

Original scientific paper

## MEASURING ACADEMIC ACHIEVEMENT IN A GRAMMAR-LED GENERAL ENGLISH COURSE AT A TERTIARY EDUCATION INSTITUTION

Maria Eugenia Zevallos Valdivia

San Ignacio de Loyola University, Lima, Peru

**Abstract.** *With the need for instant communication and the boom of the digital era, quality content concerning grammatical output by language learners has become a hot issue among teachers, particularly university professors who aim at accuracy when dealing with their students' production. The purpose of this study was to measure the effectiveness of a remedial grammar course created "ad hoc" for university leavers (n = 987) in Lima, Peru between March 2018 and September 2019. The dataset deployed in the study came from two instruments: Pre-Test and Post-Test, applied to participants at the start and end of every term. When processing the data, the difference of the paired samples did not follow a normal distribution, therefore, the t-student test could not be applied. Alternatively, the non-parametric Wilcoxon signed-rank test had to be used, but only after verifying the assumption that the differences between post and pre-test samples followed a symmetric distribution. The test result yielded a very significant p-value, thus rejecting the null hypothesis that there were no differences regarding median grades between the pre- and post-tests. Furthermore, the effect size of nearly 70% confirmed the effectiveness of the grammar course and the appropriacy of the application of teaching and assessment methods.*

**Key words:** *ELT, grammar, Wilcoxon test, CEFR, academic achievement*

### 1. INTRODUCTION

Over the last years, much has been published regarding the re-appearance of grammar in the learning of a foreign language, particularly as a reaction towards the extended use of the communicative approach since the 1970s. Under that umbrella, there are terms that we, teachers, have been extremely familiar with, such as the learning of a second language (contrasted to the acquisition of a native language), inductive (as opposed to deductive) approach to teaching, fluency (versus accuracy), or communicative competence (contrasted to linguistic competence), which have certainly proved to have fit in our evolving, globalized world where English has been, and will probably be – for many years ahead – the lingua franca. However, there is a group of users whose aim is not oral communication in the first place but instead, written reception – reading – and oral production – speaking. I am referring to the world of tertiary education and its actors such as scholars, researchers, or

---

Submitted October 9<sup>th</sup>, 2023, accepted for publication November 18<sup>th</sup>, 2023

Corresponding author: Maria Eugenia Zevallos Valdivia, Universidad San Ignacio de Loyola, Lima, Peru

E-mail: mezevall@hotmail.com

college students who may be more inclined to become linguistic competent, be exposed to deductive instruction, or attain accuracy in their productive outputs.

## 2. LITERATURE REVIEW

A paper by Kamal, S. M. (2013) reporting results on the study of article accuracy to undergraduate students from various universities in Dhaka, Bangladesh points out that little or no need is shown by students to “polish” their use of this grammatical structure as it has no significant effect on meaning. As long as the message is put across, no mastery of grammar is needed. On empirical terms, over the last decades this fact has become trendy in EFL learning due to the emphasis on communication skills prioritising fluency to accuracy particularly when producing language, be this oral or written.

Ideally, there should be a balance between accuracy and fluency when teaching a foreign language. It is not necessary to sacrifice any of the two to succeed in the teaching-learning process following a form-based or a communication / content-based approach (Krashen, Nilolov, 1997). The authors did an experiment with two groups of children (eighth graders) in Hungary exposing them to the two teaching methods: communication-based and traditional grammar-based, and found out that in the former one, learners were as accurate as the ones who received instruction with the traditional, grammar-based programme. This means that both approaches to teaching EFL can co-exist and be applied to several age groups so that learners can be benefited by making the most of them in their performance. Hence, there is no need to sacrifice accuracy for fluency. According to Krashen and Nilolov (1997), “Ideally, accuracy and fluency should advance at the same pace during the language acquisition process ...”

The above quotation is also associated with the extent to which the teaching style prioritizes learning or acquisition. It is known that for the latter term, exposure to the target language is immersed within everyday contexts where meaningful situations are presented and practised in a communicative way enhancing fluency. This has also been reinforced by Gayane R. Hovhannisyanyan (2016): “Only through meaningful learning activities do the students create their own mental models of the knowledge acquired and the skills used.” This practice is contrary to what happens when a language point is first presented, analysed and later practised through controlled exercises following a deductive approach. In this case, accuracy should come before fluency and “learning” should consequently take place. However, in any case, the learner may ideally become competent both linguistically and communicatively.

Furthermore, the role of the teacher is key when delivering a method of instruction. It is said (Obeidat, M., 2020) that teacher-centredness is a characteristic of the deductive method of teaching whereas in the inductive method, teachers encourage students to discover the rule after having practised it within real-life like contexts, to finally store it in either their short- or long-term memory (Bilash, 2009). What is more, in their desire to make students understand how rules of the English language work and how these are applied in real-life situations, teachers may deliver instruction using either a bottom-up (specific to generic) or top-down (generic to specific) approach. Incidentally, these ones have been linked respectively to the inductive and deductive currents of teaching. At this point, it is worth mentioning that empirically, the application of a deductive approach can benefit more adult learners than younger ones since it calls for their maturity, motivation,

and raises awareness on the formation of rules and their application, i.e., usage and use, something that may not necessarily be attained by the application of inductive, bottom-up methods.

### 3. BACKGROUND

The present study was conducted at the Bilingual Department of a private university in Lima, Peru, between March 2018 and September 2019 with 987 participants enrolled in a non-credit, grammar course called English Competency Course (ECC). Passing this course with a mark between 10.5 and 20, would enable participants to replace the grade they had previously obtained: 11, 12, or 13 (over 20) in their last general English course called English VI, and thus comply with the requirement of credits earned for having taking courses in English. Having complied with this requirement would also let them apply to obtain the bachelor's degree.

ECC was designed to be a remedial course whose main purpose was the review of the English grammar studied through English I to VI, i.e., during the students' first three years of studies at the university; it would cover the basic user and independent user reference levels according to CEFR (A1 to B2). ECC would have a duration of seven weeks, being weeks 1 to 6 devoted to instruction, and week 7 to evaluations and feedback. The weekly contents of ECC matched the main grammatical structures that the students had learnt every semester in their English I to VI courses, primarily, tenses. Therefore, in ECC, they would be completing the CEFR reference levels every two weeks: elementary (A1, A2), intermediate (B1) and upper intermediate (B2). In addition, the weekly input of instruction was 11 academic hours, making 77 hours for the whole course. The pre-test was applied during the first hour of the course on day one, and the post-test before taking the final exam in week 7. Regarding the number of participants, there were 47 ECC sections opened between 2018-2019 with a total of 987 students, but the ones considered for data processing in this study were 955 as there were 32 students who, for diverse reasons, did not take either instrument, pre or post-test.

#### 3.1. Data collection and analysis procedure

The data was obtained from, on the one hand, the administration of an entry test whose main purpose was to know about the students' *status quo* at the start of the course. Inhere it is important to mention that most of the students who initially enrolled in the English Competency Course, particularly in 2018, had not received English instruction for an approximate period of three years i.e., since the last time they took English VI – at the end of their third year of studies; note also that according to Peruvian law, undergraduates should complete five years of university studies before applying for bachelor's degree. Therefore, at the launch of ECC in 2018, we received the “oldest” students i.e., the ones who had already completed their fifth year and had already left university – most of them had been working or involved in internship at the time of starting the course.

On the other hand, the application of the post-test enabled us to measure the extent to which the participants had not only activated prior knowledge, i.e., the one learnt during their general English subjects: English I to VI, but also to see if they were able to *use* the structures in their academic or professional settings. To make the data obtained from the instruments more valid, it was determined that the exit test would evaluate the same

structures as the entry test, in the same level and order of difficulty as they had been learnt in English I to VI and eventually presented in ECC. In other words, the entry- and post-tests would contain exactly the same questions.

The data was processed using the R statistical programming language. Out of the original 987 registers, 32 were eliminated to avoid bias. These belonged to students who, for any reasons, had been unable to take either test and thus, were marked with zero in both tests.

The median before the application of instruction was 11 out of 20 points (55%), and after having received instruction 14 over 20 (70%).

As normality of differences between pre and post test scores could not be verified, the t-student test for paired samples was discarded. Instead, the non-parametric Wilcoxon test was considered. However, this test has also its own assumption of symmetry distribution, so it had to be verified through the histogram and the result obtained is shown below.

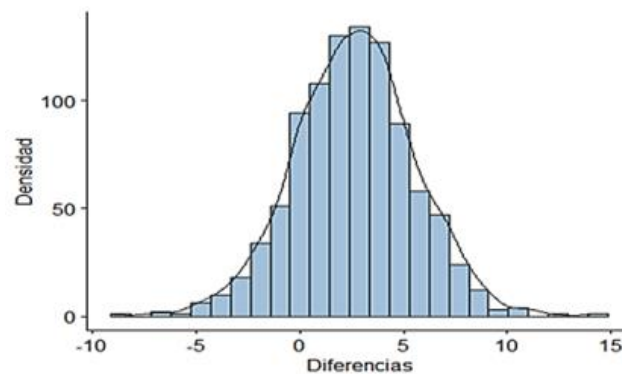


Fig. 1 Differences in pre- and post-test grades

As it can be seen, the graph approximated a symmetric distribution, which meant that it was advisable to apply the Wilcoxon test.

### 3.2. Hypotheses

Researcher's question:

Are there any statistically significant changes between the grades obtained after the application of the English Competency Course?

Null Hypothesis:

There are no differences in the median grades between the pre-test and post-test.

Alternative Hypothesis:

The median grades of the post-test are greater than those of the pre-test.

#### 4. THE FINDINGS

A Wilcoxon signed-rank test indicated that post-test scores were significantly higher than pre-test scores,  $V = 32047$ ,  $p < .001$ ,  $r = .694$ .

These results show that after applying instruction, the median grades of the English Competency Course (ECC) were significantly greater than the ones obtained before the instruction. They also show that the effect size was large.

It can be justified firstly by considering that during the six instruction weeks (66 hours), students would review grammar that belonged to the A1, A2, B1 and B2 scale descriptors of language ability as stated by the Common European Framework of Reference for Languages (CEFR). Secondly, the progress tests applied at the end of each week assessed the participants' mastery of the structures reviewed and practised in class for each of the CEFR levels in terms of both recognition and production. A typical progress test would include two sections, one with multiple choice questions for students to identify the form and use of the grammatical structures studied during the week, as well as open-ended questions for them to produce language using the target structures. This latter section used to have a greater weight because in real class time, every structure used to be practised under communicative contexts and because it involved more mental processing, or cognitive domain than simply recognising, as sustained in Bloom's taxonomy (Bloom, 1956).

The attained effect size of 69.4% can be explained by two main reasons. Firstly, ECC was aimed at being a remedial course, which means that its main purpose was to make students improve aspects of prior learning experiences that had not been well internalized in any of the six English courses taken during their first three years at university and that eventually were reflected in any of the three low scores obtained in their last general English course (English VI): 11, 12 or 13 over 20. Without having certainty of which structures had to be reinforced, it was decided in the design of the course that students should review the main grammatical points, e.g., tenses studied in prior coursebooks. Secondly, a point in favour for the effectiveness of the course was the age in which these students would receive the ECC instruction. According to university records, when students take their general English courses: English I to VI, their age ranges between 18 to 20. A typical student who enrolled in ECC was aged between 23 to 25. This happened particularly in 2018 because there was a group who had already completed their five years of studies at university and had been waiting for an alternative to compensate for one of the low grades obtained in English VI: 11, 12, or 13, something that impeded them to obtain the bachelor's degree; the minimum mark had to be 14. This context led to a further assumption: their level of maturity to assume the demands of ECC was higher. Being older meant a two-fold advantage: 1) that they had a more defined motivation either intrinsic or extrinsic, something that would help them become more focused, engaged and determined to do their best and complete the course successfully; and 2) as time went by, they would recall structures more vividly and as a result, they would feel more self-confident in their use both during class time and in the exams.

#### 5. DISCUSSION

On quantitative grounds, the efficacy of the remedial grammar course: English Competency Course was proved. The design of the course in terms of content, along with the teaching method used contributed to such efficacy. On empirical grounds, some credit

needs to be given to the role of learner autonomy which might have contributed to the results obtained in this research.

As far as course design is concerned, a study on the effect of variables in a remedial grammar course final exam (Zevallos, 2022) revealed that well-constructed instruments can be a reliable source for measuring efficacy. The instruments in question were six tests which reflected students' progress in the grammatical structures reviewed every week within the duration of the course. The study consisted of building a regression model using each of the six progress tests administered in the course as independent variables and correlate them to the results of the final exam, which acted as the dependent variable. The findings revealed a good adjustment of the model (Adjusted R-squared 0.70%), which meant effectiveness of both, construction of the tests – type and quantity of questions – and the teaching method deployed.

In the current study, like in the Zevallos one (2022), the deductive approach to teaching was applied. “Deductive” involves a top-down approach to instruction as stated by Harmer (1989). This “explicit” way – or “lecturing” (Obeidat and Alomari, 2020) – to present grammar points helped learners to retrieve, review and re-practise structures they had seen in previous general English courses at university. The main reason for the success of a so-called old-fashioned method as the deductive one was, as explained above, the age of the participants. A study by Singleton and Lengyel (1995) discusses the relationship between age and the success of foreign language learning. They explore factors such as cognitive development and motivation in language learning to prove high correlations between maturity and learning a non-mother tongue language, which is something that empirically did happen in the current research work. A further study by Obeidat and Alomari (2020) also explores the effect of using inductive and deductive approaches to teaching English grammar to undergraduate students. Although the results claimed significant differences in favour of the experimental group, the one on which the inductive method was applied, it was recommended to conduct further studies on non-native speakers of English in higher education to determine the best approach, inductive or deductive, that can enhance their level of grammar proficiency, something also suggested in the present study.

Lastly, on autonomy in language learning, a study by Kayaoğlu et al (2015) on the role of web-based grammar instruction at the Karadeniz Technical University in Turkey attempted to explore whether computer-assisted grammar instruction could yield better results regarding participants' academic success than the traditional classroom teaching. The findings revealed no significant differences between the two methods; however, some insights into interdependency and independence related to managing their learning process arose. This issue has been empirically tackled in the present study as a link between age and academic achievement: the older the students, the more aware of the need to deepen into the grammatical points by means of out-of-the classroom practice. The Kayaoğlu study also recommends the design of entry and exit tests in order to compare the effects of computer-assisted language learning applications (CALL) just as it has been done in this research work when measuring the effectiveness of ECC through the pre- and post-test instruments.

## 6. CONCLUSIONS AND IMPLICATIONS

The intention of this study was to prove whether there were any statistically significant changes between the scores obtained from the pre-test and the post-test in the English Competency Course (ECC), a remedial grammar course administered to undergraduates in a Peruvian university. The median grades of the post-test proved to be greater than those of the pre-test yielding a surprising effect size of nearly 70%, with which the efficacy of the course was demonstrated.

One aspect to rescue from the study is the impact it can make in foreign language teaching and learning, particularly in the field of tertiary education. The findings of this research have given light to a revisit of content selection when it comes to designing a remedial course to university learners. It is important to consider the inclusion of the same structures learnt in previous courses – as well as their sequence and order – so that students can retrieve them and activate them at ease. By doing so, as it happened to the participants in this study, teachers would be fostering self-confidence and a genuine desire to use them in their academic and professional contexts; this could be one mode to enhance meaningful learning (Ausubel, 1963) under a communicative perspective.

A further implication of this research was the role given to the deductive approach to instruction. In this case, the mature age of the students was a condition that helped to prioritise learning over acquisition. However, the deductive concept to teaching was ever combined with modern aspects of the communicative approach such as “induction”, “fluency-based” and “pragmatic use” of the grammatical structures turning students into more autonomous, responsible, and independent users of the English language.

Finally, it is suggested that further studies should focus on measuring the degree of association between the content of each question in the pre-test, and its outcome in the post-test. Within the same scenario of ECC, Zevallos (2022) attempted to analyse the contribution of each of the instruments applied every week – called Progress Tests – in the Final Exam as a way to prove the correct choice of contents, their graduation in level of difficulty and the teaching method.

## REFERENCES

- Ausubel, David. *The Psychology of Meaningful Verbal Learning*. New York: Grune & Stratton, 1963.
- Bilash, Olenka. *Inductive and Deductive Instruction*. Alberta: Saskatchewan Education, 2009.
- Bloom, Benjamin. S. *Taxonomy of Educational Objectives, Handbook: The Cognitive Domain*. New York: David McKay, 1956.
- Brown, H. Douglas. *Strategies for Success: A Practical Guide to Learning English*. New York: Addison Wesley Longman Inc., 2002.
- Brumfit, Christopher. *Communicative Methodology in Language Teaching*. Cambridge: Cambridge University Press, 1984.
- Celce-Murcia, Marianne. and Diane Larsen-Freeman. *The Grammar Book: An ESL Teacher's Course* (2nd ed). Boston: Heinle & Heinle, 1999.
- Dörnyei, Zoltan. *The Psychology of the Language Learner: Individual Differences in Second Language Acquisition*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc., Publishers, 2005.
- Ellis, Rod. *The Study of Second Language Acquisition*. Oxford: Oxford University Press, 1994.
- Ellis, Rod. *Task-Based Language Learning and Teaching*. Oxford: Oxford University Press, 2003.
- Farrell, Thomas S.C. and Patricia, Lim Poh Choo. “Conceptions of Grammar Teaching: A case study of Teachers' Beliefs and Classroom Practices.” *TESL-EJ* 9/2 (2005): pp. 1-13.
- Gayane, R. Hovhannisyan. “Acquisition of Language Meanings Via Smart Technologies.” *Journal of Teaching English for Specific and Academic Purposes* (2016): Vol. 4, No 1, pp. 23-37.

- Harmer, Jeremy. *Teaching and Learning Grammar*. London: Longman, 1989.
- Kayaoğlu, Mustafa N., Akbaş, Raşide D., and Erbay, Sakire. "The Role of Web-based Grammar Instruction in Tertiary Level EFL Students' Academic Achievement." *Journal of Teaching English for Specific and Academic Purposes* (2015): Vol. 3, No 3, pp. 499-507.
- Krashen, Stephen., and Marianne Nikolov. (1997). "Need we sacrifice accuracy for fluency?" *System* (1997): Vol. 25, No. 2, pp. 197-201.
- Littlewood, W. (1981). *Communicative Language Teaching*. New York: Cambridge University Press.
- Mohammad M. Obeidat, and Moh'd A. Alomari. "The Effect of Inductive and Deductive Teaching on EFL Undergraduates' Achievement in Grammar at the Hashemite University in Jordan," *International Journal of Higher Education*, 25 February 2020, <https://www.sciedu.ca/journal/index.php/ijhe/article/view/17312/10712> (7 September 2023).
- Prabhu, N. S. (1987). *Second Language Pedagogy*. Oxford: Oxford University Press.
- Richards, J., Platt, J., & Weber, H. (1985). *Longman Dictionary of Applied Linguistics*. Longman.
- Richards, Jack C., and Theodore Rodgers. *Approaches and Methods in Language Teaching*. Second Edition. New York: Cambridge University Press, 2001.
- Singleton, David M., and Zsolt Lengyel. *The Age Factor in Second Language Acquisition: A critical Look at the Critical Period Hypothesis*. Clevedon: Multilingual Matters, 1995.
- Skehan, Peter. *Second language acquisition research and task-based instruction*. Oxford: Heinemann, 1996.
- Thomas, Earl W. *A Comparison of Inductive and Deductive Teaching Methods in College Freshman Remedial English*. Pennsylvania: University of Pennsylvania, 1970.
- Williams, James D. *The Teacher's Grammar Book* (2nd ed.). New Jersey: Lawrence Erlbaum, 2005.
- Zevallos, Maria Eugenia. "Método Predictivo Para Comprobar la Efectividad de la Enseñanza de la Gramática en un Curso Remedial de Inglés en una Universidad Peruana," *Revista Igobernanza*, 22 marzo 2022, <https://www.igobernanza.org/index.php/IGOB/article/view/180> (18 julio 2023).