Improving Indonesian EFL Learners’ Motivation Through Computer Assisted Learning (CALL)

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Abstract
It has been argued that technology can improve learners’ motivation. Furthermore, technology integration has been regarded one of motivational strategies or techniques to improve learners’ positive attitudes. In this regard, one of motivational strategies that can be given to learners is incorporating CALL (Computer Assisted Language Learning) to EFL (English as a Foreign Language) classrooms. Therefore, the present research analyzed the effects of CALL on a group of Indonesian EFL learners’ motivation. In order to obtain the results, the present re-search conducted a quasi-experimental study toward 40 college students. In addition, a set of questionnaires adapted from Taguchi, Magid & Papi (2009) as well as semi-structured inter-views were used as research instruments. In addition, English tests will be given to the respondents to see the effects of CALL on the improvement of learners’ achievements. The results of present study suggest the positive effects of CALL on learners’ motivation. In addition, learners’ achievement also improved after being intervened with CALL. Nevertheless, the use of CALL needs to be supported by teachers who are capable enough to provide suitable materials that suit learners’ need. Thus, it seems important for teachers to be provided with prior sufficient training on how to use CALL effectively.

INTRODUCTION

Technology seems to have a positive effect on EFL learning. The point is shown on numerous studies on the impacts of technology integration toward EFL classes (Bull & Ma, 2007; Harmer, 2007; Larsen-Freeman & Anderson, 2011). The use of multimedia technology in EFL learning can improve learning independence and help learners to overcome difficulties which might happen in traditional classrooms (Crystal, 1997; Miranty & Rachmawati, 2016; Sari, 2020). In addition, the appropriate use of technology based EFL learning can be beneficial to learners (Clements &
Sarama, 2003). The above points how the benefits of technology in EFL classrooms.

CALL (Computer Assisted Language Learning) can be considered as one of techniques to integrate technology in EFL learning. As claimed by Butler-Pascoe & Ellen (1997), CALL can create a language learning environment that helps learners to practice target language. Furthermore, teachers are encouraged to motivate learners to find activities that can support language learning from computer technology (Harmer, 2007; Genç Iler, 2015). Studies toward the use of CALL in writing classes show its positive effects in motivating, creating conducive learning environment and improve the quantity and quality of their writing skills (Bialo & Sivin-Kachala, 1996; Goldberg, Russell, & Cook, 2003; Lam & Pennington, 1995; Stepp-Greany, 2002). In addition to learners’ motivation, several studies indicate positive attitudes of learners toward CALL (Akbulut, 2008; Bebetsos & Antoniou, 2009; Brown & Vician, 2004; Mahmoudi et al, 2012). The above findings suggest positive impacts of CALL on learners’ motivation and attitudes.

Despite numerous studies on the effects of CALL on EFL learning, there seems to be a lack of studies which investigate Indonesian EFL learners’ motivation and attitudes toward CALL. The present study aims to investigate the effects of CALL on EFL learners’ attitudes and motivation. In addition to fill the void, the present study aims to provide deeper insights to educators, researchers and other policy makers on the impacts of technology in EFL learning, especially in Indonesian EFL learning context. Specifically, the present study is guided by this research question, what are the effects of CALL on attitudes and motivation of a group of EFL learners in Bekasi, Indonesia?

**RESEARCH METHODOLOGY**

The present study uses a quasi-experimental method to obtain its data. Respondents consist of 40 college students in a private university in Bekasi, Indonesia and took Basic Reading and Writing class. They are divided into experimental and control classes. Both classes were given a set of questionnaires adapted from Taguchi, Magid, & Papi (2009) before and after the treatment which consist of seven sessions. For experimental class, each session is integrated with computer assisted instruction. They were also given weekly tasks which needed to be finished and submitted via internet. The questionnaires use a Likert scale with following responses: (1) Strongly disagree, (2) Disagree, (3) Agree, and (4) Strongly agree.
Before the questionnaires were distributed, a pilot study was conducted to see the validity and reliability of the questionnaires was conducted by using Pearson product moment and Cronbach’s Alpha (>0, 65) to measure the questionnaires. In this regard, r=0.811, p<0.05 and N=4. Following are the results of pilot study.

**Table 1. Result of Pilot Study**

| Variable               | 1.       | 2.       | 3.       |
|------------------------|----------|----------|----------|
| Criterion measures     | Pearson Correlation | 1.000**  | 1.000**  | 1.000**  |
|                        | Sig. (2-tailed)     | .        | .        | .        |
|                        | N           | 4        | 4        | 4        |
| Ideal L2 self          | Pearson Correlation | 4.       | 5.       | 6.       |
|                        | Sig. (2-tailed)     | 0.000    | 0.000    | 0.000    |
|                        | N           | 4        | 4        | 4        |
| Ought-to L2 self       | Pearson Correlation | 7.       | 8.       | 9.       |
|                        | Sig. 2 tailed     | 0.000    | 0.000    | 0.000    |
|                        | N           | 4        | 4        | 4        |
| Family influence       | Pearson Correlation | 10.      | 11.      |
|                        | Sig. (2-tailed)     | 0.816    | 0.816    |
|                        | N           | 4        | 4        |
| Instrumentality        | Pearson Correlation | 12.      | 13.      | 14.      |
|                        | Sig. (2-tailed)     | 0.845    | 0.845    | 0.845    |
|                        | N           | 4        | 4        | 4        |
| Attitudes to learning English | Pearson Correlation | 15.      | 16.      |
|                        | Sig. (2-tailed)     | 0.816    | 0.816    |
|                        | N           | 4        | 4        |
| Linguistic confidence  | Pearson Correlation | 17.      | 18.      | 19.      | 20.      |
|                        | Sig. (2-tailed)     | .997**   | .997**   | .997**   | .904     |
|                        | N           | 4        | 4        | 4        | 4        |
In addition to the questionnaires, semi-structured interviews were given to four respondents. Due to the mixed nature of the present study, obtained data will be treated differently. While quantitative data will be analyzed using SPSS 23, qualitative data will be coded based on different categories. Besides questionnaires and interviews, English tests will be given before and after treatment to see learners’ improvement.

RESULTS AND DISCUSSION

Results

Table 2. Questionnaire’s results

| Variables                        | Before Treatment | After Treatment |
|----------------------------------|------------------|-----------------|
|                                  | Experimental     | Control         | Experimental | Control         |
|                                  | class            | class           | class        | class           |
|                                  | Mean  | Med  | Std. Dev | Mean  | Med  | Std. Dev | Mean  | Med  | Std. Dev | Mean  | Med  | Std. Dev |
| Criterion measures              | 3.41  | 3.00 | .618     | 3.38  | 3.00 | .650     | 3.47  | 3.00 | .514     | 3.23  | 3.00 | .832     |
| Ideal L2 self                   | 3.82  | 4.00 | .393     | 3.77  | 4.00 | .439     | 3.65  | 4.00 | .493     | 3.54  | 4.00 | .877     |
| Ought to L2 self                | 3.00  | 3.00 | 1.000    | 3.23  | 3.00 | .725     | 3.18  | 3.00 | .883     | 2.54  | 3.00 | .519     |
| Family influence                | 3.06  | 3.00 | .748     | 2.69  | 3.00 | .751     | 3.00  | 3.00 | .866     | 2.77  | 3.00 | .439     |
| Instrumentality                 | 3.82  | 4.00 | .393     | 3.85  | 4.00 | .376     | 3.59  | 4.00 | .507     | 3.31  | 3.00 | .630     |
| Attitudes toward language learning | 3.41  | 3.00 | .618     | 3.31  | 3.00 | .751     | 3.00  | 3.00 | .000     | 3.08  | 3.00 | .760     |
| Linguistic confidence           | 3.94  | 4.00 | .243     | 3.85  | 4.00 | .376     | 3.82  | 4.00 | .393     | 3.46  | 4.00 | .877     |
| Learning interest               | 3.53  | 4.00 | .514     | 3.62  | 4.00 | .506     | 3.59  | 4.00 | .507     | 3.23  | 3.00 | .832     |

Before treatment, the most salient variables among the experimental class are linguistic confidence (M= 3.94), the ideal L2 self (M= 3.82), and instrumentality
After treatment, although those variables decreased in points; linguistic confidence (M= 3.82), the ideal L2 self (M= 3.65) and instrumentality (M= 3.59), they are still the most salient ones. On the other hand, the least salient variables are ought to L2 self (M= 3.00) and family influence (M= 3.06). Next, the experimental class did not show a significantly high level of interest to-ward English learning (M= 3.53), attitudes toward language learning (M= 3.41), and criterion measures (M= 3.41) before treatment. However, after treatment the experimental class experienced an increase in attitudes toward language learning (M= 3.59). In addition, criterion measures experienced an increase (M= 3.47). On the other hand, learning interest’s points dropped drastically (M= 3.00) while the ought to L2 self (M= 3.00) and family influences (M= 3.00) are still the least salient variables.

Before treatment, the most salient variables in the control class are instrumentality (M= 3.85), linguistic confidence (M= 3.85), and ideal L2 self (M= 3.77). After treatment, those variables are still the most salient ones but experienced decreasing points; they ought to L2 self (M= 3.54), linguistic confidence (M= 3.46), and instrumentality (M= 3.31). Before treatment, the least salient variables are family influence (M= 2.69), the ought to L2 self (M= 3.23), and attitudes toward language learning (M= 3.31). After treatment, those variables are still the least salient one; ought to L2 self (M= 2.54), family influence (M= 2.77), attitudes toward language learning (M= 3.08). However, control class shows relatively high level of learning interest (M= 3.62) and criterion measures (M= 3.38). Nevertheless, both variables experienced decreasing points after treatment as criterion measures and learning interest got similar points (M= 3.23).

In addition, English tests were conducted to see the effects of CALL on learners’ achievements.

Table 3. English tests’ results.

|                  | Experimental class | Control class |
|------------------|--------------------|---------------|
| N                | Before             | After         | Before       | After       |
| Average scores   | 397                | 424           | 375          | 321         |

Discussion

Table 2 indicates that experimental class has a slightly higher level of motivation than the control class, before and after treatment. Although both classes experience declines after treatment, experimental class experienced lesser
decline than control class. Questionnaire’s results also indicate how experimental class has relatively high level of linguistic confidence, has a clear vision on ideal L2 speakers, and instrumental motivation on learning English. In addition, experimental class shows a significant increase in English test’ results. Although be-fore treatment experimental class has shown higher scores in test results, they do not show decrease like control class does. Based on the results of questionnaires and tests, experimental class shows better performance than control class. The weight of evidence suggests that CALL has positive effects on learners’ motivation and achievements.

As suggested by the above paragraph, CALL seems to have positive effects on learners’ motivation. Several studies also suggest similar findings. A study Genç & Aydin (2010) on learners’ motivation and the use of CALL on English learning suggests a positive correlation between the level of learners’ motivation and the use of CALL. In addition, Anderson & Speck (2001) remark that the use of technology on language classrooms can motivate and make students get more involved. Boualem’s (2015) study on the effects of software such as Microsoft Power point on motivation of a group of foreign language learners in Algeria indi-cates an increase in the level of motivation and English. A study of Tavakoli, Lotfi, Biria, & Wang (2019) on the effectiveness of CALL-mediated task-based learning on learners’ motivation for L2 reading suggest positive effects of CALL on learners’ motivation. Numerous studies also suggest that the use of CALL in language classrooms can influence learners’ motivation and attitudes positively (Başöz & Çubukçu, 2014; Fatemi Jahromi & Salimi, 2013; Tuncok, 2010). Besides, Al-Jarf’s (2004) study on the effects of web-based and traditional writing classes on learners’ writing skills show that web-based writing class has better impacts than traditional one. The above studies suggest that CALL has positive effects on learners’ motivation and achievements.

Despite points mentioned in the previous paragraphs, it is still possible that the in-crease in learners’ motivation cannot be attributed solely to CALL’ integration to English classrooms. Nevertheless, the interviews’ results indicate that the respondents are more motivated to learn English due to CALL. In addition, the interviews’ results indicate factors which motivate the respondents to use computers in English classrooms. Following are the comments of respondents regarding their motives to use computers for learning English.
"Firstly, data (for learning English) is more available. Secondly, the materials are easier to be understood and thirdly I think the presentation is more attractive than regular textbooks." Student 1

"My main motivation is easier to be...learned, especially (If I use) computers. More flexible. (It) can be accessed everywhere and every time from any device. Its presentation is also good, attractive. (It) can be understood faster, once (I see it) and can be accessed everywhere and (I like learning from) traditional and modern (methods to be balanced) so I like writing and computer...." Student 3

The above comments indicate that the respondents are motivated to use computers for learning English because they can access materials easily. By connecting their devices to internet, learners can access learning materials faster than using textbooks. In addition, attractive presentation is one of factors which motivates the respondents to use computers.

Similarly, a study of Ellinger et al (2001) on the use of internet in language classrooms indicates that it can inspire students, improve students’ motivation and enhance enthusiasm. Ababneh & Lababneh’s (2013) study on the effects of internet on writing skills of EFL learners in elementary schools suggests that internet has positive effects on writing skills. It is indicated on how students can use more diverse vocabulary and write complex paragraphs after internet was integrated to English classrooms. In its classroom research on a group of students in Advanced English Speaking, Kung (2003) also found that the use of internet can help students find different types of speeches in English. In addition to the accessibility, attractive presentation becomes one of factors which motivate the respondents of present study. The findings of Liu’s (2013) study on factors which affect learners’ acceptance toward Moodle (Modular Object-Oriented Dynamic Learning Environment) suggest similar conclusion. It can be said that accessibility and attractive presentation motivate learners to learn English.

Despite their relatively high level of motivation due to CALL’ integration, most respondents of present study said that they do not mind to learn English without computers as long as several requirements are met. Following are respondents’ comments:

"Umm, first is teacher, teachers should be able to explain well, don’t ramble, just straight to the materials, and the textbooks, they should have attractive visuals." Student 1

"Yes, I can learn English without using computers. How can I as a college student get interested to learn English without using computers? First, in my
opinion teachers should be friendly to students and teachers should have interesting teaching methods. That way we can be interested to learn English without using computers.” Student 3

The above comments show that despite learners’ motivation toward CALL, they can still learn English without computers as long as teachers deliver lessons in ways that can motivate learners to learn English. In this sense, strategies that teachers take to motivate learners can be considered as motivational strategies. Teachers with suitable motivational strategies can be regarded as important as CALL in influencing learners’ motivation. Kung (2003) also emphasizes the importance of teachers toward learners’ motivation. Furthermore, key success of foreign language learning lies on how efficient teachers can guide students and supportive teaching strategies (Mutlu & Eröz-Tuğ, 2013; Segura & Greener, 2014). Although CALL can improve learners’ motivation (Chapelle & Jamieson, 2008; Motteram, 2013), it should be accompanied by the presence of teachers who can support learners in using computers for language learning. As argued by Abunowara (2016), hardware and software are not the only ones that affect learning success but also in teachers’ ability to plan, design, and implement effective educational activities. It can be said that with or without computers, teachers need to have suitable motivational strategies to improve learners’ motivation.

CONCLUSION AND SUGGESTION

CALL (Computer Assisted Language Learning) is one of motivational strategies that can be used to Indonesian EFL learners to improve their motivation. Nevertheless, there is a lack of studies which analyze the effects of CALL on EFL learners’ motivation, especially one that specifically investigate in the context of Indonesian EFL learners. The present study aims to analyze the effects of CALL on motivation of a group of EFL learners in Indonesia. The present study uses a quasi-experimental method toward 40 college students to obtain its data. The respondents are divided into two classes; experimental and control classes. While control class is given traditional English language lessons, experimental class is given CALL-integrated English lessons for seven weeks. The present study uses two research instruments; questionnaires and semi-structured interviews. The questionnaires are adapted from Taguchi, Magid, & Papi (2009) and given before
and after the treatment to both classes. On the other hand, the interviews were conducted to four respondents to provide deeper insights on how CALL can affect learners’ motivation. In addition, English tests are given before and after the treatment to see the effects of CALL on learners’ achievements. The questionnaires’ results suggest that both classes experienced decreasing points, however, experimental class’ points do not experience decreasing points as significant as control class. In addition, the results of English tests show that the achievements of experimental class increased after treatment. The interviews’ results also indicate that the respondents were more motivated to learn English when lessons were integrated with computers. The weight of evidence suggests that CALL has positive impacts on learners’ motivation. Nevertheless, the respondents noted that CALL needs to be implemented by experienced teachers to ensure teaching effectiveness.

Although the present study has tried to minimize its limitations, it is one without limitations. First, the results of present study would reflect the population better if it had more respondents. Second, the present study would have deeper discussions if it had diverse re-search instruments such as student journals or classroom observation. Third, the present study would have better insights if data gathering period was conducted longer. Nevertheless, the present study can still be a milestone of similar studies. Next study can also analyze the effects of CALL on learners’ retention and demotivation. In addition, further studies can ana-lyse the effects of CALL on learners from different groups of learners.

REFERENCES

Ababneh, S. & Lababneh, S (2013) The Effect of Using the Internet on EFL Elementary School Students’ Writing. Journal of Education and Practice. 4, 103-108.

Abu Naba’h, A., Hussain, J., Al-Omari, A., & Shadeifat, S. (2009). The effect of Computer Assisted Language Learning in teaching English grammar on the achievement of secondary students in Jordan. The International Arab Journal of Information Technology, 6(4), 431-439.

Afshari, M., Bakar, K. A., Luan, W. S., Samah, B. A., & Fooi, F. S. (2009). Factors affecting teachers’ use of information and communication technology. International Journal of Instruction, 2(1), 77-104.

Ahmadi, D., & Reza, M. (2018). The Use of Technology in English Language Learning: A Literature Review. International Journal of Research in English Education, 3, 115-125. https://doi.org/10.29252/ijree.3.2.115

Akbulut, Y. (2008) Exploration of the attitudes of freshman foreign language students towards using computers at a Turkish state university. The Turkish Online Journal of Educational Technology, 7 (1), 18-28.
Al-Jarf, R. (2004). The Effects of Web-Based Learning on Struggling EFL College Writers. King Saud: King Saudi University. Foreign Language Annual, 37(1), 46-45.

Al-Mansour, N. S., & Al-Shorman, R. A. (2012). The Effect of Computer Assisted-Instruction on Saudi University Students’ Learning of English. Journal of King Saud University—Languages and Translation, 24(1), 51-56. http://dx.doi.org/10.1016/j.jksult.2009.10.001

Ancker, W.P. (2002). The Challenge and Opportunity of Technology: An interview with Mark Warschauer. Forum, 40(4), 2-7.

Anderson, R & Speck, B. (2001). Using technology in K-8 literacy classrooms. Upper Saddle River: Prentice Hall.

Başöz, T., & Çubukçu, F. (2014) Pre-service EFL teacher’s attitudes towards computer-asisted language learning (CALL). Procedia – Social and Behavioral Sciences 116, 531–535. http://dx.doi.org/10.1016/j.sbspro.2014.01.253.

Bayraktar, S. (2002). A Meta-analysis of computer assisted instruction in evidence education. Journal of Research on Teaching in Education 34(2), 173-188.

Beatty, K. (2003) Teaching and Researching Computer Assisted Language Learning, New York: Longman.

Bebetsos, E. & Antoniou, P. (2009) Gender Differences On Attitudes, Computer Use And Physical Activity Among Students. Turkish Online Journal of Educational Technology. 8. 63-67.

Bialo, E.A., & Sivin-Kachala, J. (1996). The effectiveness of technology in schools: A sum-mary of recent research. School Library Media Quarterly, 25(1), 1–17.

Blachowicz, C. L., Bates, A., Berne, J., Bridgman, T., Chaney, J., & Perney, J. (2009). Technology and At-Risk Young Readers and Their Classrooms. Reading Psychology, 30, 387-411. https://doi.org/10.1080/02702710902733576.

Boualem, B. (2015) The Effects of Using Microsoft Power Point on EFL Learners’ Attitude and Anxiety. Advances in Language and Literary Studies, 6 (6), 1-6.

Bradford, A. (2007). Motivational Orientations in Under-researched FLL Contexts: Findings from Indonesia. Relc Journal. 38, 302-323. 10.1177/0033688207085849.

Brown, S.F.R. & Vician, C. (2004) Who’s Afraid of the Virtual World? Anxiety and Mediated Communication. Journal of the Association for Information Systems 5, 99-107.

Bull, S., & Ma, Y. (2001) Raising learner awareness of language learning strategies in situations of limited recourses. Interactive Learning Environments, 9(2), 171-200. doi: 10.1076/ilee.9.2.171.7439

Butler-Pascoe & E. Ellen, (1997) Technology and Second Language Learners. American Language Review, 1(3).

Chapelle, C., & Jamieson, J., (2008) Tips for Teaching with CALL: Practical Approaches to Computer-Assisted Language Learning. Pearson Longman, New York.

Chikamatsu, N. (2003). The effects of computer use on L2 Japanese writing. Foreign Language Annals, 36 (1), 114-127.

Clements, D. H., & Sarama, J. (2003). Strip Mining For Gold; Research And Policy In Educational Technology-A Response To Fool’s Gold. Educational Technology Review, 11(1), 7-69. https://eric.ed.gov/?id=EJ673505

Crystal, D. (1997) English as a Global Language. Cambridge: Cambridge University Press.

Dörnyei, Z & Ottó, I. (1998). Motivation in action: A process model of L2 motivation. Working Papers in Applied Linguistics (Thames Valley University, London), 4, 43-69.
Dörnyei, Z. (2001) Teaching and Researching Motivation. Harlow: Longman.
Dörnyei, Z. (2003). Attitudes, Orientations, and Motivations in Language Learning: 
Learners: Results of an Empirical Study. Language Teaching Research 2 (3), 203- 
229.
Dörnyei, Z. (2005). The Psychology of the Language Learner: Individual Differences in 
Second Language Acquisition. Mahwah: Lawrence Erlbaum Associates.
Dörnyei, Z. (2009). The L2 motivational self-system. In Z. Dörnyei & E. Ushioda (Eds.), 
Motivation, language identity and the L2 self (pp. 9-42). Bristol: Multilingual 
Matters.
Dörnyei, Z., & Csizer, K. (1998) Ten Commandments for Motivating Language English 
as a Foreign Language Learner. Language Teaching Research 2 (3), 203-229.
Dörnyei, Z., Csizér, K., & Németh, N. (2006). Motivation, language attitudes and 
globalisation: A Hungarian perspective. England: Multilingual Matters.
Ellinger, B. S, Sandler, D. D, Chayen. K, Goldfrad. J, Yarosky. (2001) Weaving the web 
into an EAP reading program. English Teaching Forum, 19, 150-158.
Fatemi Jahromi, S. A., & Salimi, F. (2013). Exploring the human element of computer-
asisted language learning: An Iranian context. Computer Assisted Language Learn-
ing, 26(2), 158-176. http://dx.doi.org/10.1080/09588221.2011.643411
Gardner, R.C. & Lambert, W.E. (1972). Motivational Variables in Second Language 
Acquisition. In R.C. Gardner & W. Lambert (eds.) Attitudes and motivation in 
second language learning. (pp. 119-216). Rowley, MA: Newbury House.
Gardner, R.C. (2005) Integrative motivation and second language acquisition. (Joint 
Plenary Talk), Canadian Association of Applied Linguistics/Canadian Linguistics 
Association.
Genc, G.& Aydin, S. (2011). Students’ Motivation toward Computer-Based 
Language Learning. International Journal of Educational Reform, 20(2), 171– 
189.
Gençli, B. (2015). How does technology affect language learning process at an 
early age? Procedia – Social and Behavioral Sciences, 199, 311 – 316. doi: 
10.1016/j.sbspro.2015.07.552
Goldberg, A., Russell, M., & Cook, A. (2003). The effect of computers on student 
writing: A meta-analysis of studies from 1992 to 2002. The Journal of Technology, 
Learning, and Assessment, 2(1), 1–52.
Guilloteaux, M.J. and Dörnyei, Z. (2008) Motivating Language Learners: A 
Classroom-Oriented Investigation of the Effects of Motivational Strategies on 
Student Motivation. TESOL Quarterly, 42, 55-77. http://dx.doi.org/10.1002/j.1545-
7249.2008.tb00207.x
Harmer, J. (2007). The practice of English language teaching. England: Pearson. 
www.worldcat.org/title/practice-of-english-language-teaching/oclc/149005881
Hashim, H. (2018). Application of Technology in the Digital Era Education. 
International Journal of Research in Counseling and Education, 2, 1-5. 
https://doi.org/10.24036/002za0002.
Korkgöz, Y. (2011). A blended learning study on implementing video recorded 
speaking tasks in task-based classroom instruction. TOJET: The Turkish Online 
Journal of Educational Technology, 10 (4). Retrieved May, 2013 at 
http://www.tojet.net/articles/v10i4/1041.pdf.
Kruse, K. (2001) Using the web for learning: Advantages and disadvantages. 
(accessed 22nd October 2002).
Kung, S. C. (2003) Using web resources in public speaking class. English Teaching 
Forum, April.
Lam, F.S., & Pennington, M.C. (1995). The computer vs. the pen: A comparative study of word processing in a Hong Kong secondary classroom. CALL, 8, 75–92.
Larsen- Freeman, D., & Anderson, M. (2011). Techniques and Principles in Language Teaching. Oxford: OUP.
Liu, J. (2013) E-learning in English classroom: Investigating factors impacting on ESL (English as Second Language) college students’ acceptance and use of the Modular Object-Oriented Dynamic Learning Environment (Moodle). Graduate Theses and Dissertations. https://lib.dr.iastate.edu/etd/13256.
Loewen, S. & Reinders, H. (2011). Key Concepts in Second Language Acquisition. Basingstoke: Palgrave Macmillan.
Mahmoudi, E., Samad, A., & Razak, N. (2012). Attitude and Students’ Performance in Computer Assisted English Learning (CAEL) for Learning Vocabulary. Procedia-Social and Behavioural Sciences 66, 489–498.
Mansor, N. (2016). Enhancing Communication via Social Media in ESL Classroom. In 6th International Conference on Language, Education, and Innovation.
Miranty, D., & Rachmawati, D. (2016). Designing Podcast for Students: A Prototype for Teaching English in Listening Class. Journal of English Language Studies, 1(2).
Morat, B. N., Shaari, A., & Abidin, M. J. Z. (2016). Facilitating ESL Learning Using Youtube: Learners’ Motivational Experiences (pp. 23, 137). Banda Aceh: Association of Malaysian Researchers and Social Services Faculty of Teacher Training and Education, Universitas Syiah Kuala, Darussalam.
Moss, M., & Southwood, S. (2006). E-Learning for Teaching English for Speakers of Other Languages. London: National Institute of Adult Continuing Education.
Motteram, G., (2013) Innovations in Learning Technologies for English Language Teaching. British Council, London UK.
Mutlu, A., & Eröz-Tuğa, B., (2013) The role of Computer Assisted Language Learning (CALL) in promoting learner autonomy. Eur. J. Educ. Res. 51, 107–122.
Rosicka, Z., & Hosková-Mayerova, S. (2014). Motivation to Study and Work with Talented Students. Procedia—Social and Behavioral Sciences, 114, 234–238. https://doi.org/10.1016/j.sbspro.2013.12.691.
Roy, A. (2019). Technology in Teaching and Learning. International Journal of Innovation Education and Research 7, 414-422. https://doi.org/10.31686/ijier.Vol7.Iss4.1433.
Sari, A. B. P. (2020). WhatsApp-Based Speaking Test in EFL Context. Journal of English Language Studies, 5(2), 175-188.
Schacter, J. (1999). The impact of education technology on student achievement. Milken Exchange on Education technology. Journal of Educating computing Research (20), 1-13.
Segura, B., & Greener, S., (2014) Technology on CALL: improving English language learning in a Spanish context. In: Omgreen, Levinsen (Eds.), 13th European Conference on e-Learning (pp. 464-469). Curran Associates, Inc, Copenhagen, Denmark.
Shyamlee, S. D., & Phil, M. (2012). Use of Technology in English Language Teaching and Learning: An Analysis. In International Conference on Language, Medias and Culture (Vol. 33, pp. 150-156).
Simin, S., & Heidari, A. (2013). Computer-Based Assessment: Pros and Cons. Elixir International Journal, 55, 12732-12734.