

IMPACTS OF EXPLICIT LEARNING ON PAKISTANI ESL COGNITION

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Abstract

The study aims to investigate the impact of *explicit learning* on Pakistani ESL' cognitive process in classroom setting. For conducting this study, the participants ($n=200$) of grade 10th have been recruited from government institutions of Punjab's remote areas and divided them into two groups: experimental ($n=100$) and control ($n=100$) learning situations. The experimental group was instructed in the classroom setting and they were explicitly taught English as the second language. The experiments are categorized into two parts: (a) pre-test and post-test to externalize the sensory motor system of competence and its improvement triggered by providing explicit learning. Firstly, the participants were evaluated with pre-tests i.e. *written comprehension task* and *verbal fluency test*. After evaluating, they are provided input of second language until three weeks. After providing input of second language, they were assessed in the same procedure, and now got an improvement in both the productively cognitive skills: *verbal* and *non-verbal* (written). For data analysis, Python 3.11.1 version has been used to get the statistical data processing. The pre-test results predict that the ratio of sensory motor system was mean=9.4 and 9.7 of the two groups with std=2.2 and 2.3 but fortunately, the post-test results reveal that the mean ratio of two groups is 11.4 and 14.8 with std=1.3 and 1.7. On the basis of these results, the study implicates that learners' efficiency in productive skills: (verbal and non-verbal) is mandatory but may be improved if sensory motor system works efficiently. For sensory motor efficiency, the ESL practitioners should adopt explicit learning.

Keywords: Explicit learning; ESL; Sensory-Motor system; Productive Skills; Verbal Fluency

1. Introduction

For a decade, a scenario on ESL input has broadened in educational circles on the impact of teacher directed (explicit learning) versus student directed (implicit learning) based on the initiative that explicit learning is passive rather than energetic and engaged learning. Therefore, it is considered as effective for learner's accomplishment and learning. It is important that ESL teachers must know well that what sort of grammar, teaching strategies and instructional materials best assist learning in the class sequentially to regulate their teaching in the direction of a realistic and getting maximum learners' output. According to Hulstijn (2005), "*Explicit learning is input processing with the conscious intention to find out whether the input information contains regularities and, if so, to work out the concepts and rules with which these regularities can be captured. Implicit learning is input processing without such an intention,*

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taking place unconsciously." (p. 131) explicit and implicit learning have taken an impetuous motivation to the ESL practitioners to get the better results with minimum effort. A lot of studies (Dulay & Burt 1973; Krashen, 1985; White, 1998; Ruhi, 2001; Rahem, 2022 and Xodabande, 2023) have been dedicated in this line of inquiry to externalize the underpinning issues of the ESL learners. Krashen (1985) focused on the formal instruction to the learners under the communicative approach, White (1998) focused on the form of the explicit and the main argument was to focus on the effectiveness of explicit learnings and its effects on the SLA.

Among Asian ESL learners, getting mastery in language proficiency is the crucial area and no significant strategies have been adopted to assist the teachers but the very first point is that the focus of the interest in ESL is only learner[s] whose development is essential so that all the experiments should be dedicated on them. For this, the study formulates the certain objectives.

RQ1: What are the impacts of explicit learning on Pakistani ESL cognitive faculty?

RQ2: How do explicit learning trigger cognition of ESL?

2. Literature Review

Since the early 1990s hold up the thought that several types of explicit formal instructions are pretty much helpful for second language *maturity* Dekeyser (1995), Ellis (2002), Robinson (1996) Doughty et al (1998). In very current studies on second language learning, classrooms have also shown inclination to point to that paying attention of the students on *form*, essentially through clear instruction that is better to *implicit* learning (White, 1998). According to the view of Schmidt (1992) who argued that if we are interested in making our learners fluent in second language (SLA), by the view of cognitive theory, we have to enable them to connect in the employing that language in the logic of communicating somewhat in that particular language, at the same time as they maintain the related *declarative knowledge* in working memory. Existing vision regarding teaching communicative approach disputes that grammar has its position in ESL learning environment. Applied linguists also claimed that *instruction* is useful for learners particularly in the area of second language acquisition (SLA) process, progress and in ultimate achievement in that specific language. Schmidt and Frota (1986) have laid a vehement stress on the notion that *instruction* and *chances of interaction* outside the classroom environment were both essential and crucial for second language development. Pienemann (1985, p. 36) devised a hypothesis on the basis of psychological research in second language acquisition (SLA). He claimed that those *instructions* which hit next developmental level of the student are far better than those which hit too far beyond his present level. Spada (1997) similarly planned a study to figure out whether or not there was any contact among contact type and type of the instruction. She studied the consequence of instruction and experience on huge number of adult learners who were registered in a demanding EST course held in Canada. She came to the conclusion that situation was less influential forecaster of disparity in second language learners' performance as compared to the instruction. She also came to know that contact *optimistically* considered for variation in grammar where the instruction-given was form-focused. Ellis (1989) has done a study to measure up to the classroom and naturalistic location and came to the idea that learners which were in a classroom setting appeared to be doing better than those naturalistic learners in that they have shown a high level of communicative skill in a very shorter period. Ruhi (2001) considered the consequence of implicit and explicit focus on form toughened by minor recast on second language development on 72 adult English language learners. The consequence of the study maintained the hypothesis. Doughty (1991) carried out a study on two groups of adult second language learner and tried to find out whether learners who have got visual improvement

in their contact to relative clauses with no metalinguistic rule declaration enhanced as much as those who in addition with this also received explicit metalinguistic rules. He found that both groups improved appreciably more than a control group on post-test managed right away after the instruction. She inferred her conclusions as proof for Schmidt (1990) “*Noticing Hypothesis*” and to his claim that in receipt of learners to be present at forms in *controlled input* is the most excellent condition for language learning.

According to VanPatten (2022), learning a second language especially vocabulary concatenation tasks via two incidental and intentional learning has been dedicated in the line language instructional research. In this parlance, incidental vocabulary development as the by-product of meaningful mutual compatibility to comprehend the amount of comprehensible input but faulty issue of these instructional strategies is that in this way the focus is only on language usage in real life span and only conveying meaning without grammatical development. Incidental vocabulary learning is a long term-cognitive process and it requires a huge amount of input while intentional learning contrastively is linked with our voluntary cognitive system of conscious control and direct focus is on language forms. Schmitt (2019) focused on the instructional programs to develop the intentional vocabulary learning but for developing vocabulary, various types of instructional material has been adopted such as workbook, classroom materials. It includes word lists, flashcards and activities and gamified assisted techniques. This study is not dealing with only language usage but also with grammatical development skill of the ESP learners. Grammatical development is linked with human cognitive faculty for this keeping in mind such methods and techniques that gives effective development of grammatical development. For this, the present study adopts explicit learning techniques. Learning vocabularies only did not boast the grammatical aspect of human mind for this, explicit techniques have been implied in the classroom setting.

To cut a long story short, there are a large number of hypothetical and realistic studies and an adequate amount of verifications in second language acquisition (SLA) which have observed that formal instruction are necessary and helpful in the acquisition of linguistic competence and have a very constructive and encouraging effects on second language acquisition (SLA) as it triggers the learners’ competence level that potentially ensures the *modulation* of learning that enhances the cognitive sensory motor system.

3. Methodology

3.1 Participants

The participants of this study were 237 adult English as a second Language (ESL) learners in a private language teaching institute in Punjab, Pakistan. The mean age of the participants was 21-26, and they were selected based on the *convenience sampling* procedure and their availability in the study context has been ensured by the written consent by each individual participant. The general proficiency level of the participants in English was assessed using *verbal fluency* test, and the results showed that most of them were at intermediate level Learners (ELL). Following Li and Hafner (2022), the participants were assigned into two groups: experimental (n=100) and control (n=100) conditions based on their own preferences for using different materials excluding 37 participants due to their unwillingness and showing non-seriousness attitude to the study. Accordingly, 100 students preferred learning academic tasks via explicit instructional method (experimental group), and 100 participants opted for using traditional materials and method implicit instruction. Informed consent for participating in the study were obtained from the students before taking part in this study.

3.2 Procedures

The study was carried out over 3 weeks, and data collection started by administrating the pre-tests. During this period, both groups received classroom *instruction* based on the curriculum implemented by Single National Curriculum (SNC) for preparing the students for board exams (i.e., regional and federal). The classes were held once a day, within 3 weeks, and each session lasted for 45 min. All sessions focused on teaching academic writing with a specific topic: “*How did I spend my winter holidays?*” Additionally, the participants were asked to review target academic writing covered in the classroom using their preferred materials outside the classroom. The participants were informed that 30% of their overall evaluation would be based on their scores on post-treatment tests. Data collection ended with measuring and documenting changes in the participants’ knowledge in the post-tests.

Data has been analysed using Python IDLE version 3.11.1. In analysing data, both descriptive and inferential statistical techniques were used. For descriptive statistics, mean values and standard deviation were obtained from data. For inferential statistics, the scores on vocabulary tests were analysed using multivariate analysis of variance. There is more than one dependent variable, and these variables are related to each other either conceptually or in a specific way.

4. Results

4.1 Pre-test Results

Test-Type	N	Group-Type	Mean	Std
Pre-Test	100	Control	9.4	2.2
	100	Experimental	9.7	2.3

Results of the Pre-test Table-1

The results of the pre-test study have been demonstrated in Table 1. As shown above, the test-type is pre-test, $n=100$ participants in both the groups: (a) control (b) experimental. The mean value of the control group is 9.4 comparatively low from the experimental group. The standard deviation (std) value is 2.2 for control group noticed low comparatively from experimental group.

4.2 Post-test Results

Test-Type	N	Group-Type	Mean	Std
Post-Test	100	Control	11.4	1.3
	100	Experimental	14.8	1.7

Results of the Pro-test Table-2

The results of post-test have been presented in the Table 2. As mentioned above, the test-type is post-test conducted among the two groups $n=100$ participants: control vs. experimental. The mean value of the control group is 11.4 i.e., comparatively low from the experimental group similarly the standard deviation (std) value is 1.3 for control group i.e., comparatively low from experimental group=1.7. Furthermore, the data reveals that improvement in experimental group is noticed.

5. Discussion

Test-Type	Mean	Std
Pre-Test	9.6	2.3
Post-Test	13.1	1.5

Table No-3

The present study investigated the impacts of explicit learning in ESP Pakistani learners and the study hypothesized that explicit learning triggers the internal cognitive system to regulate in developing L2 system effectively. The primary research question was connected with the effectiveness of explicit learning in instructional classroom in improving intermediate level students' academic performance. Accordingly, learning consequences from two interventions, namely explicit and implicit using various techniques, were compared. Data analysis revealed that before the treatment, participants in the experimental and control learning conditions were similar with respect to their knowledge of academic words. The overall values of the pre and post tests have been demonstrated in the table no-3. The total values of the pre and post tests have revealed that there is a difference in two variables i.e., pre-test and post-test with total mean value of pre-test is equivalent to 9.6% of both groups: control and experimental. The post-test mean value is 13.1% that is comparatively higher than pre-test values and there is a gap in between these values. It means that post-test treatment is effective as the results have demonstrated favourable results. Similarly, the standard deviation value of the pre-test is higher about 2.3% but comparatively in the post-test has been decreased to 1.5%. The decreasing of *std* means that positive response in cognitive faculty.

As the study posted the two hypothetical questions:

RQ1- *“What are the impacts of explicit learning on Pakistani ESL cognitive faculty?”*

RQ2- *“How do explicit learning trigger cognition of ESL?”*

The findings, as summed up in Tables above have given an empirical verification for the effectiveness of explicit learning for developing grammatical knowledge of second language knowledge. The participants of both groups in particular have gained knowledge of a significant proportion of the target language tenses from the pre-test to the post-test and results are far better in post-tests.

According to address the RQ1 *“What are the impacts of explicit learning on Pakistani ESL cognitive faculty?”* this question is more related to the neurolinguistics and psycholinguistics. The human faculty of language is a compacted and unified shell of neurons that works collectively to develop the grammatical, phonological and memorizational underpinnings. As a whole dealing with neurolinguistics issues of explicit learning, the findings of the study show that explicit learning is significant in developing cognitive system of Pakistani ESP learners who are taking SNC in Pakistan. It consequently develops the whole cognitive faculty that includes receptive and productive vocabulary knowledge, grammatical aspects like tenses and inflectional morphology without focusing on only communicative approach to language teaching. Such findings might have resulted from the following reasons. First, given that grammatical drills.

Dealing with the RQ2- “How do explicit learning trigger cognition of ESL?” the study predicts that it deals with what is the method through with the internal cognition takes.

The study has some pedagogical implication for teaching grammatical chunks in classroom setting as learning second language has been defined as a “specialized English-language teaching grounded in the social, cognitive, and linguistic demands of academic target situations, providing focused instruction informed by an understanding of texts and the constraints of academic contexts” (Hyland, 2006, p. 2). This instructional approach improves the explicit knowledge and grammatical underpinnings of the cognitive faculty as a whole. This study can be considered to develop the highly material developments and practice for the ESP teachers and practitioners in classroom. In this parlance, the explicit method of instructional input in the classroom setting is extending learning to provide EAP students anytime and anyplace with practical strategies (Xodabande & Atai, 2022).

The conclusive remark of this study aligns with previous studies that accounted positive learning outcomes from explicit learning in 2nd language acquisition. There may possibly be various factors adding to the effectiveness of explicit method for learning tenses as experienced in this study. Firstly, by providing the nature of the target language tenses, participants well thought-out of those items pretty much related to their wants and devoted time and energy in getting expertise in them. Secondly experimental group students learned in a systematic manner and got a chance to review and practice their learning in a given scenario. That’s why they outperformed in post-test as compared to the control group participants. So, teachers who have been teaching language are encouraged to include this strategy into their teaching list by giving a learner suitable material and encouraging them to expand their knowledge of target language.

6. Conclusion

This study investigated the effectiveness of explicit method in academic instructional teaching to the ESL Learners in developing their cognitive skills in writing. The findings show that those who were taught explicitly have gained more *accuracy* and performed efficiently than control group participants. The results also offered further empirical confirmation for the effectiveness of explicit learning compared to implicit learning. In this way, explicit learning triggers the sensory motor competence to perform the learners’ efficiently in an academic setting. This research is limited to only Pakistani ESL learners and we are focusing on our single national curriculum (SNC). Pedagogically it implicates that learning is mediated by the human cognitive system that regulates the learning process. If this cognitive motor system can be efficiently regulated, all the ESL learning modules: vocabulary, composition and comprehension will work energetically.

Reference

- Barclay, S., & Schmitt, N. (2019). Current perspectives on vocabulary teaching and learning. *Second handbook of English language teaching*, 799-819.
- DeKeyser, R. M. (1995). Learning second language grammar rules: An experiment with a miniature linguistic system. *Studies in second language acquisition*, 17(3), 379-410.
- Doughty, C., & Williams, J. (1998). Pedagogical choices in focus on form. *Focus on form in classroom second language acquisition*, 3, 197-262.
- Ellis, N. C. (2002). Frequency effects in language processing: A review with implications for theories of implicit and explicit language acquisition. *Studies in second language acquisition*, 24(2), 143-188.

- Ellis, R. (1989). Are classroom and naturalistic acquisition the same? A study of the classroom acquisition of German word order rules. *Studies in second language Acquisition*, 11(3), 305-328.
- Hulstijn, J. H. (2005). Theoretical and empirical issues in the study of implicit and explicit second-language learning: Introduction. *Studies in second language acquisition*, 27(2), 129-140.
- Hyland, K., & Hyland, F. (2006). Feedback on second language students' writing. *Language teaching*, 39(2), 83-101.
- Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. Addison-Wesley Longman Limited.
- Krashen, S. D. (1993). Comments on Stephen D. Krashen's "teaching issues: Formal grammar instruction". The effect of formal grammar teaching: Still peripheral. *TESOL Quarterly*, 27(4), 722-725.
- Li, Y., & Hafner, C. A. (2022). Mobile-assisted vocabulary learning: Investigating receptive and productive vocabulary knowledge of Chinese EFL learners. *ReCALL*, 34(1), 66-80.
- Pienemann, M. (1984). Psychological constraints on the teachability of languages. *Studies in second language acquisition*, 6(2), 186-214.
- Rahem, D. (2022). Verb+ noun collocations with 'do' and 'make' in English language learner texts: A corpus-based study.
- Robinson, P. (1996). Learning simple and complex second language rules under implicit, incidental, rule-search, and instructed conditions. *Studies in second language acquisition*, 18(1), 27-67.
- Ruhi, A. (2001). *Toward operationalizing focus on form in EFL classroom setting*. Unpublished MA thesis, University of Tabriz, Tabriz.
- Schmidt, R. (1992). Awareness and second language acquisition. *Annual review of applied linguistics*, 13, 206-226.
- Schmidt, R. W. (1990). The role of consciousness in second language learning. *Applied linguistics*, 11(2), 129-158.
- Schmidt, R., & Frota, S. (1986). Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese. *Talking to learn: Conversation in second language acquisition*, 237, 326.
- Spada, N. (1997). Form-focussed instruction and second language acquisition: A review of classroom and laboratory research. *Language teaching*, 30(2), 73-87.
- VanPatten, B., & Smith, M. (2022). *Explicit and implicit learning in second language acquisition*. Cambridge University Press.
- White, J. (1998). Getting the learners' attention: A typographical input enhancement study. *Focus on form in classroom second language acquisition*, 85-113.
- Xodabande, I., & Boroughani, T. (2023). Mobile-assisted focus on forms in English for academic purposes instruction: Investigating the impacts on learning academic words.