



RESEARCH PAPER

Using Placebos in Language Teaching: A Case Study of ESL Classroom

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ABSTRACT

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The research aims to highlight the significance of producing the positive self-perception of the second language learners to improve their performance and efficiency in the language classroom. It is observed that appreciation of learners increases their confidence and motivation level. Similarly, the psychological notion, named placebo effect has been studied for this research to see how self-image of a student and an encouraging stimulus by a teacher can lead to an improved performance of the learner or not. The placebo effect is predominantly discussed in medical research and practice, but now, this study investigates this psychological concept exclusively in the English language classrooms to evaluate the performance of ESL learners. In this experimental research, two groups of students were involved as control and experimental groups. In the experimental group, all the psychological strategies were applied. In the second group of students, called the control group, all instruction material remained the same as it was for the first group. This experimentation of teaching two groups of learners was guided by two objectives. First, to determine whether the placebo effect is truly suitable in ESL classrooms in improving the learning abilities. Second, is it workable to extend these psychological strategies to other fields? The exploration not only answered the questions encouragingly and validated the claims, but also paved the way for the wider spectrum of educational research.

Introduction

The human abilities like language learning can be enhanced using the psychological tactics, reshaping the self-image of the students (Shahid, 2018). The placebo effect is a psychological phenomenon, in which the receiver of a (medical) procedure feels a betterment in the condition due to her/his own perception and beliefs, instead of the procedure itself (Kirsch, 2019). The word placebo is originated from Latin, meaning "I shall please". Today, this conception is extensively studied

and practiced in the medical field, and it is a significant procedural tool in research and practice. A placebo is a type of treatment or a substance which actually does not affect therapeutically. A person is given a placebo to persuade him/her, to consider that it is an appropriate and authentic treatment. It is very common in medical research to treat a patient using the placebo to get the maximum results from these newly formed drugs. This technique is usually proved as an effective way to deal with the issues. The studies have shown a strong correlation between the person's expectations about the effectiveness of the treatment and the ultimate results obtained. The stronger feeling about the efficacy of the treatment lead to the positive effects of the treatment. Further to this, the effective communication between the patients and the health care provides enhance the positive effects of the medicine on the patient's life. Psychological appreciations help in enhancing the motivation level and self-confidence of learners by affecting their thoughts, emotions and feelings (Beauregard, 2007).

In this study, the psychological conception of placebo is taken from the medical field for exploring in the language classroom, where the students are given certain behavioral placebos to boost their morale and self-esteem (Hyldgaard, 2020). It is to be tested whether this strategy can improve their language skills or not.

The Nocebo effect is the opposite of placebo effect in the way that it occurs when a negative outcome is predicted. The person under treatment believes that the specific treatment or event will lead to a negative outcome. The person's beliefs about the negative effects of positive effects of the treatment of phenomenon help in ameliorating the patient's condition or making is worse.

In this study, the Nocebos or the negative beliefs and perceptions were lessened, so that learners do not restrict their capabilities simply because of their own perceptual limitations (Wang et al., 2019). Any experience, whether new or previous, that might have caused any student to have negative feeling about his/ her performance was replaced with a positive self-concept and high expectations.

Literature Review

Several research attempts have been made to streamline the notion of the placebo effect into the educational spheres through different dimensions. These studies either discuss the matter either from the perspective of educational psychology or in the way of behavioural understanding. The area of language teaching is still less touched upon in this regard.

Fake praise can act as a placebo to facilitate student learning and growth. As a teacher, we can generously praise our students instead of pointing out their mistakes. This can encourage them to speak more in class which is a decisive factor for improving language (Cook, 2000; Harris, 2012). It is a fact that praise stays longer in human memory, and we mostly remember the teachers who gave praise rather than criticism. Enabling students to feel that they are improving can have a placebo effect that can have a real impact on student learning in the long run (Kamali, 2021).

The placebo effect is not just applied to medicine, it can be extended to anything or anyone, practically. For example, a player performs better after taking an "energy" drink, and people think that expensive wine is better in tastes than the

cheaper wine. The placebo effect can also influence stress-related conditions such as test taking. The placebo effect, as a psychological response, is capable of triggering both positive and negative affect. The negative side of the effect is termed as the nocebo effect (Wang et al., 2019).

In a similar study, the experimental results, investigated with a paired-samples t-test, revealed that the subjects' creativity - as determined by the RAT test - improved significantly after the placebo procedure. Their experience shows that a simple placebo, concealed as a common assessment procedure, is capable of constructing measurable improvements in students' creativity. This suggested that other common assessment methods may have a greater impact on students' actual academic performance than expected (Susnea & Susnea, 2020).

Esteky and Kalati (2021) in their study reveal that similar educational content associated with brand names can enhance students' performance on various academic assessments. Studying an educational course published by a strong brand improved performance on a memorization task. Study also shows that students value educational content more when they are told it is associated with a strong educational brand (Kakar & Pathan, 2017). These findings document a significant benefit of implementing branding in higher education institutions.

In a similar study, student age, gender, and groups at the end of the study were found to be significant variables in critical thinking style (Bachman, 1990). Within the research, it was an important finding that in the placebo group only trying to create a positive environment led to better levels of improvement than in the experimental group where activity and exercise were facilitated. The findings were deliberated based on the relevant literature (Demirbag, Unisen & Yesilyurt, 2016).

All these above-stated research works have delineated the idea of the placebo effect with much consideration in educational settings, however, there is still a large void to fill in terms of language teaching where it is imperative to study the implications of the placebo effect in language classrooms. This is why the research paper in hand has been attempted conduct where the placebo effect is tested in the ESL classroom setting.

Material and Methods

The study has been experimental in nature and attempted to find out learners' performances how using the placebo and Nocebo effects. Usually, the experimental research design is used for such studies where the correlation or causal relationship between different variables are observed (Cohen, Manion, & Morrison, 2018). Following the conventional approach of experimental design research, the two groups of participants were formed, i.e., the experimental group and the control group. The sampling of the study consisted of the undergraduate students from an IT based well reputed university of Pakistan. The students of BS Computer Science degree program, aged between 18 to 20 years of age were offered a compulsory course titled as *English Composition*.

Students in each section were taught the course with the same instructional material, course content, and teaching methods. Their semester examinations and all assessments were conducted at the same time to achieve homogeneity.

Sampling

The total number of students who participated in this study was 50, who were further divided into two groups each comprising 25 students, named as the experimental group and the control group. The diagnostic test was conducted to assess the linguistic abilities of the students and it was established that the students of approximately the same age group and same linguistic abilities form both the groups. This way the homogeneity was maintained between the experimental group and the control group. The table 1 reflects the student's status for the population and sampling.

Table 1
Sampling

	Students		Distribution in groups/sections	
Population	247		Ten sections	
Sample	50		Two sections	
	25	25	One Control group	One Experiment Group

Instrumentation

All assessment means and methods, including sessional exams, quizzes, assignments, final projects and final exam, were the primary tool for assessing students' performance in classroom and determining competence in language. These assessment methods were combined and classified into pre-treatment assessment and post-treatment assessment. Weights were adjusted so that they truly represented student performance before and after treatment assessments. Along with quantitative methods of student assessment, classroom observation was another significant component that substantiated pre-treatment and post-treatment assessment results. Classroom and student observations were also beneficial in planning, modifying, and implementing specific strategies in the experimental group as necessitated by the situation.

Specialized Behaviour and Teaching Methods in the Experimental Group

The overall curriculum, learning content, teaching methods, assessment tests and their contents, and student counseling hours were the same for the experimental and control groups, so that there was no preferential treatment to any group. Additionally, to generate the placebo effect among students in the experimental group, various different strategies were utilized during teachers' interactions with students whether inside classroom or outside the classroom. Such strategies were not practiced with the students in the control group as these were not the part of regular instruction. Both special strategies and behaviors along with general (normative) instructional practice were applied in the experimental group to shape students' perceptions and form their positive self-belief.

The specific behaviors and strategies for creating the placebo and reducing the nocebo effect are described below:

Preliminary Examination

The main purpose of the test was to create a placebo effect on the experimental group students related to their foreign language learning abilities and performance. Hence, the actual results were not revealed to the students and instead the instructor said that their performance had been excellent.

One-On-One Counseling

Every student in the experimental group was called from time to time for individual counseling. In these counseling sessions, the student was convinced that she/he was indeed a high achiever and would certainly excel in the final assessment by the end of the academic session. This was to give the students a positive hope for themselves rather than pointing out or dwelling on their weaknesses.

Collective Therapy

Like one-on-one counselling, group therapy sessions were also carried out in a collective manner, keeping in mind the same strategy. Moreover, during the class, the instructor used to announce to the students on several occasions, "*The students of this section (class) exhibit a very positive and heartening attitude, and their academic result is better than the rest of the sections. I am eager to teach you guys.*"

Naming Certain Students during the Lecture

Likewise, during the lectures, the instructor used to the placebo technique of announcing the student's name and appreciating the results and class performance openly to create placebo effects. The instructor also announced the special personality features of the students to create a good self-image of the students about themselves.

Being Euphemistic to Minimize the Nocebo Effect

Sometimes, it was felt that the students were developing a negative or weak self-image and thinking that learning some concepts were beyond their understanding. At that situation, the nocebo effect was employed by using the euphemistic words and expression highlighting their positive traits and improved performances.

Results and Discussion

Data collected in terms of pre-treatment assessment and post-treatment assessment were evaluated in two parts. These two parts' result is described in the following sections respectively.

Pre-Treatment Assessment Results

The average score of the students in the control group was 37.09, whereas the average score of the students in the experimental group was 37.14. The cumulative results of these pre-treatment tests show that both the groups under study were homogeneous in relation to their performance in foreign language learning. The figure 1 shows the symmetry of results for both the groups.

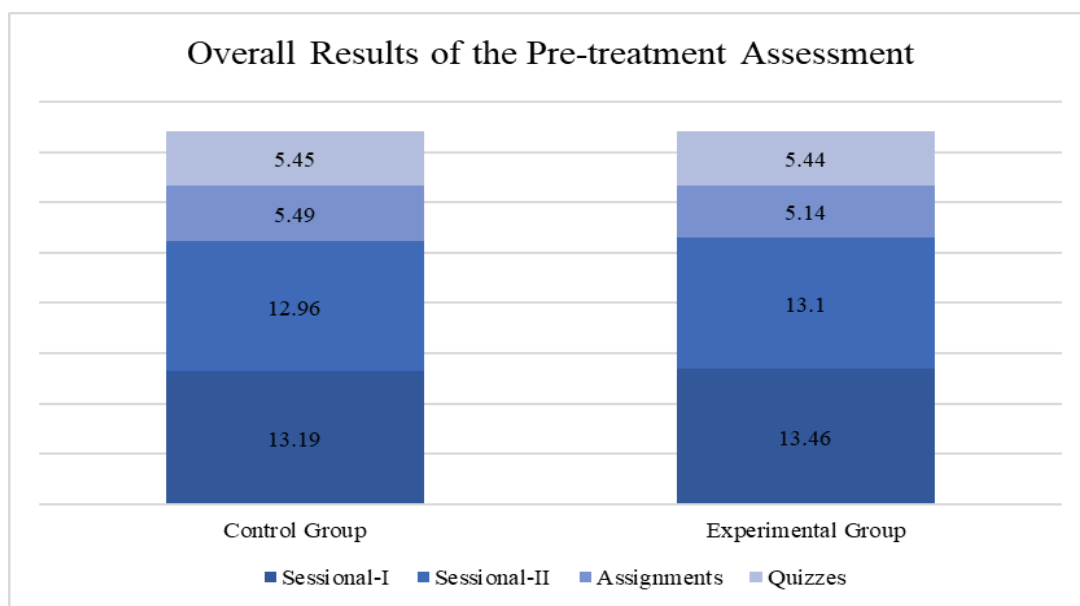


Figure 1. Overall Results of the Pre-treatment Assessment

Likewise, the T-test results shown in the Table 2 remained 37.0920 for control and 37.1480 for experimental group and the standard deviation 5.6930.

Table 2
Pre-treatment assessment results T-test

		<u>Group Statistics</u>			
	Pre-treatment Assessment	N	Mean	Standard Deviation	Standard Error Mean
Scores	Control Group	25.0	37.09200	5.69327	1.13865
	Experimental Group	25.0	37.14800	3.92875	0.78575

Table 3
pre-treatment assessment T-test result

		Independent Samples Test								
		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Scores	Equal variances assumed	2.062	.157	-.040	48	.968	-.05600	1.38345	-2.83761	2.72561
	Equal variances not assumed			-.040	42.632	.968	-.05600	1.38345	-2.84669	2.73469

Post-Treatment Assessment Result

The average score of the students in the control group was 37.10, whereas the average score of the students in the experimental group was 40.86. The cumulative results of these post-treatment tests show that both the groups under study showed the difference in relation to their performance in foreign language learning. The figure 2 shows the symmetry of results for both the groups.

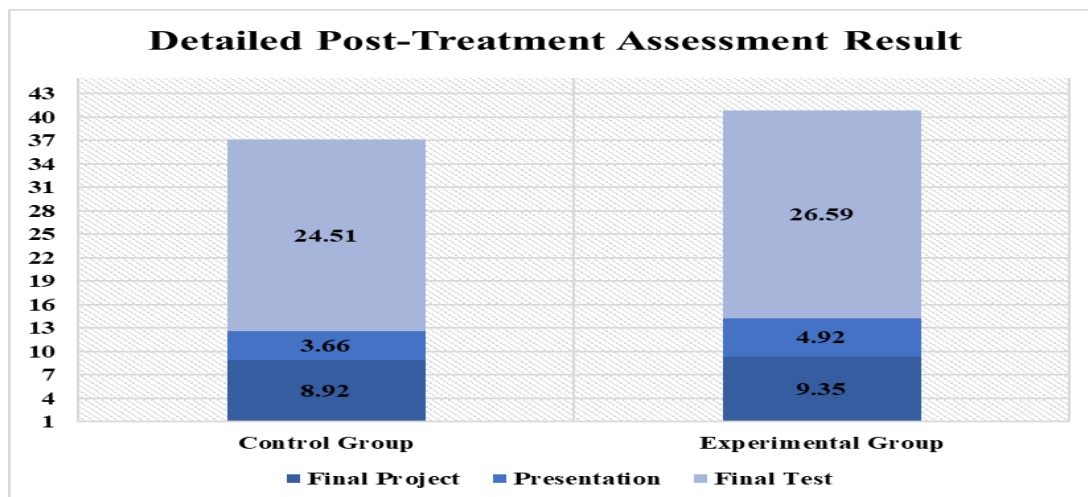


Figure 2. Graphical Representation of the Overall Post-Treatment Assessment Result

Likewise, the T-test results shown in the Table 2 remained 37.100 for control and 40.860 for experimental group and the standard deviation 5.127.

Table 4
Post-treatment assessment t-test result

Group Statistics					
	Post-treatment Assessment	N	Mean	Standard Deviation	Standard Error Mean
Scores	Control Group	25.0	37.1000	5.12748	1.02550
	Experimental Group	25.0	40.8604	3.51856	0.70371

Table 5
Post-treatment assessment's t-test result through SPSS

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
Scores		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Scores	Equal variances assumed	4.486	.039	-3.023	48	.004	-3.76040	1.24373	-6.26108	-1.25972
	Equal variances not assumed			-3.023	42.501	.004	-3.76040	1.24373	-6.26946	-1.25134

Summary of Results

The results were explained and interpreted in two ways. Firstly, the means of both pretest and posttest assessments were compared. Secondly, the t-test was applied using the software named SPSS. Both statistical tests validated each other results and it was finally concluded that the homogeneous groups, the control group and the experimental group, performed almost the same before treatment. However, when the placebo and nocebo techniques were applied, the results showed a different

picture of the difference between the results of both the groups, the control group and the experimental group. The results presented an evident improvement in the performance of the experiment group.

Table 5
Summary control group

<u>Control Group</u>		
	Mean	Percentage
Pre- treatment assessment	37.090	74.180 %
Post- treatment assessment	37.100	74.200 %

Table 6
Summary experimental group

<u>Experimental Group</u>		
	Mean	Percentage
Pre- treatment assessment	37.140	74.290 %
Post- treatment assessment	40.860	81.720 %

The same results can be seen through graphical representation in Figure 3.

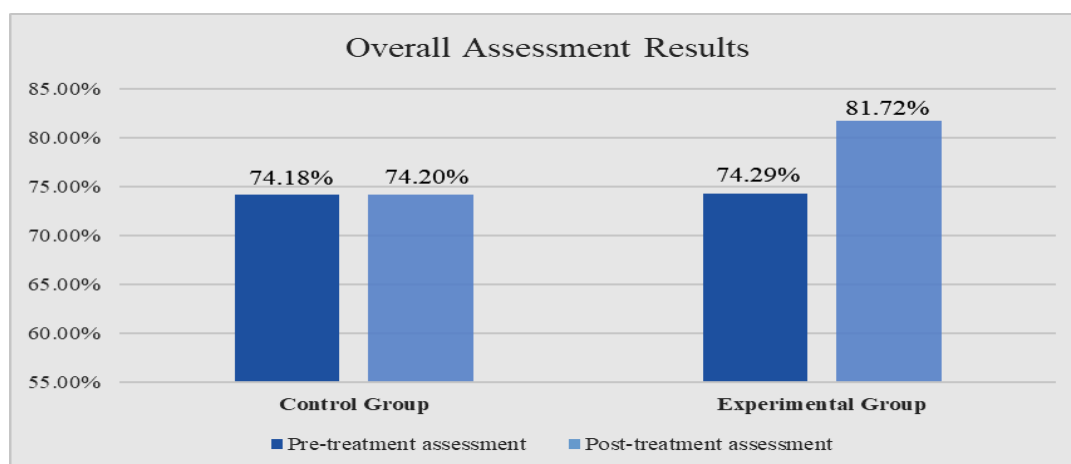


Figure 3 Comparing Pre-and Post-Treatment Results in Two Groups

Conclusion

Placebo effect contributes to the improvement of motivation level of learners. It is viable and significant for language classrooms. The study has found that the impact of placebo effect and nocebo effect in the positive direction. Both of these techniques worked well in improving motivational level of the learners. This affective mode of learning has a great effect on the performance of the second language learners. The study has found that the experimental group clearly show the improved performance when compared with the control group. However, it requires the efficiency of the instructor as well who needs to be too involving in the teaching and learning process.

It may be observed that placebo effect requires time to develop, like other psychotherapies which develop over the time. The repetitive acts, reminders and patience by the teacher pave the way for the positive change expected in the second language learners. Students learn and get motivated through this psychological technique not in a single instance but the persistent reinforcement from the teacher is a must part of the overall success.

While teaching and learning the foreign language, the technique of creating placebo effect was found as an effective way to improve the performance of the learners. It is proved very significant for the instructors of foreign language learners to be well aware of such psychological handling of their class and students. It is suggested that the language teachers be trained to use the placebo effect in their class and with students to instill positive and high self-image which ultimately strengthen the motivation level and performance of students.

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