Investigating the Effectiveness of Call for the English Language Learner

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Abstract

Purpose: The prime motive of this research is to investigate the affectivity of computer/technology-based learning that advances the future of digital world.

Methodology: This research investigated the effects of CALL as a developmental tool for English language learners; the standard learning of CALL has been examined through the criteria of the mixed method. The data was gathered from survey closed-ended questionnaire by following the primary basis of data which is further analyzed through SPSS. Thus, 106 responses were gathered through questionnaire where it has estimated that 85% undergraduate students agreed CALL helps them to improve their L2 proficiency.   In addition, the data is also collected through open-ended interviews from the English language instructor which analyzed through the content analysis that resulted in their positive responses of encouraging CALL based classes for learning English as L2.

Findings: The gathered data depicted the 80% positive reliance over CALL based learning. However, the study accomplished the advent of CALL with effective proficiency.

Unique Contribution to Theory, Policy and Practice: This research has also investigated the belief of students and teachers regarding the advance advent of CALL-in terms of language learning. Likely, the contribution of this study integrates the advancement in terms of language learning; that could bring the world closer to the technology. Institutes should promote the CALL based learning in order strengthen the learner's language competence. Teacher should be fully aware of CALL based teaching which helps to brings effectively in instructing the learners.

INTRODUCTION

1.1. Background

The research is primarily focused on the learning system that technologically advanced by the new advent of computational methodology of language learning/teaching. The digitalize platform that emerge due to the need for technology in the education system to motivate the learners towards learning. Second language learning is said to be crucial as advanced learner's needs progressive productivity in language learning so here the CALL (computer assisted language learning) plays a vital role in boosting the learner's proficiency in learning a language through an innovative manner. Likely, internet as an effective source that brings the world towards e-learning where CALL as an approach to a learning system in which computer and computer-based aids are integrated, it facilitate the learners to learn a language with comfort and feasibility that is said to be the student-centered learning. However, the emergence of CALL was originated soon after CALI (computer aided language instruction). Later, in 1960 the demand and need for CALL as advancement in learning gradually increased (Davies and Higgins 1982). As CALL contributed as the learning/teaching methodology in the field of computational linguistics, applied linguistics, and second language acquisition that advances these areas of language.

In additon, three theories were presented in respect of CALL that later signifies its effectiveness, the first theory regarded as "Behavioristic CALL" which comprised of the theory of behaviorism that was presented by Pavlov, Thorndike, and Skinner as the theorist believed that learning mode through the innovation of CALL is wholly based on repetitive language drills. Shortly, in 1980 this theory was rejected by "Communicative CALL" as the pioneer Warschauer and Haley (1998) presented their approach that language learning is a process of exploring, discovering, and developing which involves cognitive skills of a learner, moreover, it was said, "a demand for interactive and communicative uses of the computer for language teaching evolved in the second language teaching scene" Benyo (2020). Further, another theory "Integrative CALL" was proposed right after in which Ally stated that learners interpret the information through which they learn by observation, processing, and interpretation, and then transform the information into personal knowledge, further, technology integrates the skills of the learners that help them to build a perspective on the use of technology and language learning, and the process of learning is integrated through CALL, (Warschauer & Haley 1998 as cited in Polat 2017).

In the research of Khan et al. (2021) stated in their collaborative study that a breakout in the education system due to covid-19 created the switch from the

traditional classroom to e-learning, speaking skills at that time was more focused. Moreover, the reliability of speaking skills is further examine through quantitative research in which computer-assisted learning methodology was analyzed which indicates that online learning is challenging but it can be cooperative by means of CALL that motivates the learner and boost their language skills.

1.2. Statement of the problem

In Pakistan, the problem is that the traditional teaching method affects the learner's proficiency in learning because of the untrained language teachers, old teaching techniques, teacher-centered learning, poor accommodation, less use of computer sources, and lack of motivation creates hurdles for the teacher and students but through the interactive use of CALL with the sufficient expertise of use can help the Pakistani language learners to learn the second language effectively (Zeeshan, 2020).

Additionally, the study of Chandio et al. (2021), analyzed the interest of CALL from the students of BBA 2020 was tested by means of pretest and post-test which figure out the effect of reading skills of language by using CALL. In addition, Rehan (2019) stated in the research CALL based activity is a way to improve learner's autonomy. They believe that Pakistani ESL learners possess the higher autonomy if they are taught through CALL-based instruction; moreover, the findings in this research prove the effectiveness of CALL-centered learning that helps the learners to receive through visual and verbal based codes.

Another research was conducted in Pakistani elementary level of EFL learners; however, they were administered in reputable high school. Further, the implementation of CALL environment at this level of EFL learners not only encouraged them in e-learning but also the cognitive development by means multimedia sources helps the EFL learners to retain the knowledge/information for a longer period of time (Anjum and Mansoor, 2020).

This research focuses on the investigation of the effects on the English language learners that focuses on the feasibility and reliability of CALL as a developmental tool, further, this study also determine the impact of technological advancement on the English Learners.

1.3. Objectives

● To investigate the effectiveness of CALL on the English language learners.

1.4. Question

Q: What are the effects of CALL as a developmental tool for English language learners?

1.5. Justification

Additionally, CALL is more like blended learning which includes face-to-face teaching along with the resources of computational language learning. The globalized system of learning demands to learn the global language which is English, the learners of this language are learning it as a second language and the innovation of CALL facilitates to learn English and its language skills. So far, the aim of this research is to investigate the effectiveness of CALL for English language learners.

1.6.   Limitation

This study investigate the effects of CALL as a developmental tool for English Language Learners, that determine theoretical study whether the learners are learning through this advanced method that is limited to the computational aid, further, the focus is specific to the efficiency rather than the other doctrine of linguistic approach. The research is limited to the undergraduate students who are studying English as their compulsory course whereas the teachers are teaching English as a major course that helps to investigate the effectiveness of CALL for the English Language Learners.

1.7.   Scope

The scope of this study is broader as similar to the demand of the 21st century, the advancement of technologies in the education sector that spread through the computational sources that mold the cognitive skills into the creative skull that will remain last till decades. This research is entirely based on expanding CALL which brought advancement, and sooner it turns Traditional Teaching and Learning into Computer Assisted Teaching and Learning.

1.8.   Key Words

1.8.1. CALL: "The application of computer in language learning and teaching, the term CALL is used as an application of ICT for teaching and learning foreign language" (Levy, 1997, as cited in Alzahrani , 2017).

1.8.2. Technological advancement: "The use of information and communication (ICT) in language teaching and learning has occurred with the growth of multimedia and the internet" (Saranya, 2018).

1.8.3. Standard Learning: "Interactive pedagogy is used to supervise the set aims of language learning excellence of the learner" (Benyo, 2020).

1.8.4. E-Learning: "The term e-learning is an umbrella that refers to several different names such as online learning, virtual learning, web- based learning, technology mediated teaching, and so forth" (Baxtor & Haycock, 2014 as cited in Aroud and Yunus, 2020).

1.8.5. L2: "Second language that consciously acquired or used by its speaker after puberty"(Eric Lenneberg 1967, as cited in Siahaan, 2022).

LITERATURE REVIEW

CALL is used as an aided tool that is used for the purpose of teaching and learning a second language. The CALL is analyzed in the research as a software or technological tool for assisting the learning process along with its impact and efficiency on learning a language.

In the research of Nguyen (2021) computer-based activities (CBA) are involved in order to teach the learners in learning the foreign language in general and English in particular. Kren (2000) as cited in Nguyen (2021) stated that computer is a beneficial tool that benefits teaching and learning a language. In this research the three criteria were followed in order to exploring the result that later showed by conducting the language learning classes with the support of technology i.e. computer assisted learning/teaching helps to improve the FL learners competence.

On the other hand, importance of CALL also strengthens the writing abilities among the EFL/ESL learners. The aim of this research is to study efficacy of language learners that CALL carried interesting and specific software that work as effective tool. The following research outcome Alharbi (2018) explicatory study demonstrates that EFL/ESL feels motivated along with the improved knowledge and effective capabilities of writing English effortlessly. Additionally, the research of Aggoune and Ghaouar (2019) focuses on identifying the obstacles and barriers that effects CALL implementation in learners writing expression. The perspectives of EFL teacher hence gathered by means of research tool that further elucidates CALL barriers are extrinsic; however, the lack of literacy and unavailable resources of CALL based technologies creates hurdles. In order to overcome CALL based obstacles this study suggested that sufficient CALL based material, effective training, and innovative teaching methodologies.

Teaching methodologies is advances by the advent of CALL with time strategies and techniques likely to be the part of teaching method. A study of Habbash (2020) aims to explore the challenges that EFL teachers are confronting within CALL based classroom. Moreover, the quantitative study explored the frequency of challenges and also determines those challenges with adequate solutions by upgrading teachers knowledge of technological development along with an another initiative of training program regarding the literacy of CALL that helps them to integrate CALL methodology of EFL learning/teaching for effective output.

Likely, in the research of Ratnaningish et al. (2019) stated that CALL shows its effective output in terms of student motivation for learning, this method enhanced the performance of students in listening as well as also developed the speaking ability more comparatively. But in this research of Chen, Zou, and Su (2021) stated CALL is an advance and developmental tool in the world of teaching. The researcher further said that this pedagogy is based on blended, ubiquitous, and collaborative advanced applications for learning.

Computer-assisted language learning program is challenging that requires expert linguist, language specialist, teachers, and software engineers. The aim of CALL is to teach the different aspects of L1/L2 learning through the effective use of computer programs, it is an interdisciplinary approach and have been used various fields. Similar to this study the secondary data analysis has showed the NLP (natural language process) technique further it enable the CALL for bilingual in order to have command on their languages as stated in the research of Singh and Tyagi (2019).

Furthermore, this study investigated the impacts of integrating CALL in order to identify the EFL learning gaps. The research is distinctive as stated previously; it is inclined to focus learner's interaction and challenges within CALL. Abbasi et al (2022) identified in CALL environment vs non-CALL environment that resulted that there should be the counterbalance between traditional classes and CALL based classes that helps to trigger the learning gaps among EFL learners.

In contrast, Alhujaylan (2019) in Saudi Arabia presented his research evaluating the efficiency of CALL in teaching the important skill that is writing, based on an experiment that investigates the improvement through CALL. The hypothesis was conducted were the control group and experimental group where the result shows a high degree of distinct frequency between these group, further, demonstrate that the experimental group attain a positive result in response of CALL implication. It stated that if the students were allowed to go beyond the specific English language material with the help of CALL then it improves the writing skills of ESL learners significantly.

In addition, Khafaga and Alghawli (2021) investigate the impact of CALL on EFL learners which contributes to positive performance in an interactive way. The Saudi EFL students developed through this software in which their motivation and interest increased in learning.

The CALL dominated in the field of SL learners that further explore the effects of this software program in order to enhance the vocabulary development of EFL learners. The participants were divided into EG and CG where EG outperformed and later on, stated that CALL is the product for L2 learners in order to learn vocabulary as compared to the traditional method of teaching, and this study was given by Cakmak, Namaziandost, and Kumar (2021). Adara and Haqiyah (2021) presented the investigation over the effective phenomenon of motivation through CALL, for EFL learners the CALL-centered classroom motivates that brings out a positive attitude the learners toward language learning. This study is based on the findings where Experimental class scores are higher than the Control group, whereas the positive outcome of CALL in terms of motivation for learning among the students is significant.

A study involved the effect of computer assisted language learning project helps to determine student-efficacy and teachers-efficacy. The research motive to

expose the EFL student's/teacher's skills and concepts related to CALL. In this regard Alotumi (2020) employed the quasi experiment that resulted student and teachers are required to integrate CALL teaching/learning to enhance CALL competency and to make them fit according to the customs of digital era.

Moreover, the research of Ghounane and Rabahi (2021) to investigate EFL student's pronunciation training by means of CALL. The study explore that with the implementation of CALL the pronunciation of EFL learners strengthen along with that learners also becomes autonomous, motivated, and information increased by repetitive practice. Apart from this, a study focused on stress, depression and anxiety among the ESL students which is common but this complexity likely to be decreased when the l2 learners are learning in the digital environment which helps them to learn with creativity and effectiveness. (Singh and Kumar, 2022).

However, these researches is been involved in investigating the further effects of CALL as a development tool for the L2 learners among the undergraduates. Although, this study has entirely focused to analyze the effectiveness of CALL, later on, the positive standard learning is examined through the criteria of implication of the mixed method. This research is also draw the recognition between the effectiveness of CALL according to the faculty of English major teachers and undergraduates.

METHODOLOGY

3.1. Research Design

This research is based on the mixed paradigm; the design is comprised of hybrid research. The data is gathered through survey questionnaire by following the primary basis of analysis conduction. In addition, it has also investigated the effectiveness of CALL through interviews from the major English language teachers.

3.2. Population

The researcher has conducted the research from 106 total undergraduate students as participants who are taken English as a compulsory course and 10 interviews have been conducted from the teachers of different universities teaching English as their major course.

3.3. Sample and Sample Technique

This research is accomplished from the private sector universities. Likely, the interview has been taken from the teachers who are teaching English as their major course that are from the various universities and the survey questionnaire respectively acknowledged from the undergraduate students. The sampling technique is based on two types that comprised of convenience sampling that is followed by the open-ended interviews and simple random sampling is based on closed-ended survey questionnaire. The student and the pedagogues are the sample through which the data has gathered within a limited time.

3.4. Measurement/Instrument Selection

The data is gathered to obtained and analyze the study on the basis of closed-ended survey questionnaire following the Likert scale with strongly agree, agree, neutral, disagree, and strongly disagree. This research is also comprised of the tool of open-ended interviews that helped to investigate the effectiveness of CALL for English language learners.

3.5. Procedure

The study has accomplished this research by analyzing the effectiveness of CALL that investigated the validity of either CALL is a successful language learning method or a traditional method that comes under the header of standard e-learning. The consent is taken respectively from the teachers and undergraduates verbally and participants were informed about the aims of this research. Further, closed-ended survey questionnaire is circulated through Google forms to other departmental students. Additionally, the faculties of English language teachers from various universities are involved to examine its reliability through the open-ended interview based session accordingly in order to investigate the effective outcome of CALL according to the perspective of students and the pedagogues respectively.

3.6. Plan of Analysis/Statistical Tool

The analysis of this study has-been generated through the SPSS (22) tool that elaborate the data precisely with valid information. Moreover, the inferential measurement has shown the predictability of CALL as a technological advanced tool for the standard language learning.

DATA ANALYSIS

This study is based on the mixed methodology which comprised on the tools of questionnaire and interviews, the analysis of both tools recognized the effectiveness of CALL for English language learners. Further, survey questionnaire is analyzed through SPSS (22) whereas; interviews are examined by content analysis.

4.1. Questionnaire:

The research is based on Quantitative survey closed-ended questionnaire where the responses from the respondent have analyzed adequately by following the SPSS method for data analysis. The validity of CALL hence proved by the positive responses of 106 undergraduate students that further listed down in the table (4.1.1.).

Table: 4.1.1Questionnaire

Statement	Laptop		Desktop Computer		I-pad		Other	
	F	P%	F	P%	F	P%	F	P%

What type of computer do you use for L2 learning?	72	67.9%	16	15.1%	6	5.7%	10	9.4%	

Statement	SA		A		N		D		SD	
	F	P%	F	P%	F	P%	F	P%	F	P%
1- Learning through computer-assisted language learning is easier rather than books	18	17.0%	50	47.2%	24	22.6%	14	13.2%	-	-
2- Computer-assisted language learning strengthen computer literacy.	28	26.4%	52	49.1%	24	22.6%	2	1.9%	-	-
3- Computer-assisted language learning helps to increase English language proficiency.	35	33.0%	45	42.5%	22	20.8%	4	3.8%	-	-
4- Computer-assisted language learning-based classroom promotes learners autonomy.	19	17.9%	63	59.4%	20	18.9%	4	3.8%	-	-
5- Computer-assisted language learning develops language skills among L2 learners.	16	15.1%	63	59.4%	24	22.6%	3	2.8%	-	-
6- Using computer-assisted language learning can boost your level of	31	29.2%	46	43.4%	21	19.8%	8	7.5%	-	-

confidence.

7- Computer-assisted language learning can be stress-free.	17	16.0%	49	46.2%	32	30.2%	7	6.6%	1	0.9%
8- Grammar is improved through computer-assisted language learning.	25	23.6%	43	40.6%	23	21.7%	15	14.2%	-	-
9- Computer-assisted language learning helps to identify language errors through various online applications. (e.g. Grammarly, Proofreader, Linguix, etc).	37	34.9%	55	51.9%	12	11.3%	2	1.9%	-	-
10- Computer-assisted language learning increased learner's motivation.	25	23.6%	44	41.5%	30	28.3%	7	6.6%	-	-
11- Computer-assisted language learning facilitates flexible learning hours for learners.	18	17.0%	54	50.9%	31	29.2%	3	2.8%	-	-
12- Computer-assisted language learning reduced L2 anxiety among learners.	26	24.5%	39	36.8%	32	30.2%	8	7.5	1	0.9%
13- Computer-assisted language learning benefits the students to experience the L2 with variety of	25	23.6%	61	57.5%	15	14.2%	5	4.7%	-	-

knowledge.

14- Students who are learning L2 through traditional method are efficient.	7	6.6%	36	34.0 %	34	32.1 %	23	21.7 %	6	5.7 %
15- Computer-assisted language learning can be a risk of over-dependence on technology.	2 1	19.8%	35	33.0 %	29	27.4 %	19	17.9 %	2	1.9 %
16- Computer-assisted language learning can be a source of distraction for language learners. (E.g. social media ads, video overlay ads, contextual ads, etc).	2 8	26.4%	38	35.8 %	29	27.4 %	10	9.4%	1	0.9 %
17- Computer-assisted language learning increased educational costs in terms of L2.	1 1	10.4%	45	42.5 %	29	27.4 %	19	17.9 %	2	1.9 %
18- Computer-assisted language learning can be the source of distance-learning that may detach you from your family and surroundings.	2 4	22.6%	48	45.3 %	18	17.0 %	16	15.1 %	-	-
19- Computer-assisted language learning can be the source of less interaction between	2 6	24.5%	52	49.1 %	20	18.9 %	5	4.7%	3	2.8 %

the teachers.

In response to statement no. 1, 67.9% students use laptop for their L2 learning that facilitates them to learn. Further, in response to statement no. 2, 47.2% students agreed that learning through CALL is easier comparatively. Likely, in response to statement no. 3 (49.1%) and 4 (42.5%) respondents agreed that not only their English language strengthen through CALL but their computer literacy also build up. Furthermore, in answer to the statement no. 5, (59.4%) students agreed that CALL promotes learners autonomy to learn the L2 respectively.

On the other hand, in statement no. 6, 59.4% students believe that CALL develops their L2 skills effectively. Additionally, statement no. 7 (43.4%) and 8 (46.2%), students positively think that CALL helps to boost the confidence as well as it is stress-free learning of a language. Likewise, in statement no. 9 (40.6%) and 10 (51.9%), students agreed with the statements that grammar is improved by the use of CALL and also errors in language can be identified in CALL by using various applications.

Secondly, in response to statement no. 11, 41.5% students positively feels motivated through the learning from CALL, where as in statement no. 12, 50.9% students agreed that CALL promotes flexible learning hours. When it comes to L2 learning the statement no. 13 (36.8%) and 14 (57.5%) respondents agreed that their level of anxiety decreased through CALL as well as it also benefits them to experience the L2 with variety of knowledge. However, statement no. 15, (34.0%) students agreed that L2 learning can be effective as well through traditional method of learning/teaching but on contrary 32.4% students disagreed with this statement.

In contrast, statement no. 16, with 33.0% showed that CALL can be the risk of over-dependence on technology. Likely, to the statement no. 17 (35.8%) and 18 (42.5%) showed the result that CALL can be the source of distraction as well as it also increased the educational cost for the learners. Moreover, in statement no. 19 (45.3%) and 20 (49.1%) students agreed with this believe that CALL can be the source of distance learning that may detach the learners from the surroundings and it may lessen the interaction with the classmates and teachers.

Therefore, the above statements depicts the positive effects of CALL in terms of L2 learning but there has some slightly cons of CALL. Thus, the analysis shows that CALL is effective for the L2 learning.

4.2. Analysis of Interview:

The Qualitative part of the research is based on the semi-structured interviews of open-ended questions. The data is gathered from the 10 teachers who are involved in L2 teaching; however, this data is further analyzed through content analysis by following the steps of coding, sorting, sifting, typology, and taxonomy.

Table: 4.2.1Interview

Semi-structured interview questions	Emerging themes from the responses of participants
1- How effective is the role of CALL in the process of L2 learning?	It is very much effective in the digital world. CALL strengthens not only language learning competence but also learning about the technology. This resource for language learning is handy that level up the interest of learners.
2- Do you use CALL in your class? How?	It is a paradigm shift to teaching digital natives, incorporation though CALL by using multimedia, playing YouTube videos, and using Google forms, diagrammatic pictures/charts that support the visual learning of a language. Listening quizzes and other activity encourage the learners to take the effective active part in L2 learning.
3- Can lead the learners towards isolation?	Especially, the learners who are not aware of CALL and its usage adequately face instability, hesitation, and distortion in learning.
4- What sort of positive impact CALL holds on the L2 learning?	It's totally positive when it comes to creative development of L2. Learners go for CALL in terms of gaining the knowledge, tasks, and skills development.
5- What sort of negative impact CALL holds on the L2 learning?	Without motivation, positive attitude, intelligence, aptitude, cognitive style, and personality there will be improper learning through CALL because these factors greatly influence someone in the process of his/her L2 learning.

The responses of the teachers based on their opinion about CALL, teachers were provided with five questions that comprised of CALL and its effectiveness. In

response to question 1, about the effective role of CALL in the process of L 2 learning where the estimated view of respondent is positive because they believe modern era required advanced way of teaching. CALL according to the teachers is an adequate process of teaching/learning likely, T5 also stated, *"CALL is effective, it not only strengthens learning competence but also facilitates learning about technology"*. Further, the responses showed the positive effectiveness of CALL that advances the process of L2 learning.

Secondly, in response to question 2, Do you use CALL in your class? How? Most of the teachers said that they use CALL based resources and also promotes this type of learning/teaching, as T3stated, *"I used to incorporate through CALL by using multimedia, playing YouTube videos, using goggle forms, and diagrammatic pictures/charts that support visual learning of a language"*. It is the believed of the teachers that the modern efficiency of technology provides productive support to the digital natives.

In response to question 3, Can CALL lead the learners towards isolation? The responses from the teachers were based on mixed opinions, some believes that it may leads towards isolation, whereas, some believes it depends on the use of CALL. In regard of this question, T6 believes, *"I believe that learning in isolation is somewhat helpful but distancing from the surrounding/people might be not adequate because learning a language is based on its use in real life that helps to retain last and establishing the L2 proficiency"*. The advancement of computer based learning can affect with different parameters but as faculty of English major believed that the use of CALL should adapted for the adequate need of learning/teaching.

Furthermore, in response to question 4, what sort of positive impact CALL holds on the L2 learning? Most of the teachers agreed CALL holds plenty of positive aspects when it comes to L2 learning. T10, *"CALL resulted beneficial for L2 learner's self-confidence, learners overcome their anxiety and fear when speaking and naturally make the whole expression more fluent and smoother with the learning processes"*. According to the major English faculty teachers they believed that CALL expands the learners language capabilities in a creative manner.

However, in question 5, what sort of negative impact CALL holds on the L2 learning? The teachers believe the adequate and proper use of CALL but according to T7 response as, *"Without motivation, positive attitude, intelligence, aptitude, cognitive style, and personality there will be improper learning through CALL because these factors greatly influence someone in the process of his/her L2 learning"*. Its integration depends on the L2 learning circumstances if the teacher is less-trained or has little knowledge how to conduct and teach through CALL.

The above analyzed data showed the effectiveness of CALL in learning/teaching, as per the demand of digital world in the field of education. CALL played its vital role in strengthening the advance system of L2 learning. It has been

demonstrated through result that students and teachers have positive attitude towards CALL learning/teaching.

DISCUSSION

The research is involved in investigating the effectiveness of CALL for English language learners. The analyzed data showed the positive and effective result of CALL, an interactive methods for the language learners to achieve their goals, target need of a language, and feasibility of L2 learning. The gathered data interpreted the effective outcomes of CALL, similarly, the qualitative (interviews) and quantitative (survey questionnaire) further elaborate that CALL is an important tool in educational system. However, this research also find out that some of the major English language teachers believe on the mode of blended learning/teaching which based on the integration of traditional method and CALL based teaching/learning. It not only promotes the computer literacy but also can be the source of standard leaning.

In addition to this 70% undergraduates students strongly believe that CALL strengthen their learning which motivates them and progressively boost up their computational skills.

The primary focus of this study is:

RQ1: *What are the effects of CALL as a developmental tool for English language learners?*

CALL development in terms of computer literacy is clearly stated in the research of Muhammad (2019); CALL based activities promotes learners autonomy, likely, the study focused on the computer literacy for both the learner and teacher that regarded as advanced technological tool for language learning. Comparatively, the current study of CALL has also determined that 49% learner's computational ability increased by this method of language learning where the targeted need and the objectives of L2 learning also accomplished.

Secondly, CALL is a developmental source of motivation that mentioned in the study of Khafga and Alghawli (2021) which demonstrate the impact of CALL as a software on the performance of EFL students in which number of tools were used from which questionnaires presented higher-performance of EFL learners by using CALL software. As it was stated in the research, *"the use of CALL software in EFL classes increases student's motivation and curiosity towards learning, and develops a feeling of independence that serves to foster autonomous learning"* (p. 310). Likely, this research also studied effectiveness of CALL, 41% students agreed not only it motivates their L2 learning but it is also becomes a source of stress-free learning.

Technological advanced tool for standard learning, CALL application affected the student's attitude in learning English that foster language learning process as mentioned in the research of Asrifan et al. (2020). Comparably, the interpretation in this research through questionnaire showed that 61.8% students performed well with

the help of CALL. CALL promotes standard learning that is visible through numerous researches that has been done previously. The goal of the researcher of this research was to investigate the effectiveness of CALL for L2 learning according to the learners and teachers, however, the findings of gathered data favored in CALL based learning/teaching that is the demand of the 21st century digitalize world.

In contrast, CALL can be crucial if there is insufficient knowledge regarding technology and poor literacy in terms of digital teaching, Aggoune and Ghaouar (2019) highlighted these issues that CALL may create obstacles. Similarly, the present research also investigated through interviews in which the faculty of English major teachers encouraged CALL based learning but also stated that it could be ineffective if the teachers are less-competent about the advent of new technology.

The result showed the effectiveness of CALL from the tools that is the part of this research; survey questionnaire showed CALL efficiency according to the undergraduates, on the other hand, interviews were taken from the major English language teachers in order to investigate the CALL according to their point of view. Moreover, blended learning should be integrated in L2 teaching/learning.

CONCLUSION

6.1. Conclusion

The research investigated the effectiveness of CALL for the English language learners; also the study finds out the spread and demand of CALL as well as what the views of English language teachers are regarding the advancement of CALL. The positive responses have been collected in the form of survey questionnaire that has been analyzed through SPSS (22)which is taken from the L2 learners. The teachers are interviewed regarding the effectiveness of CALL, however, the analyzed content has shown that learners are having the positive attitude for CALL and its implication in terms of L2 learning but they also mentioned that the learners should make sure the positive learning.

6.2. Ethical Consideration

The research has conducted on a fair and honest basis of data conduction. Further, this research kept the respondent anonymity confidential, no harm and delusion is been made so far. The data is presented in an adequate and ethical manner which helps to achieve the aim of this research respectively.

6.3. Recommendation

The research aims to recommend on the basis of data analysis:

◆ Flipped learning should be facilitated.

◆ The teachers should be enough educated as well as trained properly in order to conduct and teach through CALL. Further, the teacher must promote stress-free

environment by utilizing the technological advanced e-learning based classes that may help the EFL learners in future.
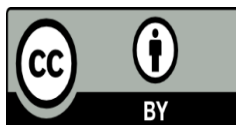
◆ Institutes should promote CALL based teaching.

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