Blog-mediated learning strategies impacts learner autonomy in the ESL context

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ABSTRACT- In higher education teaching, improving learner autonomy in technology integrated context specifically in the ESL class has become a keyconcern for curriculum planners and classroom teachers. Thus, the current research explored the effects of the blog-mediated learning strategies and their applications on students' autonomy in the ESL context among Pakistani engineering university undergraduates. This quasi-experimental research was conducted on (n=64) students in two intact ESL classes. The quantitative data was collected through the questionnaireprior to and after the intervention. The findings of the research revealed that blog-mediated learning strategies helped the engineering students' in enhancing their autonomy in the ESL context. The study suggested that there should be a blog- mediated learning strategies and courses, should be in curricula design, teaching, and learningblog- mediated learning strategies in teaching training programs because suchmodules are appropriate to authorize students and they become able to monitor their own learning in an ESL context. The study further recommends that there must be more opportunities forstudents' involvement, providing thema student-centeredlearning environment and manage to design group activities to stimulatemotivationand interest of the students for reading.

Keywords: Blogging, ESL context, learner autonomy, learning strategies, Pakistani engineering students.

I. INTRODUCTION

Teaching and learning a second language is a comprehensive procedure, which requires learners' attentiveness and alertness to deal with its various aspects confidently on their own. For attaining that goal learners need the ability, skills, and courage to make decisions related to their learning (Chan, 2010a). Being an autonomous learner and self-driven learner, one requires to be responsible enough to deal with the learning, check and monitor the process and progress,must know the employment of strategies and techniques of language learning, and can critically assess his learning, it means one should be actively involved in the process of language learning(Lee, 1998).

21st century's learners want to be self-directed and are needed to be innovative in learning they want to take charge of their learning and they are needed to be involved in an online learning environment (Coffman & Klinger, 2007), because technology is the voice of a current era and the term 'digital reading' is devised in the early millennial years with the growing reality of Internet entrée with the different text forms and variety of reading tools (Baharuddin & Hashim, 2020).

For learning, the learner needs to modify learning strategies by taking independent decisions as strategies unlock entries to academic learning and major aspects of human communication so they make a learner responsible enough to direct his learning(Oxford, 2016). Furthermore, to make the process of learning easier learner implies meaningful strategies to foster self-regulated learning, and those learning strategies and autonomy are closely related to each other hence, autonomy promotes the use of learning strategies and the use of learning strategies enhance learner's autonomy. Engineering students in Pakistan have low levels of learner autonomy in the ESL context due to less exposure, demotivation, lack of trained teachers and programs, less time of practice, lack of technology usage in ESL context, authoritative method of teaching does not promote psychological autonomy and learning strategies to enhance learning in an ESL context (Farhat & Dzakiria, 2017; Zahid, 2017; Shamim, 2008; Khokhar, 2016).

Thus, the current study explored the learners' blogging mediated usage of reading learning strategies to improve learners' autonomy in an ESL context.

II. REVIEW OF RELATED LITERATURE

Language learning strategies in the ESL context

Self-directedlearningispossible by learners by usingappropriatefoundations (e.g. content, rhetorical features, and conventions) by usingproper learning strategies, whichis an actual mechanism concerninglearning(Bai & Wang, 2020). The learners' usage of language learning strategies helps them to make learning according to their ease, and learning becomes faster, more pleasurable, self-directed, effective, handy to use in novelconditions (Oxford, 1990). Foreign language learning strategies are the activities, practices, and dynamic involvement of learners (Ellis & Simpson-vlach, 2008). Learning strategies are metacognitive endeavorsthat include activities such as planning, organizing, evaluating, and monitoring, which learners use by cognitive help in learning reading(Oxford, 2016).Oxford states thatlanguage learning strategiesenable learners to authorize their learning confidently by helping themselves and they can improve their learning. A taxonomy developed by (Oxford, 1990) based on language learning strategies is comprising six categories of direct and indirect strategies. Cognitive strategies are used to comprehend and produce the target language and involve the essential processes of practicing, getting, and transferringcommunications, analysing, and generating structures for input and output.Memory strategiesaids inmemorizing and recovering new information. Affective strategies, metacognitive strategies, and social strategies help in learning indirectly but powerfully. Metacognitive strategies assist to manage the learning procedure by properly arranging, planning, focusing, and assessing learners' own language learning. Affective strategies enable learners to regulate and controlemotions, i.e.: anxiety, inspiration, and negativities (Oxford, 1990).

Learner Autonomyin the ESL context

Autonomy has been researched in several ways concerning languagelearning. Themost often quoted definition is that of Holec (1981), who definesautonomy as the ability to take charge of one's own learning'. That is, to have and to hold, the responsibility for all the decisions concerning all aspects of this learning. According to (Chan, 2010b) the autonomous learner is thus expected to develop the ability to take charge of every stage of his/her own learning including:

- Arrangement of the goals/ objectives
- knowing and evolving learning strategies to attain such goals
- evolvingand enhancing plans
- Giving expression on learning (which includes identifying problem areas and means of addressing these problems)
- classifying and choosing pertinent resources and support
- Measuring one's own improvement (which includes defining criteria for evaluating performance and learning).

Learner autonomy has been a broadly discussed notion in the ESL teaching context in past it was only discussed in politics and philosophy (Guilherme, 2007). In the 1960s it was first

introduced in the ESL context since then it provided considerable effects thus, it was followed and discussed."The ability to keep learning when teaching stops" became the idea which propagates autonomous learning (Alm, 2006). Autonomous Learning is to be started in anextensivediversity of actionsfor example the capability for disinterest, critical reflection, managerial aptitude, and self-directedreproduction. Autonomous Learninginvolves a constructive attitude to the purpose and content. Psychological autonomy remained to be well-related to English learning accomplishments (Little, 2007; Vickers & Ene, 2006). Thus, English instructors have been trying to fit their ways of teaching to promote the psychological autonomy of the students in ESL classrooms. According to (Ezzaidi, 2020) autonomous learning in a pedagogical philosophy denotes that, it must enhance the quality of all-time learning by emphasizing the learner's existence as an active learner in the teaching-learning process. Thus, enhancing an effective autonomy methodology and developing suitable and applied activities to fosterself-directed learning and encourage the instructor's presence as facilitator and guide has got considerable consideration in the applied linguistics' field since the early 1960s. (Ezzaidi, 2020).

Bloggingin the ESL context

With the expansion of internet technology, educators are continuouslylooking foradvancedapproaches to match the possibleimprovement of technology in the educational fields. Asthe current generation is "Generation Y"or "Echo boomers" or "Millenniums"these people are technology savvy (Christine Anne Haynes, 2017).(Fletcher, J., & Nicholas, 2018) suggested that, technological tools can help teachers to improve and entangle learners' attention, focus, motivation, and engagement by integrating them according to the learners' learning purposes. Thus, teachers and designers are involved in producingeasy ESL contexts that offer digital natives to get involved in the material provided and enable them to manipulate and modify the content into innovative understandings (Coffman & Klinger, 2007). There are

multiple ways to integrate technology into an ESL context so,blogging is one of the technological sources to expand communication skills it's a communicationplatform to develop learning (Harvil, 2018). A plethora of researches are thru earlier related to technology integration in the ESL context, which is not enough in this field (Liu et al., 2020), and there are numerous studies carried out on blogging in the ESL context, but reading comprehension is not discussed much (Yakut & Aydın, 2017). A social media tool blog is very much used as an educational tool in the ESL context with many benefits (Inayati, 2015). Blogs very supportive source in reading, when a learner critically asses his tasks during blogging, it assists to evaluate ideas by discussion (Fletcher, J., & Nicholas, 2018).

Thoughthe ESL learners in the Pakistani engineering context have a high tendency to take charge of their language learning, the level of learner autonomy is not encouraging because of the lack of learners' properly designed course which they can follow and do the activities by themselves. Thus, the presentresearch will examine the use of blogging mediated learning strategies that relate to ESL skills and contribute to the perspective of learner autonomy. The learning strategies will comprise the use of blog mediated learning strategies: cognitive strategies, memory, compensation, cognitive, metacognitive, and affective strategies by using bog mediated dictionaries, videos, audios, highlighter, images, and comments sections for interaction both in and out of the class.

Studies on Language Learning strategies and learners' autonomy

Self-regulation or a sense of implied agency and/or autonomy are considered the same and strategies are used by the learners in language learning(Thomas & Rose, 2018). According to (Dornyei & Ryan, 2015) applying learning strategies purposefully is more significant thanknowing only about the strategies or knowing about their characteristics. As learner autonomy discusses the real-world conditions and involvements of learning, where individual's individuality is the center of attention (Smith, 2008). Furthermore, learner autonomy is possibly be improved in EFL/ESL classrooms via foreign language learning strategies which may bring effective learning results(Belland et al., 2013). The paradigm shift of the roles of teachers as an authority to learner's individuality one major rationale that is consistent with the definitions of autonomy, i.e., the ability and readiness to act autonomously(Teimourtash, 2018). Many researchers have done work by linking language learning strategies and autonomywhich improves one's intent, strategic capacity, and overall learning (Oxford, 2016). Research on the association between language learning strategy and learner autonomy proliferates in the literature. Nevertheless, little number of studies have investigated the prospects of encouraging learners' autonomy and instructing them language learning strategies.

As the research conducted by (Iamudom, 2020)investigated the learner autonomy level concerning language learning strategies usage in EFL learners context in Bangkok. The findings of the study revealed, students had a higher level of learner autonomy along they employed language learning strategies positively. In the (Iamudom, 2020) view, if a learner performs effectively it is because he knows his abilities and strategies to perform well.

The study conducted by (Khonamri et al., 2020) identified the relationships among language learning beliefs, language learning strategies, and learner autonomy. This was mixed-method research with 177 EFL learners at the University of Mazandaran in Iran. The findings of the study portrayed that, language learning beliefs affected the learners' autonomy through the mediation of language learning strategies. But, the instruction of the strategies did not have any effects on the learners' autonomy but it helped in changing their language learning beliefs.

Besides, there are researches conducted concerning technology-integrated EFL/ESL context and language learning strategies along with learners' autonomy. The research by (Shih & Shih, 2020)attempted to explorethe comparison ofindividual and collaborative learning logs using Google Sheets' effect on learner autonomy in an EFL context in a private university in Taiwan. The findings demonstrated that learners' usedtheir metacognitive strategies in the logging procedure. In this process, students' improved their social interaction and their confidence with collaborative learning logs. (Shih & Shih, 2020).

Another study was conducted at Najran University in Saudi Arabiawhich explored learner autonomy through the explicit use of language learning strategies in the mobile-assisted language learning context. The data analysis revealed learner autonomy was improved in EFL class mediated by smartphones with language learning strategies (Abbas et al., 2017).

Besides, one other study investigated the effect of reading learning strategies mediated by smartphone features and applications on the learners' autonomy in Saudi Arabia. The findings of the study revealed that employment of smartphonereading mediatedlearning strategies promoted the learners' autonomy in EFL reading context(Abbas & Alzubi, 2019).

The study conducted by (Teimourtash, 2018) with Iranian EFL undergraduates examined the influence of training cooperative learning strategies in reading courses on the inferential reading ability of EFL

learners. The quantitative and qualitative analysis established that cooperative learning strategy training influenced positivelystudents reading comprehension ability.

Besides, the study conducted in a Pakistani university by (Butt et al., 2019)acknowledged the foreign language learning strategies are not a knownphenomenon for university students. Thus, through alearner-training program, a foreign language learning strategy was designed and conducted with 50 EFL students to foster learner autonomy. The results received by the study demonstrated the positive effects of the foreign language learning strategies' program in enhancinglearner autonomy. Hence, there is a great need to investigate further this issue with the integration of social media networks like blogging in the ESL context concerning the learning strategies and learners' autonomy thus, this study has aimed to explore this idea.

The present study will address the following research question:

• Is there any significant effect and relationship between the use of blog-mediated learning strategies and learner's autonomy among Pakistani engineering undergraduates in the ESLcontext?

III. METHODOLOGY

A quantitative research approach was applied in the current study sequentially by administrating the prequestionnaire and post-questionnaire to collect the data. The questionnaire was based on the usage of blog-mediatedlearning strategies which affects the engineering students' autonomy prior to and later the intervention the ESL context.

Data Collection Procedure SAMPLE FOR THE STUDY

The current study involved engineering undergraduates enrolled in the computer system engineering department(first year) at Mehran UET Jamshoro, Pakistan.Annually, around 10000 students by by attempting the pre-entry test conducted by the university. Thus, purposive sampling was used in the current study to choose the sample. The two intact classes of 64 students: 32in the experimental group and 32 in the control groupbecame part of the current study. The engineering students of the current study are homogeneous in terms of their educational background (science stream), age (18-20), language learning (English), and level (first semester and first year). The researcher being a teacher in the same university teaches the English language thus, she is aware of the control group process of learning also, thus, by making sure that respondents in the control group do not getblog-mediated learning strategy coursein the ESL classes. Whereas, the questionnaireswere administered in the control group class also.

INTERVENTION COURSE

AnEnglish language course was designed on the blog by the researcher and conducted with the participants of the experimental group. A qualified teacher from the English department was trained and then she conducted the blog-mediated course for the experimental group. The experimental group was involved in the course on how to uselearning strategies via blogging concerning the handouts/printed material. The course was administered with 8 sessions. In these sessions, the participants read 8 units related to English language skills designed by the researcher to know the learners' learning strategies: (cognitive, memory, metacognitive, compensation, and affective) in the ESL context mediated by blogging.

INSTRUMENT

The blog-mediated learning strategies in an ESL context with the perspective of learner's autonomy are discussed in the questionnaire. A pre-questionnaire and post-questionnaire were used to collect the data as the pre-questionnaire was administered prior to the intervention in the first week with both groups (experimental and control) and post-questionnaire after the intervention. According to the variables of the study, learner's autonomy and learning strategies' items were designed.

RELIABILITY & VALIDITY OF INSTRUMENT

Factor Analysis and Cronbach's alpha was conducted to check the reliability and validity of the instrument. By using Pearson Correlation to validate the items related to the learner autonomythe level of significance was $(0.01^{**}, 0.05^{*})$. After the factor analysis, the questionnaire was administered for piloting (n= 32) with those students who were not part of the actual study. Thus, the results of Cronbach's alphawere.94.

IV. FINDINGS

There were 64 students registered in the two intact reading classes i.e., 32 students in each group, and accomplished the pre-learning strategies and Autonomy questionnaire prior to the intervention.

Research Objective: To know the significant effect and relationship between the use of blogmediatedlearning strategies and learner autonomy among engineering students in the ESL context. Prior to the interventional program, students used thelearning strategies and autonomy shown in the following table (Table 1).

				gies and Auton	оту Que			
Learning Strategies	Group	N	Mean	St. Deviation	t	df	Sig. (2-tailed)	St. Error Difference
Cognitive strategies	Experimental Control	32 32	2.52 2.43	.671 .637	.554	6 2	.581	.164
Memory Strategies	Experimental Control	32 32	2.69 2.65	.636 .600	.318	6 2	.752	.155
Affective strategies	Experimental Control	32 32	2.67 2.68	.621 .579	- .104	6 2	.917	.150
Compensation strategies	Experimental Control	32 32	2.84 2.72	.991 .577	1.66	6 2	.102	.224
Metacognitive strategies	Experimental Control	32 32	2.84 2.67	.594 .621	- .878	6 2	.383	.146
overall strategies	Experimental Control	32 32	2.51	.601	.331	5 2	918	.122
psychological autonomy	Experimental Control	32 32	2.612.802.84	.472 .655 .214	- .282	6 2	.669	.128

As above mentioned Table 1 shows the findings that there are no significant differences in the scores of learning strategies between the experimental group (M=2.51, SD=0.601) and the control group (M=2.61, SD=0.472): t(52) = -.331-, p=0.918 before the intervention. Another aspect shown in the table 1 is that there are no any statistically significant differences exist in the scores of learners' autonomy between the experimental group (M=2.70, SD=0.655) and the control group (M=2.84, SD=0.214); t(62) = -.282-, p=.669 respectively. These findings reveal the homogeneity between both groups: experimental and control before the intervention. Hence, both groups: experimental and control experience an equivalent usage of reading learning strategies and psychological autonomybefore the intervention and confirms the groups' homogeneity.

Furthermore, the data analysis of the post-learning strategies and autonomy questionnaire was carried out by "One-way ANOVA" which is mentioned in the following Table 2.

Table 2Post-Learning Strategies and Autonomy Questionnaire

Learning Strategies	Group	N	Mean	St. Deviation	t	df	Sig. (2- tailed)	St. Error Difference
Cognitive strategies	Experimental Control	30 29	3.78 3.07	.588 .423	5.26	5 7	.000	.327

metacognitive strategies Experimental Control 30 3.27 .529 3.09 .552 1.28 5 .205 7 .028 .028 Memory Strategies Experimental Control 30 3.96 .326 .363 .326 7 .80 5 .000 .516 .516 Affective Strategies Experimental Control 29 3.26 .363 .363 7 .7 .000 .378 Compensation Strategies Experimental Control 30 3.96 .645 .385 7 .000 .378 .385 7 .000 .397 Overall strategies Experimental Control 30 3.92 .464 .327 7 .7 .464 .327 7 .000 .397 Autonomy Experimental Control 30 3.78 .325 .327 .3219 .219 .7 9.67 5 .000 .622 .000 .622 .7 Autonomy Experimental Control 30 4.08 .477 .219 .7 7.66 5 .000 .000 .7								
Strategies Control 29 3.26 .363 7 Affective strategies Experimental Control 30 3.96 .645 5.88 5 .000 .378 Compensation Strategies Experimental Control 30 3.92 .464 6.12 5 .000 .397 Strategies Control 29 3.28 .327 7 7 overall strategies Experimental Control 30 3.78 .325 9.67 5 .000 .622 Autonomy Experimental 30 4.08 .477 7.66 5 .000	-	-			1.28	.205	.028	
strategies Control 29 3.14 .385 7 Compensation Strategies Experimental Control 30 3.92 .464 6.12 5 .000 .397 overall strategies Experimental Control 30 3.78 .325 9.67 5 .000 .622 Autonomy Experimental 30 4.08 .477 7.66 5 .000	•	-			7.80	.000	.516	
Strategies Control 29 3.28 .327 7 overall strategies Experimental Control 30 3.78 .325 9.67 5 .000 .622 Autonomy Experimental 30 4.08 .477 7.66 5 .000		•			5.88	.000	.378	
Control 29 3.17 .219 7 Autonomy Experimental 30 4.08 .477 7.66 5 .000	•	•		_	6.12	.000	.397	
	overall strategies	•			9.67	.000	.622	
	Autonomy	-			7.66	.000		

The above-mentionedTable 2 indicates that 76% of the participants in the experimental group usedlearning strategies mediated blogging (M=3.78, SD=.325) compared with 63% in the control group (M=3.17, SD=.219) who used the traditional method of learning strategies. Additionally, Table 2 also indicates that 82 % of participants in the experimental group (M=4.08, SD=.477) have improved their autonomous constructsmore than the control group (M=3.31, SD=.250) with 66%. Thus, the use of reading learning strategiesby the experimental group they used bloggingin ESL context compared with the control group they learned through traditional methods verified to be significant (t(57) = 6.060, p=.000). Furthermore, cognitive strategies, memory strategies, affective strategies, and compensation strategies scores were having significant differences at the level of (.000). Though, metacognitive strategies could not show any significance (t (57) =1.282, p=.205). Moreover, Table 2 shows that learners 'autonomyshowed to have significant differences related to the experimental group (t (57) =7.664, p=.000) after the intervention. Engineering students in the experimental group were able todefine the learning contents by identifying the learning goals and objectives. The participants of the experimental group were able to arrange and plan to learnsuccessfullyby defining appropriate methods and practices. Moreover, they enhanced their monitoring ability to check their errors and mistakes and were able to evaluate their growth in reading learning. Engineering students of ESL class utilized multiple ways to process the knowledge. Thus, it is a solidsign of how language learning strategies play a part in enhancing engineering students' autonomous learning features.

V. DISCUSSION

The results of the current study have shown that the intervention on blog-mediated learning strategies hasfacilitated learners to use learning strategies on their own. Learners learned how to store and regaininnovative information and observe and reproduce information on their own. They understood how to overcome language gaps and do their activities. Additionally, they made decisions of their learning by setting goals and objectives of reading tasks, they were able to correct and rectify their errors, they could monitor their language learning in the ESL context. Moreover, they have learned how to control their feelings and attitudes towards language learning. The learners' development in the use of reading learning strategies has encouraged their autonomous learning characteristics of learner's autonomy. Learners likedto use a blog- mediated learning strategies in and out of the class. They become able to manage their learning on their own in the ESL context, and they enhanced their desire and wish to learn more for meaning.

The findings are aligned with manyresearchers reported on the association between language learning strategies and learner autonomy in the ESL contextsuch as Butt et al., 2019; Teimourtash, 2018; Abbas & Alzubi, 2019; Abbas et al., 2017; Shih & Shih, 2020; Khonamri et al., 2020; Iamudom, 2020where learners'

learning strategies has encouraged their learning autonomy towards learning a second language. As (Bai & Wang, 2020) emphasized the relationship between language learning strategies and autonomy in the ESL context learners employ, the higher levels of ability, responsibility, and activities they enjoy. Thus, participants who use language-learning strategies integrated technology (blogging) more frequently would show a sign of learners' development in the level of language learning autonomy.

VI. CONCLUSION AND RECOMMENDATIONS

The present researchconductedthe blogging mediated reading course's intervention on reading learning strategies usedin an ESL context, in which learners learned to tackle all learning processes of reading skills vis- a- vis information storing, recovery, perception, construction, monitoring, assessment, emotional state, and attitudes on their own. Blogging mediated the course and its applications enabled the learners to use reading learning strategiesin and out of the class. The learners' enhanced their learning strategies usage through blogging regardless of place and time which was correlated positively with their learning and learners' autonomy. The conclusions of the study can serve as a strong foundationfor further activities by using blogging in an ESL learning context and its applications inside and outside the class. The designers of the courses can inculcate the integration of technology in terms of blogging in their future courses. The findings of the presentresearch have provided a clear picture of how university authorities can explicitly use the strategies mediated by blogging which can affect the ESL learners' autonomy.

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