Sometimes, teachers also created their own digital learning materials (50%). The data showed by Figure 2 below.

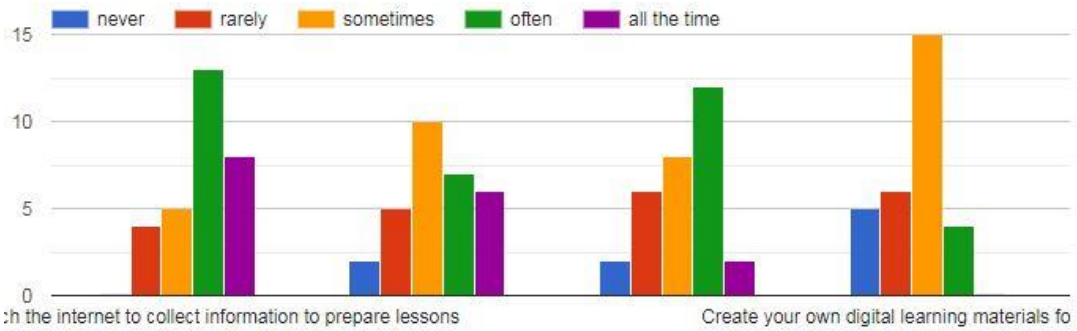

Figure 2. ICT-based Activities Showing Teachers' Skills

The other activities that showed teachers' skills in integrating ICT were preparing exercises and tasks through websites (sometimes done by 33.3% of the teachers) and 10% of teachers never assessed the students online. It was surprising that more than 50% of the teachers evaluate their own teaching by using ICT and most of them joined and looked for online professional development opportunities.

As shown in Figure 3, teachers' skills in using teaching materials based on the material sources that the teachers used, more than 50% of English teachers used internet to search teaching materials and preferred to make use of online materials from various educational sources. On the other hand, only few teachers (26.7%) used offline media and 36.7% used materials from school's computer network database.

Figure 3. Types of Material Used by English Teachers in Blended-learning Class

The results in Table 1 explained about to what extend the teachers were confident in implementing their skills in integrating ICT in the teaching and learning process in the blended-learning class of internship students. Almost a half of the teachers (43.3%) were able to produce a text using a word processing program as well as who did it a little. Out of 46.6% of them also used emails to communicate and created presentations with simple animation, videos, and pictures. In editing online texts that contained internet links and images, 30% of the teachers did it a lot and 40% considered did it often. From the data we know that only 13.3% of the teachers were passive in participating in a discussion forum on the internet like Social Medias. Moreover, mostly of them somewhat taught the students how to behave safely and ethically online.

Skills	None (%)	A little (%)	Somewhat (%)	A lot (%)
Produce a text using a word processing programme	0	43.3	13.3	43.3
Use emails to communicate with others	10	13.3	30	46.6
Capture and edit digital photos, movies or other images	0	30	36.6	33.3
Edit text online containing internet links and images	3.3	26.6	40	30
Create a presentation with simple animation functions, videos, and pictures	0	26,6	33.3	40
Participate in a discussion forum on the internet like social medias	13.3	30	33.3	23.3
Teach students how to behave safely and ethically online	3.3	20	50	26.6

Table 1 Frequency of Teachers' Skills Performance

3. The School Supports toward ICT Integration in Blended-learning Class of Internship Students

From the questionnaire we collected data that more than 50% of school did not provide both teachers and students with computers/Smart phones for their own use. However, most schools (93.3%) allowed the internship students to use personal ICT devices such as laptops, tablets, and Smart phones.

It was 63.3% of schools required the English teachers to participate in ICT training. Table 2 showed the areas of professional development that teachers have ever undertaken.

Areas	Yes (%)	No (%)
Introductory courses on internet use and general applications (basic word-processing, spreadsheets, presentations, databases, etc.	70	30
Advanced courses on applications (advanced word-processing, complex relational databases, Virtual Learning Environment, etc.)	43.3	56.6
Advanced courses on internet use (creating websites/home page, video conferencing, etc.)	40	60
Courses on the pedagogical use of ICT in teaching and learning	50	50
Participate in online communities (e.g., mailing lists, groups, blogs) for professional discussions with other teachers	60	40
ICT training provided by school staff Personal learning about ICT in your own time	60	40
Other professional development opportunities related to ICT	66.6	33.3

Table 2 Areas of ICT Professional Development Taken by Teachers

From the table above we know that 70% of teachers participated in introductory courses on internet use and general applications (basic word-processing, spreadsheets, presentations, databases, etc. However, 56.6% of them did not join advanced courses on applications (advanced word-processing, complex relational databases, Virtual Learning Environment, etc.). Moreover, more than a half (60%) of them did not participate in advanced courses on internet use (creating websites/home page, video conferencing, etc.) but 50% of them took courses on the pedagogical use of ICT in teaching and learning. It was encouraging that 60% teachers participated in online communities (e.g., mailing lists, groups, blogs) for professional discussions with other teachers as well ICT training provided by school staff Personal learning about ICT in their own time. On top of that, 66.6% of English teachers joined other professional development opportunities related to ICT independently. Some parties that supported ICT at school can be seen in Figure 4.

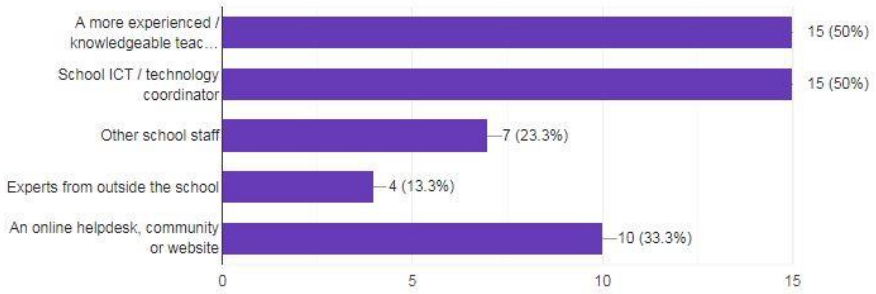

Figure 4 Parties of ICT supports at Schools

From the figure above we know that school ICT were supported by a more experience /knowledgeable teacher (50%) as well school ICT/technology coordinator. Some teachers (33.3%) preferred to access an online helpdesk or community. Some schools(23.3%) asked other school staff to handle ICT matters while others (13.3%) hired experts from outside the school.

4. Obstacles Faced by English Teachers in Integrating ICT in Blended-learning Class of Internship Students

Question 22 showed kinds of obstacles faced by English teachers in blended-learning class of internship students. It can be seen in Table 3 below.

Obstacles	Not at all	A little	Partially	A lot
Insufficient number of computers/hand phones with internet owed by the students	1	2	5	22
Lack of adequate skills of teachers	1	1	14	14
Insufficient technical support for teachers	1	1	3	25
Insufficient pedagogical support for teachers	1	1	1	27
Lack of pedagogical models on how to use ICT for learning	1	1	10	18
School time organisation (fixed lesson time, etc.)	-	-	-	30
Pressure to prepare students for exams and tests	-	-	-	30
Most parents not infavour of the use of ICT at school	3	3	10	14
Most teachers not in favour of the use of ICT at school	3	4	15	8
Lack of interest of teachers	7	3	10	10
No or unclear benefit to use ICT for teaching	6	3	11	20

Using ICT in teaching and learning not being a goal in our school	-	-	5	25
Money consuming	-	-	-	30

Tables 3 Obstacles Faced by English Teachers in Integrating ICT

From the table above we can see that 22 teachers (73.3%) stated that there was insufficient number of computers/hand phones with internet owed by the students. Teachers (46.6%) were lack of adequate skills in ICT. Insufficient technical support for teachers (more than 50%) was influenced a lot as well as insufficient pedagogical supports. School time organisation (fixed lesson time, etc.) and pressure to prepare students for exams and tests were also the main reason why ICT could not be implemented well. 10 teachers (33.3%) stated that they were not interested in integrating ICT and 20 of them (60%) stated that using ICT was not the goal of the schools. The last point showed that all teachers thought that integrating ICT in teaching learning process was money consuming.

Discussion

The results of the first part of the questionnaire show that the majority of English teachers in Vocational High School who teach internship students in blended –learning class have relatively long period of time in integrating ICT. It means that the teachers are aware of the importance of integrating ICT and conducting blended-learning class to overcome the students' absence of the regular classes. They have good background knowledge in using computers/hand phones connected to the internet. It may happen because most of the teachers (70%) took introductory courses on internet use and general applications (basic word-processing, spreadsheets, presentations, databases, etc so they have good foundation in using ICT in their teaching. It is in line with Kennewell (1992), teachers who participate in computer training courses provide a good foundation for further development, and will have long-lasting effect on the use of ICT in their schools. In addition, Liao (1993) reported that the longer teachers' exposure to computers and the more types of computers prospective teachers had experienced the more comfort they felt in working with computers and internet. Besides, Wong et al.

(2003) reported that participants with computer experience are more likely to find ICT useful, thus the teachers have greater confidencein integrating ICT.

This can be seen in this study where most of the teachers used computer/hand phone with internet connection to prepare lesson (76.6%) and 90% of them implemented blended-learning class with ICT integration.. Where teachers' perceived competence toward ICT was concerned, most of the teachers indicated that they had moderate levels of ICT competence (55%). The result shows that teachers are between the range of "somewhat competent" and "competent" in using computers. This suggests that teachers are able to perform any task with some assistance and eventually complete the task given. They are able to integrate computers into their teaching lessons. In other words, teachers can use ICT to prove themselves to be sufficiently competent to teach and develop their skills. Moreover, according to Motter (1995), such hands-on experience could increase the participants' positive attitudes toward computers and eventually increase their skills.

From the description above, it is obvious that English teachers with low skill in the use of ICT are more or less equal with those with high skill. On the one hand, Aremu et.al (2011) who conducted the similar study to Junior High School teachers, he found that the teachers' skills in ICT integration were low. This difference results may be due to teaching to different students. As we know that internship students cannot attend on a regular class then one way to overcome it is by conducting blended learning class. While the blended class is required to use internet as a means to keep teachers and students connected as mentioned by Thorne (2003), blended learning is a combination from multimedia technology, video streaming CD-ROM, class virtual, voicemail, e-mail and teleconference, online text animation and video streaming. As a result, English teachers who teach internship students are encouraged to have more skills in using ICT.

Other previous study has shown that the secondary teachers in Malaysia have low and moderate levels in their ICT skills (Sia, 2000) and this may adversely affect the successful implementation of the education. It is also note worthy that this study was conducted in urban and semi-urban secondary schools where most schools may be not

equipped with computer and internet connection. This finding is consistent with the finding of Wong et al. (2002) but is not consistent with the finding of Norhayati (2000), Sia (2000), and Rosli (1998), as they reported low to average usage of computer. This may be due to the different sample used, and lack of computer training for teachers during that period of time.

The school supports in using ICT discussed differently in two parts. First, ICT facilities provided by the schools, and second, school supports for teachers. To describe the first part, the questionnaire gave us surprising results that 43.3% of both students and teachers rarely use computers/hand phones with internet. Only 26.6% of both of them use it all the time. This finding is inversely with teachers' skills. It was mentioned that the teachers' skills are relatively high but they are rarely used in teaching internship students in the blended learning class. While it showed that 53,3% of schools provided good facilities to the teachers in the form of laptops/tablets/PC/hand phones for their own use. It is different with the students; they were not facilitated by the schools so they had to equip themselves. Only 6.6% of the students did not have laptops and 20 of the students did not have Smartphone. It can be concluded that actually teachers and students have easier access to the internet and most of them equipped themselves with ICT tools. Teachers' anxiety to use ICT can be due to lack of school supports. The lack of advance courses in ICT application and pedagogical use in teaching mainly to be the cause of the anxiety. Some schools (13.3%) have overcome this problems by inviting experts from outside the school to provide advance knowledge about the application of ICT.

The application of ICT integration in teaching internship students also experiences many obstacles, both in terms of school facilities and within the teachers' own personalities. One of the obstacles complained by the teachers is the insufficient number of laptops/Smart phones connected with internet owned by the students and provided by schools. Its results showed 73.3% but it is contrary to the results in another part of the questionnaire that stated that more than 90% of the students have their own laptop/Smart phones with internet connection. However, in the case of blended-learning

class of internship students, they do not attend regular class at schools so it is necessary for the students to equip themselves with ICT tools that can make them stay connected with the teachers and class communities.

Another obstacle showed by the results are time constraints that deal with school time organization and pressure to prepare students for exams, becomes the partial factors in discouraging teachers to integrate ICT in their teaching. All of the teachers (100%) complained about those matters and they definitely stated that integrating ICT is time consuming. This may be due to the lack of teachers' interest and perception in using ICT. The results of this study show that money consuming is the main major obstruction of this program (100%). Both teachers and students have the same thought about this. In Indonesia, internet is much more expensive comparing with other countries. So we should wait for the government policy to overcome it.

CONCLUSION

The results of this study have described on how EFL teachers' readiness of vocational high school in integrating ICT in blended-learning class of internship students. The students' absence and lack of engagement force the teachers to develop themselves to improve their skills in using ICT.

The results seems to indicate that most of the teachers conducted blended-learning for internship students and required both the teachers and the students to use ICT integration in teaching learning process. Most teachers have relatively long period of experience in using ICT. Moreover, most of them have joined introductory courses in using ICT so it makes them confident enough to perform their ICT skills. So it can be concluded that teachers' experience plays an important role on their ICT readiness

On one hand, the results show that although the teachers have sufficient skills to integrate ICT in their teaching, they are still reluctant to do that due to some obstacles that pop up in the real implementation. It is important to note that most of the teachers still have negative attitudes toward the integration of ICT. Therefore, schools must

support them by giving regular courses related to ICT integration in blended-learning and give them motivation to keep developing their skills by actively practicing and joining online communities independently.

REFERENCES

Badri, M., Al Rashedi, A., & Mohaidat, J. (2013). School teachers' technology readiness–An empirical study applying readiness factors and teacher type categorization. In *Proceedings of the 2013 International Conference on Information, Business and Education Technology (ICIBET 2013)*. Atlantis Press.

Chiu, F. Y. (2014). The Application of a cloud-based student, teacher, and parent platform in English as a foreign language education. *TurkishOnline Journal of Educational Technology, 13*(3), 178.

Izzudin. S. (2012). *Pengaruh Penerapan Model Blended Learning terhadap Motivasi dan Prestasi Belajar Siswa SMKN 1 Paringin.*S2 thesis, UNY.

Keramati, A., Afshari-Mofrad, M. and Kamrani, A. (2011). 'The role of readiness Factors in E-Learning outcomes: An empirical study', *Computers & Education*, 57, 1919-1929.

Kennewell, S. (1992). *Computing for the terrified*. Computers Education, 18(1-3), 195-200.

Liao, Y. C. (1993). *Effect of computer experience on computer attitudes among pre-service, and postulant teachers*. In D. Carey, R. Carey, D.A. Willis, & J. Willis (Eds.), Technology and teacher education annual 1992.(pp.498-505). Charlottesville, VA: Association for the Advancement of Computing in Education.

Motter, G.M. (1995). *Plan a successful computer workshop for teachers*. The Delta Kappa Gamma Bulletin, 61(3), 19-21.

Norhayati, A. M. (2000). *Computer technology in Malaysia: Teachers' background characteristics, attitudes and concerns*. [Online]. *The Electronic Journal on Information Systems in Developing Countries*. Available: http://www.ejisdc.org.

Öz, H. (2014). Teachers'and students'perceptions of interactive whiteboards in the English as a foreign language classroom. *Turkish OnlineJournal of Educational Technology, 13*(3), 156.

Rosli, A. W. (1998). *Tahap literasi komputer guru-guru sekolah menengah Zon A Bahagian Kuching/Samarahan.* Unpublished master's thesis. Kota Samarahan: University Malaysia of Sarawak

Sang, G., Valcke, M., van Braak, J., Tondeur, J., & Zhu, C. (2011). Predicting ICT integration into classroom teaching in Chinese primaryschools: exploring the complex interplay of teacher□related variables. *Journal of Computer Assisted Learning, 27*(2), 160-172.

Sia, P.W. (2000). *Computer anxiety and computer literacy among urban secondary school teachers in Miri*. Unpublished master's thesis. Kota Samarahan: University Malaysia of Sarawak.

Thorne. K. (2003). *Blended Learning How to Integrate Online and Traditional Learning.* JS Typesetting Ltd, Wellingborough, Northants

Wong, S.L. (2002). *Development and Validation of an information technology (IT) based instrument to measure teachers' IT preparedness*. Ph.D. Dissertation, Universiti Putra Malaysia, Malaysia. Unpublished.