



**COMPARING THE EFFECTIVENESS OF
INTERLEAVING AND BLOCKED PRACTICE IN
TEACHING ENGLISH SPEAKING SKILLS TO
TERTIARY LEVEL ESL LEARNERS:AN
EXPERIMENTAL STUDY**

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CHAPTER 6

CONCLUSIONS

6.1. Introduction

Task repetition practice in language learning leads to the enhancement of new skills that can be developed into complex skills with time. The present study is an attempt to examine the effectiveness of the two methods of learning a second language- blocked practice and interleaving- at different stages of the program. This research made an effort to measure the differences between blocked practice and interleaving in English interaction, pronunciation, fluency, and vocabulary and grammar performance of the participants in the initial and final rounds of the training sessions. The effect of the progressions during the three rounds as well as the attitude and motivation of the participants were the other areas of investigation in the study. Next, based on the findings of the results the other sections of the chapter are an elaboration of the pedagogical implications followed by the limitations of the research and recommendations for future study in this particular field.

The four research questions are re-stated in this chapter-

1. Is there any significant difference between IL and BP in English interaction, pronunciation, fluency, and vocabulary & grammar performance in the first two rounds of the STSs?
2. Is there any significant difference between IL and BP in English interaction, pronunciation, fluency, and vocabulary & grammar performance in the final round of the STSs?
3. Is there any significant difference between IL and BP in the progression of English interaction, pronunciation, fluency, and vocabulary & grammar performance during the three rounds of the STSs?
4. Is there any significant difference between IL and BP in their effect on the progression of attitude and motivation of the participants towards learning English during the three rounds of the STSs?

6.2. Research Question 1:

Is there any significant difference between IL and BP in English interaction, pronunciation, fluency, and vocabulary & grammar performance in the first two rounds of the STSs?

Experimental research was conducted on the ESL learner participants to examine the English interaction performance of the participants and further study the pedagogical effect of interleaving as well as blocked practice. No significant difference in the effectiveness of blocking and interleaving was observed in the English interaction performance of the L2 learners. Thus, in the initial phase, neither the interleaving group nor the blocked practice group demonstrated significantly better performance in the learning of L2. However, a slight improvement in the case of blocking was found in the interaction performance but, it could not be considered to hold any statistical significance.

The findings of the English pronunciation performance also could not demonstrate any statistically significant difference while studying the effect of blocking and interleaving in an attempt to practice English pronunciation. It was noticed that in the initial phase of learning neither BP nor IL could perform significantly better than the other. Although blocking exhibited a considerably better performance in pronunciation, the variance was not sufficient to be statistically significant.

In an attempt to compare the pedagogical effects of the two methods, i.e., interleaving and blocking on L2 learners' fluency performance, the research showed that both methods bore no statistically significant impact on the progress of English L2 fluency. The training program scheduled for L2 fluency in the initial phase demonstrated that neither group presented a remarkably high degree of fluency improvement in their performance. Even though the rate of fluency development of the learner participants of the blocked practice group was moderately higher than that of the interleaving group, the slight breach in their performance was not statistically significant.

Moreover, considering the retention of the participants' English vocabulary and grammar skills, the pedagogical impact of blocking and interleaving showed no statistically significant difference between the two methods. It was found to be statistically insignificant in the initial phase of the practice sessions. A similar result was also observed in the final phase of learning concerning how these methods affected English vocabulary and grammar learning.

6.3. Research Question 2:

Is there any significant difference between IL and BP in English interaction, pronunciation, fluency, and vocabulary & grammar performance in the final round of the STSs?

The study on the interaction performance during the final stage of the STSs did not exhibit results that hold statistically significant differences between the two groups- blocked and interleaved. The minor rise that was seen earlier in the initial stage of practice persevered in the final phase of learning. The important finding to be noted in this study was that the method of blocking might be more crucial than interleaving in the improvement of L2 learners' interaction performance. The use of blocking may demonstrate its effectiveness as compared to interleaving in the improvement of interaction performance in L2 because the influence of desirable difficulty on learners with little expertise in language ability generates anxiety in the initial performance in interleaving (Bjork, 1994; Porter et al., 2007; Porter & Magill, 2010; Soderstrom & Bjork, 2015).

In addition, the study did not establish substantiation of any significantly different outcomes between the blocked practice group and interleaved group in the final stage of the STSs in the learning of English pronunciation. The slight rise in blocking as seen in the initial stage recurred in the final stage of learning. A significant finding demonstrated in the study was that blocking may thrive in the learning of English L2 pronunciation more than the method of interleaving. Blocking may be more efficacious than interleaving in the learning of L2

pronunciation as mastery in pronunciation requires the identification and noting of shared characteristics among stimuli.

Moreover, the study on the training program in L2 fluency development in the final stages of learning revealed that both groups, i.e., blocked practice and interleaving, did not significantly document the progressive pace of fluency enhancement as the practice sessions progressed. Even though it was still possible to record the negligible growth in the fluency performance of the blocked practice group in the final phase as also observed in the initial one, this slight variation observed between the groups in studying the English fluency performance was not statistically significant. An important observation in the findings of the current research was that if there had been more insistence and engagement in the sessions of the practice series, the slight increase in learners' fluency performance in support of blocking that followed both in the initial phase and the later ones in the program of training might have improved. The method of blocking provides more possibility than interleaving for stable growth in L2 fluency as it encourages the retrieval of stimuli during the repetition of tasks and may proceduralize or automate core linguistic information.

The findings demonstrated in the vocabulary and grammar component showed that the participants in the blocked practice group displayed more complex forms to some extent as well as complex sentence structures in English as compared to the participants in the interleaved group which comply with some earlier studies. As it might be the consequence of the dual effect of high similarity accompanied by benefits of stimuli retrieval, and a level of learning attained by desirable difficulty framework, the participants' learning was enhanced in the blocked condition and they performed slightly better than the ones kept in the interleaved condition.

6.4. Research Question 3:

Is there any significant difference between IL and BP in the progression of English interaction, pronunciation, fluency, and vocabulary & grammar performance during the three rounds of the STSs?

The study could not demonstrate any statistically significant difference in terms of interaction performance between the two groups during the concluding phases of the teaching sessions. In the final stages, the rise in the blocked practice group persisted as was observed in the initial stages. The key finding of the study was that blocked practice might be more effective in enhancing the interaction performance of the participants. This method may be more effective than interleaving because the desirable difficulty effect found in interleaving may create stress during the initial oral performance of L2 learners who possess low language ability (Bjork, 1994; Porter et al., 2007; Porter & Magill, 2010; Soderstrom & Bjork, 2015).

The study showed that the blocked practice group performed better and recorded a reasonably higher score than the participants in the interleaved group in the later phase of the practice program. However, the interleaved group performed noticeably better in the initial phases than the blocked practice group. During the second and third rounds, the participants were required to attempt certain tests and in most of the tests, the blocked group produced English words and statements with very few phonological inaccuracies and mid-clause pauses. The word choices were appropriate and no rigidity was noticed in their utterances. Furthermore, the participants demonstrated complex sentence structures and forms. This benefit of the method of blocking in the present study might have been produced by the effects of high similarity or assistance of stimuli retrieval. Also, the influence of the desirable difficulty framework might have contributed to that context. Nevertheless, no statistically significant difference was noted between the participants of the blocked and the interleaved group in their performance in terms of pronunciation, fluency, vocabulary and grammar.

6.5. Research Question 4:

Is there any significant difference between IL and BP in their effect on the progression of attitude and motivation of the participants towards learning English during the three rounds of the STSs?

In this study, the variances in the effects of blocking and interleaving task scheduling methods were compared and analyzed. These differences were observed keeping in view the five SA criteria of motivation by acquainting the participants with English-speaking practice sessions for three months duration. The study explored the changes in motivation concerning the five SA criteria which are: novelty, pleasantness, coping potential, need significance, and self/ social image by collecting information from the participants in both groups- blocked and interleaved- about their attitude and motivation towards English at every stage of the program. It was observed in the initial phases of task scheduling that both groups demonstrated a considerable loss of motivation yet, only the difference in the SA criteria of coping potential in support of the blocked practice group exhibited a statistically significant result. Whereas, in the final phases of task scheduling, an advanced shift in the participants' L2 attitude and motivation was prominent in the SA criterion, self/social image with certain enhancement in coping potential. The SA criterion of coping potential in support of blocked practice while the other criterion-self/social image in favour of interleaving indicated the difference in to what extent scheduling of tasks affected the progression of L2 attitude and motivation. It's probably safe to conclude that task scheduling may feasibly impact some constructs of L2 attitude and motivation throughout the training program based on the ascending and declining nature of the curve in the progression concerning L2 attitude and motivation.

6.6. Implications of the Study

Unlike the various studies conducted in the past showing the advantage of interleaving on L2 learning (e.g., Brown, 2014; Nakata & Suzuki, 2019; Pan et al., 2019; Soderstrom & Bjork, 2015; Suzuki, 2021; Suzuki et al., 2022) there was no statistically significant difference in the effect of blocked practice and interleaving

on the English interaction, pronunciation, fluency, and vocabulary and grammar of the participants in both groups. Similar to some studies (e.g., Brunmair & Richter, 2019; Carpenter & Mueller, 2013; Dunlosky et al., 2013; Schneider et al., 1998, 2002) that established no significant difference that was statistically substantial in examining the difference concerning the effects of blocked practice and interleaving on participants' L2 performance, the findings of this study hinted two implications- either it directed towards slightly more favourable outcomes for the use of the method of blocked practice in place of interleaving in the three rounds of the STSs or indicated no significant difference as a consequence of the two methods employed in the training sessions on the interaction, pronunciation, fluency, and vocabulary and grammar performance of the participants in all the rounds.

Several pedagogical implications may be derived based on the findings of the research. Firstly, repetitions of tasks where variance is minimized or blocked in order of the sequence as per difficulty level and that has high commonness may be assumed as being more useful than task repetitions where items are mixed and spaced for practice. Secondly, an attempt to add some novelty and surprise elements for the enhancement of learning by disrupting the predictable pattern of task repetition may not be beneficial. This effort might not allow the learners to efficiently take notice of the attentional resources for conceptualizing, formulating, and articulating linguistic knowledge in their working memory that is indispensable for their improvement of L2 interaction, pronunciation, fluency, and vocabulary and grammar. Lastly, the combination and integration of task repetition techniques followed by the designing of proper L2 modules may purposefully generate the dissemination of attentional resources. Since it may acquaint the L2 learners with a particular task during a specific task repetition session following the speech production or bilingual production model, the learning modules developed for L2 learners may further enhance their learning of a second language. Thus, for these categories of pedagogical tasks, the blocked practice may be a better method for the accomplishment of conceptualization, formulation, and

articulation acts. In such acts of linguistic knowledge blocking, rather, may be a better method than interleaving.

6.7. Limitations and Suggestions for Further Study

The present study had some limitations many of which were interconnected with each other. Firstly, the online mode was adopted for conducting the STSs which was challenging to gain certain advantages. To be more specific, the interpersonal connection, which is an important requirement, between the teacher and the participants could not be achievable. It was observed in both groups that there was a lack of motivation among the learners. That was brought on by the limitations of online communication. Moreover, there existed frequent interruptions amid the practice sessions. Infrastructure problems such as power cuts and issues related to the internet system during the STSs posed a hindrance in the study. It created frequent disturbances during the sessions. Secondly, it was challenging for the teacher to introduce and create elements of interest in the lessons. Even the presence of all the participants during the practice sessions was doubtful. The teacher was not convinced whether the learners were consistent in attending all the sessions. Further, certain dropouts in all the rounds of the STSs might have been triggered by the absence of interpersonal communication between the teacher and the learners due to the online mode of study. Finally, it may be emphasized that the arrangement of mutual consultation and interaction in person rather than the online approach used in the current research may lead to a more motivated and attentive study. This might enable us to have more insight and thorough observations and arrive at a convincing conclusion on the effect of blocking and interleaving on interaction, pronunciation, fluency, and vocabulary and grammar performance in L2.
