

Fostering Learner Engagement through Web Based Instruction: A Qualitative Approach

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Abstract

This evidence-based study investigated the efficacy of the web based tool ‘Pinterest’ for teaching argumentative writing at the tertiary level. Principles of authentic learning are applied in this study. Two groups of ESL learners (n=28), 14 students as control group and 14 students as experimental group, participated in the study. A true experimental design was adopted. The control group was exposed to traditional instruction and the experimental group was exposed to web based instruction using Pinterest. The performance of both groups was analysed using paired T-Tests. The results revealed a discernible improvement in the performance of the experimental group. Finally, recommendations for efficacious integration of technology are enlisted. Despite many studies investigating the positive effects of web based instruction none of the studies till date have examined the efficacy of Pinterest for writing instruction.

Keywords: Authentic learning, usefulness of Pinterest for instruction.

Introduction

“Engineering is certainly a field where proficiency in written communication is valued” (Shuman 41). Though evaluation systems are based on writing skills the teachers at tertiary level do not attach much importance to it. Peter Elbow remarks that writing well is a complex, difficult, and time-consuming process. (p.3). It is indeed challenging to teach writing. Teachers at tertiary level should find ways and means to make writing instruction as engaging as possible. Writing classrooms aren’t stimulating because the pedagogical practices

and the tools used for teaching writing are traditional. The only way to make writing more interesting is by engaging the learner using multimodal input. Galbraith, and Rijlaarsdam, state that the traditional approach of instructing students to write by subscribing to grammatical conventions and by following old models is replaced by inclusion of cognitive activities (93).

Usefulness of Web-based Tools for Student Learning - Pinterest

Research indicates that web-based tools can support student learning, specifically the development of critical reading skills and the ability to evaluate online texts, and provide opportunities for students to write texts for authentic purposes (Handsfield, Dean, & Cielocha, 2009: p 50). Weller (2011) states that new technologies can optimize learning. In this changing landscape of language teaching ‘Pinterest’ is a viable tool for teaching writing. Hubbard (2005) in his review on subject characteristics in CALL research remarks that the standard of research and reporting in call is deplorable. (p.355) Echoing the same sentiment, Stockwell (2007) observes that, despite a growing number of studies on CALL literature none of them has clearly articulated as to why the technology was incorporated to achieve the outcomes. (p.115) According to him clear documentation of what is used why it is used and how it is used need to be stated. This study articulates the why and how of using ‘Pinterest’ to achieve the learning objectives.

Theoretical Base

The principles of authentic learning are applied in this study. The proliferation of ICT tools has made authentic learning possible. The instructor’s attitude towards technology is the greatest challenge at all levels. According to Lombardi, “Colleges and universities across the country are turning to authentic learning practices and putting the focus back on the learner in an effort to improve the way students absorb, retain, and transfer knowledge”.(p.4) Reeves, Herrington, & Oliver, encapsulate the essence of authentic learning in to ten elements. These elements should be given primary importance during the design of tasks. They are crystallized here. They are i) real world relevance, ii) well defined problems iii) sustained investigation iv) analyzing multiple sources and perspectives v) collaboration vi) reflection vii)

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interdisciplinary perspective viii) integrated assessment ix) polished product and x) multiple interpretations and outcomes. These ten elements were used as a check list during the design of tasks. The study basically answers the question, how does Pinterest support authentic learning? The research question that guided the study is, to what extent will there be an improvement in the writing skills of the learners who are taught writing skills using 'Pinterest' compared to the learners who are taught using traditional methods?

In alignment with the research questions the hypothesis was framed as “Teaching Writing using Pinterest will foster better learner engagement and lead to enhanced writing skills.

Methodology

The participants of the study are students of II semester Computer science engineering from B.S.Abdur Rahman University, India. The study was conducted during a course in a written communication. 28 samples were taken for the study. The students were selected using simple random sampling. True experimental design was adopted. There was a control group and an experimental group. Before the teaching phase both the control group and the experimental group were given a pretest on the topic Global warming. The objective of the pretest was to ensure homogeneity between control and experimental group. After the instructional phase both the groups were supposed to write an argumentative essay. A randomized pretest-posttest control group experimental design was employed in this study in order to make a comparative analysis of test scores and thereby understand the efficacy of web based instruction. Another reason for choosing experimental method is to make an objective analysis. According to Kirk, The primary goal of an experimental design is to establish a causal connection between the independent and dependent variables. A secondary goal is to extract the maximum amount of information with the minimum expenditure of resources. (1-2) these goals are met with in this research.

Informed consent was obtained from the participants. Flory James and Ezekiel (2004) remark that the research participants may frequently not understand information disclosed to them in the informed consent process. (pg.1) so, the objectives and outcomes of the study were clearly explained to the participants.

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Phases of the Study

The control group was exposed to traditional instruction. The teaching materials were confined to black board, text books, newspaper clippings and visuals pertaining to the topic. The control group was exposed to scaffolding activities such as brainstorming, group discussions and, tasks on context specific vocabulary. For the experimental group the scaffolding activities were initiated using web based instruction. The tool used was 'Pinterest.

Rationale for Using Pinterest

Pinterest is a digital bulletin board where visuals, videos or audios can be pinned. It is user friendly and has an easy interface. Creating an account is a simple process as the user can sign in with an e mail or a face book account. Navigation is easy and users can choose their favourite category. It helps the user to embed authentic materials and organize content. Editing the pin board is easy using edit board options. Commenting and sharing the pin with others makes it a collaborative interface. Real learning takes place beyond the classroom.

Pedagogical Practice Using Pinterest

A video clip from you tube pertaining to the topic cloning is pinned in the wall. The need for the topic was clearly defined. Previewing questions were asked. The time frame of the video was approximately 4 minutes. The students were put in small groups. After viewing they were asked to debrief what they witnessed. Visuals on cloning were also pinned in the wall. There was a visual brainstorming activity. The students were asked to collaborate on the pin boards and comment on the content. As a follow up activity they were asked to add appropriate content in the form of visuals, videos, podcasts and web links to the digital board. They were told that the best contributions will be awarded. A sample screen shot of Pinterest is given below.

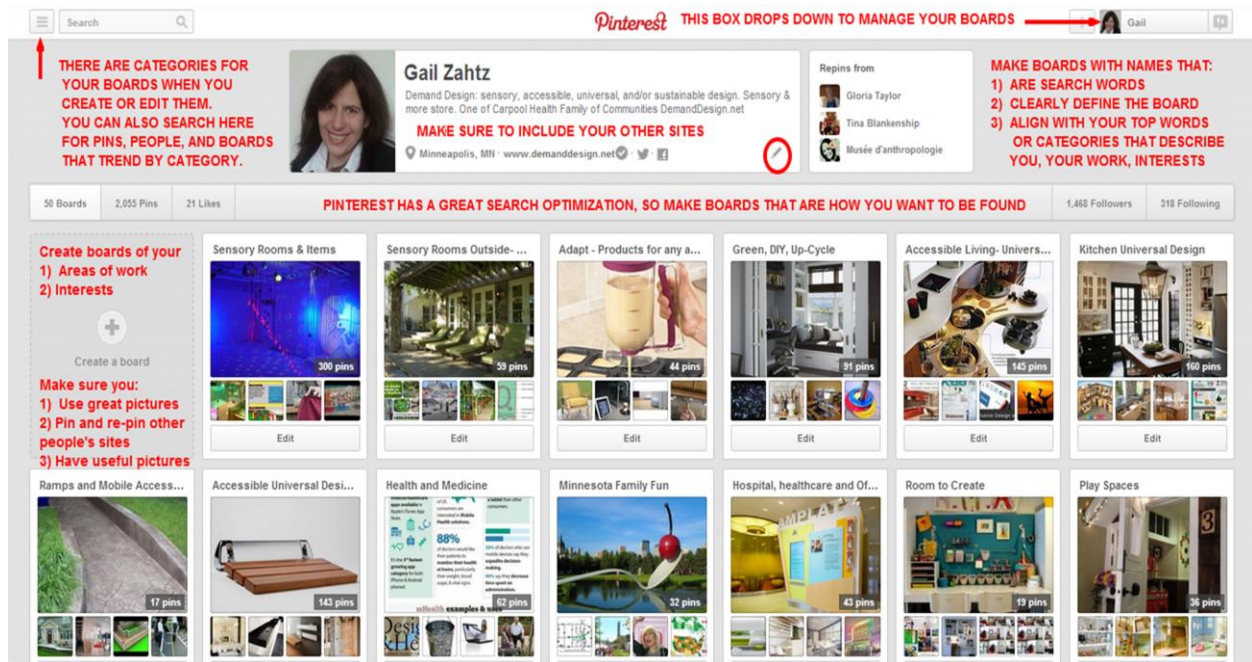


Fig-1 screen shot of Pinterest Source: Gail Zahtz (2013)

Evaluation Phase

After the prewriting activities both the groups were asked to write an argumentative essay on 250 words on the topic “Genetic cloning is unethical “ It needs to be reminded that the pre writing activities of the control group was restricted to blackboard , text books and visuals. On the other hand the experimental group were taught using ‘Pinterest’. The quality and quantity of content of both groups were analysed. Other aspects of writing such as cohesion and coherence, lexical resource and grammatical resource were not evaluated as holistic evaluation is beyond the scope of this paper.

Tabulation of pre-test and post-test marks of control and experimental group.

S.NO	Pre-test Control Group	Post- test Control group	Pre-test Experimental group	Post-test Experimental group
1	4	4.5	4	6.5
2	5	6.5	4	6
3	4	4.5	5.5	7
4	5	5	5	5
5	2.5	3.5	3.5	6
6	5	5	5.5	7
7	5.5	7	5	7.5
8	4	5	4.5	6
9	2	3	3.5	6
10	3	3	4	5.5
11	2	3.5	2	4
12	4	5.5	3.5	6
13	4	5	4	6.5
14	6	5	5	7
Total	56	66	59	86

Mean	4	4.7	4.2	6.1
S.D	1.25	1.18	0.95	0.90
Median	4	5	4	6
Mode	4	5	4	6

Table: 1

Table 1 indicates the tabulation of marks .The maximum marks allotted is 10 marks and the minimum weightage is 1 mark. Rows 2 and 3 indicate the pretest and post test marks of the control group and rows 4 and 5 indicate the pre and post test marks of the experimental group.The last five columns indicate the overall aggregate,mean,standard deviation,median and mode.

Graphical Representation of the Test Performance

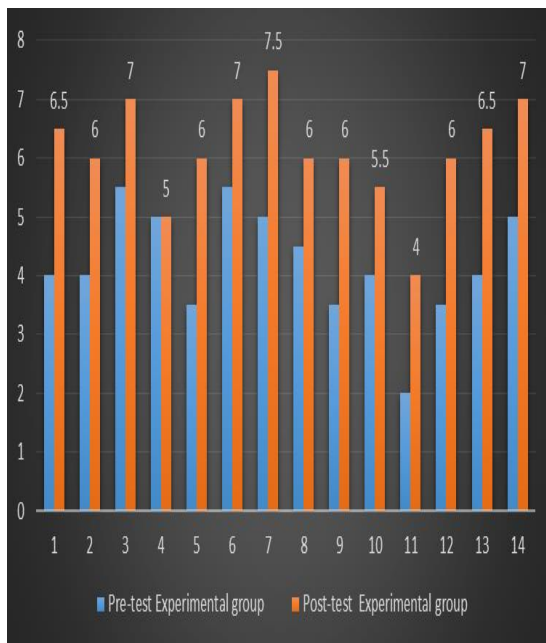


Fig-1

Fig-2

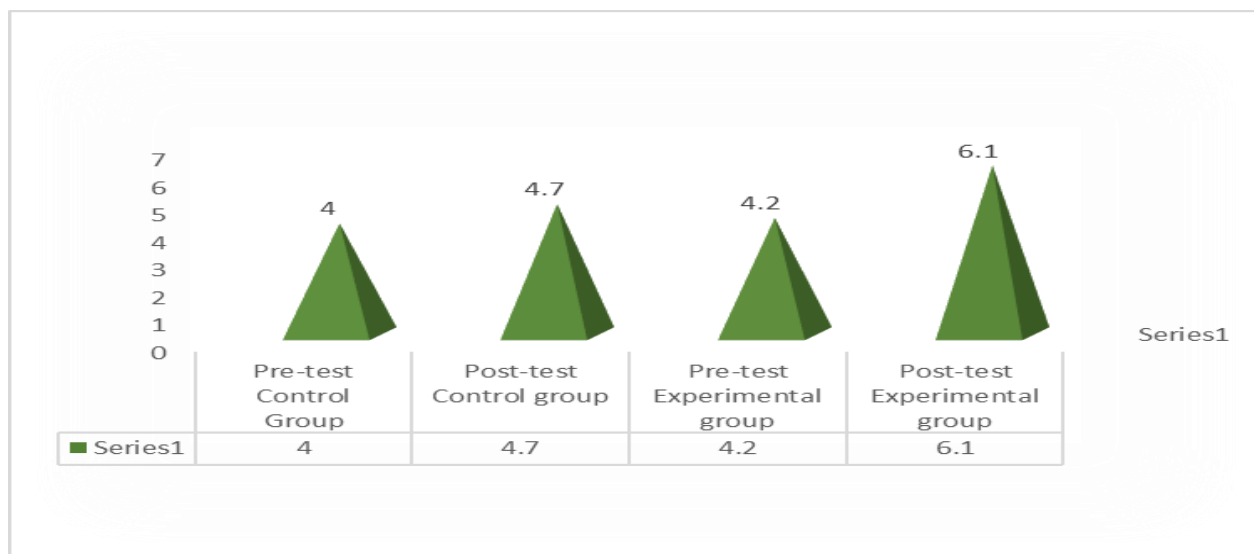


Fig-3

The bar chart in Figure 1 indicates the comparison of pretest and post test of the control group. It is evident that the post test scores of the control group is higher compared to the pretest. Figure 2 represents the comparison of pretest and post test of the experimental group. The post test scores are much higher in the experimental group. Figure 3 represents the mean scores of both the groups. As the mean values in the post test of the experimental group is much higher it could be ascertained that web based instruction during pre-writing stages is efficacious than traditional instruction. However, the mean values alone cannot ensure the test validity. Hence a paired sample T test is conducted using S.P.S.S. (Statistical package for social sciences) version 20. The results of the paired T test is tabulated below.

Tabulation of Paired 'T' test

Two sampled t-test	Control group	Experimental group
T-Value	-1.5237	-5.4325
Two tailed P-Value	0.1397	< 0.0001

Degrees of freedom	25.9141	25.9244
95% Confidence Intervals	Upper 0.2445 Lower -1.6445	Upper -1.181 Lower - 2.619

Table-2

The t value of experimental group is much higher. The alpha value was set as (<0.5). The two tailed P value of the control group indicates that the test scores are not statistically significant as it is above 0.5 alpha level. The degrees of freedom as well as the confidence intervals indicate a discernible difference between the control and the experimental group. Based on the analysis of t test it could be concluded that there is no statistical difference in control group whereas the difference in the experimental group is statistically significant. In other words the two tailed p value indicates that the experimental group has outperformed the control group. There were no statistically significant differences at .05 level for the control group and there were statistically significant differences at .05 level for the experimental group. Hence, The hypothesis that “Teaching Writing using Pinterest will, foster better learner engagement and lead to enhanced writing skills is proved.

Conclusion

The proliferation of multimedia tools have changed the landscape of English language teaching. Choosing the right tools and integrating it seamlessly is the greatest challenge facing the language teachers today. Since Pinterest is user friendly it will be a productive tool for writing. It will engage the learners throughout the writing process and augment their writing skills. The major limitation of the study is its small sample size. Based on this study one cannot generalise that web based intervention is effective than traditional instruction. Further studies at a macro level is needed to investigate the efficacy of such tools.

Recommendations for Efficacious Integration of Technology

Technology should be supported by effective pedagogy.

Design of multimedia tasks should be in alignment with strong theoretical background.

The principles of authentic learning could be applied during ICT integration for better learning outcomes.

Students should be given pretraining on the web based tools used in the classroom.

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