

The Integration of Technology into English Language Teaching: The Underlying Significance of LMS in ESL Teaching despite the Ebb and Flow of Implementation

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Abstract: The current research study focuses on how useful and important the Learner Management System (LMS) has been in English as a Second Language (ESL) Teaching at an English Language Institute (ELI), in Saudi Arabia, despite the major hurdles in the implementation.

As defined by (<https://www.mindflash.com/lms>, 2015), LMS allows you to create, distribute and track training anywhere on any device. LMS is a software application for the administration, documentation, tracking, reporting and delivering of electronic educational technology (also called e-learning), education courses or training programmes. As with any revolutionary teaching method, LMS at the aforementioned ELI was not implemented without meeting obstacles. The present study shows that resistance to using the LMS in ESL might occur in a variety of aspects of the teaching and learning process. The main objectives of the present study are to find out what could be the possible causes of a problematic implementation of the system. Factors taken into account would be based on planning, organization, implementation by administrators, and Support Leaders' intensive support in order to insure a smooth delivery of the system. Moreover, instructors' skills and competence at employing technology and covering their students' learning outcomes set in the pacing guide or instructional pack for the course, are also taken into consideration. Attention is also paid to instructors' lack of necessary skills at employing technology in the classroom as well as outside the classroom when assigning independent language practice.

Several previous studies related to teaching with technology have emphasized that technology requires infrastructure, continual maintenance and repair – one determining element, among many, is how these technologies can be used for curricula purposes and whether or not they will be successful. Examples of the infrastructure required to operate and support technology integration in schools include at the basic level electricity, internet service providers, routers, modems and personnel to maintain the network, beyond the initial cost of the hardware and software.

Keywords: Learner Management System (LMS), English Language Teaching (ELT), English as a Second Language (ESL), English Language Institute (ELI), Information Communication Technology (ICT), English as a Foreign Language (EFL) and Computer Assisted Language Learning (CALL).

I. INTRODUCTION

The present study is based on a less successful implementation of Learner Management System (LMS) at an English Language Institute (ELI), in one of the most prestigious universities in Saudi Arabia. The primary aim of the system was to enable the instructors to assign independent language practice to Foundation Year students in order to improve their English language skills and revise for the Mid-Module and Final exams at the ELI. Before the LMS was launched, the independent practice outside the classroom was mainly assigned through the students' Workbooks. LMS was assigned as a collaborative Computer-mediated Communication as an offline study or asynchronous (flexi-time) learning (Romiszowski 2004, p.6). In the same article Broadbent (2001) cited in Romiszowski (2004, p.21) confirms that "New training technology has not delivered the goods in the past.....In the New Economy, today's jewels become tomorrow's jetsam. But e-learning can endure".

Since its initial implementation, there had been numerous technical and functional problems related to the system. These problems caused frustration and lack of motivation to some instructors as well as students. However, the problems had not affected the majority of instructors and students, who managed to fully benefit from its practicality and importance in practicing the target language. While collecting data for the present study, these fortunate

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instructors and students have also reported enthusiasm and motivation in using the system and have also recommended it to be used in the future.

Instructors were provided with a feedback form at the end of each teaching module in order to report the main problems encountered as well as provide suggestions for upcoming modules. Different problems and causes for these problems were reported in these feedback forms. The feedback forms as well as other research tools (Questionnaires) will hopefully help us in future to foresee and avoid experiencing similar issues and implement a hassle free and a successful system used for teaching with technology.

II. RESEARCH QUESTIONS

The central research question that will be addressed by this study is as follows:

What could be the major causes of a less successful implementation of the LMS at the ELI?

There are three guiding questions that will shape the study. These are:

- What strategies and approaches should the institute adopt in order to successfully integrate technology into traditional teaching?
- What is the instructor's role at delivering technology oriented lessons successfully, while helping her learners maintain their motivation for using technology?
- Could the quality of assistance and support received from the administrators and support leaders be playing a substantial role in the successful/less successful delivery of the system?
- What roles does the software provider play at this?

III. LITERATURE REVIEW

To begin with the first research question based on strategies and approaches that the institute and organization should adopt in order to successfully integrate technology into language teaching, the organization must take into consideration the standards for the implementation of technology. Standards, guidelines, criteria, definitions—it seems that teachers have much to think about. For easier reference, these conditions will be referred to as, interaction, authentic audience, authentic task, production and exposure, time and feedback, intentional cognition, atmosphere and autonomy as indicated in the study by Egbert (2005).

According to Phillips (2002) cited in Romiszowsky (2004, p. 21) failure in E-learning can occur at three interlocking levels; the product level which focuses on poor course design and inadequate technology infrastructure, the learner level; that is poorly prepared learners who lack motivation and finally the organizational level which is described as low managerial support and lack of reward structure.

Chitiyo and Harmon (2009) cited in Lamatara (2014, p.401) argue that “integrating technology in education is not just a matter of having the necessary infrastructure however. To be successful, technology integration plans must insure that faculty are prepared to use technology effectively”. So, effective use of technology according to Lamtara (2014, p.401) is related to both technical and pedagogical manipulation of Information Communication Technology (ICT) infrastructure, which is far from being achieved not only in the Arab world, but also in countries, which are expected to be leaders in information technology in education. Blake's (2008, p.4) objectives are also to stimulate the technologically inexperienced readers to go out and acquire the necessary hardware and technical skills to begin incorporating technology into their classrooms.

Having reviewed sources pertinent to our second research question, which is based on the instructors' role at delivering technology oriented lessons successfully, Healey et al. (2013, p. 2) highlights that technology remains intimidating to many teachers but strongly believe that the appropriate use of technology by a trained teacher can greatly benefit language learners. This statement is further confirmed by Hunter (2011) cited in Malek (2013, p. 174) that “The importance of technology is that, if used correctly, it can enhance the students' learning”. Mahajan (2012) cited in Malek (2013, p.174) also confirms that to be effective, the technology must be fully integrated into lesson plans and teachers must be trained sufficiently. Administrators and teacher educators should also be aware of these standards in order to apply them when designing programs at their institutions. The role of administrators will be discussed in details in the third part of the literature review. Teachers are therefore expected to possess knowledge, skills, and curriculum implementation and prepare their students in the effective use of technology for language learning and for digital literacy. This is further confirmed by Levin and Wadmany (2008) cited in Lamtara (2014, p. 400) where they state that nowadays teachers are challenged in terms of their technical ability, knowledge and expertise in order to alter the old approach to education and offer new opportunities and insights to the learner. Teachers are also expected to assess students' technological knowledge and skills as well as provide activities and

tasks that appropriately integrate the students' progress in meeting the standards while pursuing language-learning objectives.

Similarly Romiszowsky (2004, p. 4) states: "In the new e-learning environment, the roles of teachers and students are also changing, but in different ways. The classroom teacher becomes an online teacher, having to master a series of new skills and competencies. The online student becomes a non-linear navigator through never-ending oceans of information – this also requires new skills and competencies". A similar statement is made by Banados (2006) cited in Blake (2008, p. 107) that in online learning and teaching, both teachers and students are challenged by new roles: teachers are more like guides and collaborators while students must assume a more autonomous participatory status.

Beside language teachers' skills in integrating technology into their traditional classroom teaching, one must also consider the challenges faced by the teachers. Challenges which usually result in unsuccessful implementation of technology. According to Hanson-Smith and Rilling (2013), teachers face certain challenges, when they decide to introduce blended lessons into the learning process: their level of expertise—Is it adequate for the task(s) ahead?, their school's computer equipment—Is it adaptable to the tasks and activities?, computer facilities and availability—Are they adequate for the number of students?, are they easily accessible when necessary?, technical support—Does it exist? Can it respond in a timely fashion? Inoue (2006) cited in Malek (2013, p. 174) also states that "instructors nowadays may face stress in attempting to integrate online learning environments in their classrooms for students with different backgrounds, academic levels, and learning styles". Although some traditional instructors are reluctant to use technology, they do realize that it supplements teaching and enhances learning (Hunter, 2011) cited in Malek (2013, p. 174). Thus there are both benefits and worries in using technology as a pedagogical tool.

The second research question not only addresses instructors' competence and knowledge at delivering technology oriented lessons successfully, but they are also required to assist their learners at retaining motivation and enthusiasm in learning with technology. With regard to learner's level and lack of motivation, we can also refer to Moss (2009) cited in Malek (2013, p. 175) where he confirms that research has demonstrated that some students have difficulties learning with these environments. Although, this statement is contradicted in a study by Ezza and Bakry (2014, p. 55) where they have assessed Saudi students' reaction to the integration of technology into the traditional English as a Foreign Language(EFL) classroom. They have reported that technology not only accommodates students' multiple intelligences, but also empowers them so that they can effectively take responsibility for their learning both inside and outside the classroom. Ezza and Bakry's statement is further supported by Alkahtani (2001) cited in Lamtara (2014, p. 400) who confirms that as far as Saudi Arabia is concerned, it is among the countries, which give importance to the integration of ICT in education in general, and especially in the teaching of English as a Foreign Language. Despite the importance given to the integration of ICT in education in Saudi Arabia, Alkahtani in the same article by Lamtara (2014, p. 407) expresses his concerns about the lack of training. The findings of Alkahtani (2005, p.2) indicate that half of the respondents in his study did not receive any Computer Assisted Language Learning (CALL) training from their universities or department. The above questions refer to the urgent need that the teaching community places on computer training. So, teachers themselves are quite aware that ICT teacher training is the key determinant for effective ICT integration in education (Lamtara 2014, p.407).

The third part of the literature review focuses on quality of assistance and support received from the administrators and support leaders. According to Ali (2013, p.36) the top two conditions that the system administrators have to meet, in order for the technologically incorporated teaching to be delivered successfully are; 1) organized and systematic introduction to the technology preceded by consultation with would-be users as well as on going training that meets the needs of the users; 2) sufficient, efficient and regular technical support that helps keep these technologies working at an optimal level.

The fourth part of the literature review refers to our fourth research question based on the software provider's role in the successful and less successful integration of technology into teaching. Tuzlukova (2013, p.286) claims that technology is not always reliable and this can be very frustrating for teachers especially when training is insufficient and/or there is no opportunity for all faculty to articulate their training needs to enable them to exploit innovative technology to the full and with a greater degree of confidence.

To wrap up the present literature review, Riaz (2013, p. 304) claims that there are at least five main challenges to incorporating technology in language teaching: 1. Training the teachers who can be overwhelmed with reviewing and managing Rich Site Summary (RSS) feeds, 2. The class size must be controlled to allow proper attention and time to each student, 3. Training the students because equal participation requires and assumes that all students will be availing technology for individual learning and contributing to group projects, 4. Ensuring that the class duration

is long enough for the students with varying learning paces to completely immerse in interactive learning and 5. A teacher who incorporates RSS and other technological tools can only hope that students will continue to use them after completing the course.

IV. METHODOLOGY

To maximize richness and accuracy of data, as well as transferability of the findings, a case study was carried out at the ELI. According to Denscombe (2007, p. 35), case studies focus on one (or just a few) instances of a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance. Based on this statement, it is hoped that the present case study has provided an in-depth account of technical and functional problems related to the organization and/or software provider. Denscombe further elaborates that case studies focus on relationships and processes within social settings that tend to be interconnected and interrelated. In order to understand what caused the ebb and flow of implementation from the software provider's side, my present study have also had to understand what were the organization's responsibilities for a successful implementation.

The findings and results of the present study are produced through both quantitative data (how many students and instructors agree or disagree with a particular statement) as well as qualitative data, where the open-ended questions in each set of questionnaires provided me a general yet responsive account of what I was investigating. The qualitative findings have therefore elaborated on the quantitative findings (Wardak 2014, p. 131).

Regarding the research tools and participants, the present study is based on a survey in the form of questionnaires for both instructors and students, in addition to the 'End of Module Feedback on LMS' shared with the instructors. The population consisted of 40 ESL Instructors and 40 level 4 foundation year students at the ELI. The instructors were from different linguistic and cultural backgrounds with mixed abilities at using technology in teaching. An analysis of the results will follow. A total of 80 questionnaires were distributed, completed and returned. The findings obtained from the questionnaires are examined separately and conclusions have been drawn on both sets. Both groups of participants were informed (prior to completing the questionnaires) that the survey was part of a research project and their responses were to be kept anonymously to preserve confidentiality.

The questionnaires designed for the instructors contained 22 questions. The type of questions were; closed questions, dichotomous (yes/no) questions followed by an open-ended 'why' question, multiple-choice questions and likert scale (strongly agree – strongly disagree) questions. The students' questionnaires on the other hand contained 16 questions, where closed questions were asked mostly. The closed questions were opted for since they are easier to code, analyse and compare across surveys (Martin, 2006) cited in Lamtara (2014, p. 402). Open-ended questions on the other hand, can provide detailed responses in respondents own words, which may be a rich source of data (Ibid, 2005) cited in Lamtara (2014, p. 403).

V. DATA FINDINGS/RESULTS

The six tables below are based on the responses received from the instructors' (questionnaires and end of module feedback) and students' questionnaires, and summarize the percentage of population for each statement

Statements (summary of statements strongly related to the use of LMS)	Instructors' Responses / highest and lowest %
Using technology in teaching	75% = every lesson
The importance of teaching with technology	73%=very important
Preference for implementing independent language practice	70%=LMS 30%=workbook and online sources
Instructors' competence at using technology	53%+competent to very competent
LMS is difficult, would recommend an easier online platform	15%=Yes 85%=No
LMS has been very useful for assigning language practice compared to traditional workbooks	83%=agree 17%=disagree
Initial LMS training workshops attended	53%=yes 27%=no 20%=no response
Follow up LMS training workshops attended	53%=yes 30%=no

	13%=no response
Guidance and instructions received from the LMS team at own campus	100% = yes
Guidance and instructions have been very helpful	83%=very helpful 17%-helpful
Students who used the LMS for revision obtained better results at Mid-module and Final Exams	88%=agree 12%=disagree
Paper-based Grammar and vocabulary quizzes are easier and involve less hassle to administer	33%=agree 67%-disagree
Students showed interest and enthusiasm at using the LMS	68%=most to all of them 32%=some of them
Rating the assistance received from the LMS Head at own campus	83%=very good 17%=good
LMS Should have been graded like other supplementary programmes at the ELI	80%=agree 20%=disagree

Fig1. *Instructors' responses to questionnaires (closed questions)*

Statements (open ended questions)	Instructors' Responses (out of 40 instructors)
What instructors liked the most about the LMS:	Learner- autonomy/independent student practice/Immediate Feedback (11/40 instructors)
	It's a cool tool/liked the exercises/motivates learners (7/40)
	Varieties of exercises and tasks (2/40)
	Can track and check progress, grades and if they have done the exercises (2/40)
	It's easy to use, once you know how to use it (3/40)
	good for practicing grammar and vocabulary (3/40)
	provides reinforcement for the language skills taught (1/40)

Fig2. *Instructors' responses to questionnaires (open-ended questions/Most-liked features of the LMS)*

Statements(openended questions)	Instructors' Responses (out of 40 instructors)
What instructors liked least about the LMS:	It's heart-breaking that such a useful platform failed to deliver language practice successfully (1/40)
	Too many technical problems/logging in problems (12/40)
	Students registration process was problematic/licensing them (6/40)
	Can't really monitor my students outside the classroom, what if the exercises are done by a friend or a family member? (1/40)
	Late implementation of the system (1/40)
	Late implementation of the system (1/40)
	Didn't work properly on mobile handsets and iPads (1/40)
	It's difficult to make students log in and do their exercises (2/40)

Fig3. *Instructors' responses to questionnaires (open-ended questions/Least-liked features of the LMS)*

Instructors' Responses to 'The Most Common Problems Associated with the LMS' (out of 40 instructors):	
Slow internet connection (27/40)	Problem with the OUP website (i.e. log in page redirected or out of service) (21/40)
Students' had been registered partially and their registration could not be completed (26/40)	Students' IDs and Passwords were not being recognized (26/40)
Courses disappeared from the teacher and student's homepage (6/40)	Unable to license my students (did not know how to/licenses had run out) (10/40)
Time constraint for instructing teachers, who could subsequently	Students were less motivated (12/40)

instruct their students, on how to use the system? (21/40)	
Lack of instruction and guidance from the admin team (2/40)	Lack of facilities/labs for practicing the system (23/40)
I had problems understanding the basic use of the LMS and therefore could not integrate it with my teaching effectively (3/40)	Students refused to do the exercises and activities on LMS (10/40)

Fig4. Instructors' responses to questionnaires (open-ended questions/common problems associated with the LMS)

Common Difficulties Reported by Instructors	
Late Implementation of LMS	My courses keep disappearing and hiding from my home page
Instructors' logging in and getting into the system	Exercises are not done by the students, but by their family members
Students' logging in and getting into the system	OUP/LMS web page is redirected repeatedly and asks for re-logging in
Students could not be licensed	Instructors and students lack training on how to use the system / 2
Students did not attempt logging in	Some students experienced problems with the listening part

Fig5. Instructors' responses to the End of Module Feedback (open-ended questions)

Statements (summary of statements strongly related to the use of LMS)	Students' Responses / highest and lowest %
The number of hours per day student spend on their computers	70%=1-2 hours 25%=2-4 hours 5%= 4-6 hours
The computer is used for:	83%=browsing the net 10%=online language practice 7%=sending emails
LMS has been used for independent language practice	85%=Yes 15%=No
Enjoyed practicing with the LMS	51%=Yes 49%=No
Problems faced during language practice	60%=Yes 40%= No
Common problems faced:	28%= Username and passwords were not being recognized 20%= Exercises were difficult 13%= Exercises getting stuck 5%= The listening part did not work 15%= Slow internet connection 3%= I did not know what to do?
Help received from the LMS Team	43%= Yes 18% = No 39% = No response
Preference towards using LMS in future	40% = Yes 45%= Maybe 5%= No 10%= No response
Preference towards taking exam with computer or paper-based	35%= Computer based 15%= Paper-based 40%= Both 10%= No response
Practicing online is easier and better than practicing from a book or visiting a library	60%= Yes 31%= No 9%= No response
Technology helps in practicing the target language better	63%= Agree 18%= Disagree 19%= No response

Fig5. Students' responses to questionnaires (closed questions)

With regard to instructors' responses to the questionnaires, the highest scores were given to guidance and instructions received from the LMS team (100% yes), guidance and instructions have been helpful (83% very helpful), students who use the LMS obtain better marks in the mid-module and final exams (88% agree). In their open-ended statements on the general subject of using the LMS for independent language practice, instructors had chosen learner-autonomy, being able to track and check learner progress and providing reinforcement for the language skills as their most liked features of the LMS. However, the least liked features of the system were predominantly related to the technical and functional problems as well as students' lack of enthusiasm for practicing the language independently and the absence of monitoring the students outside the classroom.

When asked about their opinions on the importance of using computer technology in teaching and learning, 75% of the instructors had reported frequent use of technology in teaching, 73% had rated teaching with technology as very important and 70% had shown preference towards implementing independent language practice through the LMS. The lowest scores were given to the difficulty related to the use of LMS (15% yes) and disagreement based on the statement that supports the use of LMS compared to the traditional language workbooks (17% disagree).

As far as the students' responses are concerned, the highest scores were given to the use of technology in daily tasks (70% 1-2 hours per day), the use of LMS for independent language practice (85% yes), problems experienced with the LMS (60% yes) and agreeing to the statement that technology helps practicing and revising the target language (63% agree). The lowest scores were given to the lack of preference towards the use of LMS in future (5% no) and preference towards paper based exams (15% yes).

VI. DISCUSSION

The results in the present study demonstrated that the majority of instructors despite their basic familiarity with using technology in everyday teaching still face diverse challenges in using computer technology and recently introduced platform such as the LMS. Discussing every single aspect of the results obtained from the questionnaires and end of module feedback form can be a lengthy process. I am therefore going to discuss the main aspects and the issues that have played a major role at the significance of the LMS as well as the hurdles encountered in the process of implementation. The discussion part will also shed light on whether the persistent problems with the LMS and the ebb and flow of the system, were due to technical (LMS by Oxford University) or organizational (LMS at ELI)?

The ELI has a Professional Development Unit (PDU), which works in collaboration with the administration and the faculty members at the ELI. The PDU regularly arranges events and activities by utilizing voluntary support of instructors and coordinators at the ELI. These events include workshops, presentations, training sessions, formal classroom observations and end of module evaluations. The PDU at ELI has always strived for the professional development of instructors at the ELI as well as empowering their teaching skills. Similarly, the LMS team had arranged workshops and training sessions for the instructors whose skills were insufficient at using the LMS, during their non-teaching hours. The aim of these workshops and training sessions was to offer practical guidance and instructions to the instructors, on how to successfully implement the system.

Throughout the data analysis, it has been noticed that despite their excitement and interest at administering LMS for independent practice, the majority of the instructors' attitude is still held in reserve and perceive the implementation of LMS as a daunting task. The answers received from the open-ended questions of the instructors' questionnaires mostly refer to how important and useful the LMS has been and how disadvantageous it has been to face so many technical and functional problems.

Due to the frustration caused by the technical problems in the LMS, 33% of the instructors prefer to use handouts and printed materials or the students workbooks for assigning homework and independent language practice outside the classroom. In response to an open-ended question regarding the implementation of LMS for practicing the language with comparison to the distribution of printed materials, two of the instructors had commented in favour of printed materials. They had stated that the LMS is usually used outside the classroom and instructors are unable to supervise and monitor the students. Therefore, it is difficult to know whether the exercises have been completed by the students or a family member. Similarly, the weekly grammar and vocabulary quizzes which are distributed as hard copies, are done under the supervision of the instructor in the classroom.

83% of the instructors have provided positive and satisfactory responses to the questions concerning the assistance received from the support leaders at their campus. It can be interpreted from their responses that alongside a supervisor or support leaders' positive attitude to stimulate teachers' interest in the use LMS, it is equally important that the supervisor is knowledgeable, have practical skills and competences for the effective supervision concerning pedagogical use of new technology (Lamtara 2014, p.407).

Based on the results obtained from the present study, it appears that the majority of the problems with the LMS were related to the technical side of the system. Harris (2003) cited in Romiszowski (2004, p.19) approaches the issue of project failure very much from a technical vantage point. The implication is that the main reasons for the real world failure of such systems have to do with technical design aspect.

VII. CONCLUSIONS AND RECOMMENDATIONS

The present study will hopefully eradicate substantial technical and functional problems in the future, associated with English language teaching with technology. Minor technical problems will always exist in technology when used for teaching, but the main concern here is the major problems, which not only hinder the students' learning, but also wastes a considerable amount of time and money, especially at larger institutions. The present study could also be compared to previous studies where errors have been committed that have led to the lack of success of so many earlier technology-based educational innovations.

The recommendations part primarily refers to the absolute need for eliminating technical and functional problems from any technological source before it is sold to an organization and prepared for administration. This is the sole responsibility of the software provider to make sure that the package is flawless and appropriate for the organization, since the organization's responsibility of training its instructors and providing resources for the effective use of LMS, comes subsequently.

REFERENCES

- [1] Ali, B. (2013) 'Teachers and Students Views of Technology in Saudi Arabia', An English Language Teaching Periodical from TESOL Arabia 20(1), pp. 34-36.
- [2] BERA (British Educational Research Guidelines) 2004.
- [3] Blake, R. J. (2008) *Brave New Digital Classroom: Technology and Foreign Language Learning*. Grangetown University Press, Washington.
- [4] Denscombe, M. (2007) *The Good Research Guide for Small-scale Research Projects*. 3rd Edition. Maidenhead, OUP.
- [5] Egbert, J. (2005) *CALL Essentials: Principles and Practices in CALL Classrooms*. TESOL INC.
- [6] Ezza, E. Y. and Bakry, S. A. (2014) 'Technology – Enhanced Instruction in a Saudi EFL Classroom', Arab World English Journal, Special Issue on CALL (1), pp. 55-66.
- [7] Hanson-Smith, E. and Rilling, S. (2013) *Learning Languages Through Technology*. TESOL Press.
- [8] Healey, D. Hanson-Smith, E. Hubbard, P. Ioannou-Georgiou, S. Kessler, G. and Ware, P. (2013) 'TESOL Technology Standards Framework' The Internet Journal of TESOL Technology Standards, [Online]. Available at: www.tesol.org/docs/books/bk_technologystandards_framework_721.pdf?sfvrsn=2 (Accessed: 17 January 2015).
- [9] http://en.wikipedia.org/wiki/Technology_integration (no date) (Accessed: 20/01/2015).
- [10] <https://www.mindflash.com/lms> (2015) (Accessed: 22/08/2015).
- [11] National Educational Technology Standards for Students: Connecting Curriculum and Technology (2000), International Society for Technology in Education, Eugene, OR.
- [12] Lamtara, S. (2014) 'Teachers' ICT Practices: A Case Study of Moroccan EFL Teachers', Arab World English Journal, 5(4), pp. 398-410.
- [13] Malek, A. S. (2013) 'Technology in Education: Problem or Solution?', Arab World English Journal, 4(3), pp. 172-182.
- [14] Riaz, S. (2013) 'Technology Use in the Classroom', Arab World English Journal, 4(3), pp. 300-307.
- [15] Romiszowsky, A. J. (2004) 'How's the E-learning baby? Factors Leading to Success or Failure of an Educational Technology Innovation', Educational Technology, 44(1), pp. 5-27.
- [16] Tuzlukova, V. (2013) 'Language Teachers' Perceived Computer Self-efficacy: Identifying Knowledge and Skills Gaps for Teacher-driven Professional Development', Arab World English Journal, 4(3), pp. 284-299.
- [17] Wardak, M (2014) 'Native and Non-native English Speaking Teachers' Advantages and Disadvantages', Arab World English Journal, 5(3), pp. 124-141.