# CHAPTER 4

# RESULTS AND INTERPRETATION

## 4.1. Introduction

Present-day researchers are concerned about the impact of scheduling and manipulating task repetition practices, particularly in the areas of L2. As mentioned in the introductory chapter, they carried out several studies to examine whether it was intended to enhance L2 interaction, pronunciation, fluency, and vocabulary and grammar retention (e.g., Ahmadian, 2011; Carpenter & Mueller, de Jong & Perfetti, 2011; 2013; Miles, 2014; Nakata & Suzuki, 2019; Schneider et al., 1998, 2002; ; Suzuki et al., 2022; Tavakoli & Hunter, 2018; Thai & Boers, 2016). The present study made an effort to examine the change in the oral English proficiency of the participants in the interleaving and blocked practice groups with the main goal of measuring their differences in performance and achievement. Additionally, the study also attempted to measure whether the two task scheduling methods resulted in variations in performance in the level of speaking proficiency of the participants at the tertiary level. Moreover, the study also examined the variations in L2 attitudes and motivations of the participants. An attempt has been made to present a comprehensive answer and analysis of the four research questions of the study, as reaffirmed 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 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?

### 4.2. 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?**

#### *4.2.1. Difference in Interaction Performance in the Initial Rounds of the STSs*

In the initial rounds, the difference in the effect of blocking and interleaving of the two groups of learner participants was measured in the study. The first component to be analyzed was the English interaction skills where the scores secured by IL and BP were taken into account. These English interaction scores were calculated and the mean values were compared and analyzed in PT 1 and IMT (see Table 4.1). There was no difference in performance in both groups in PT 1. Their English interaction performance was almost alike as the mean value of IL was 2.82 and that of BP was 2.96. In IMT, this similarity in performance was found while calculating their test scores in English interaction performance as the mean value of IL was 2.47 while BP was 2.73. In the initial two rounds of the STSs, there was a slight rise in the case of BP in PT 1 (2.96) and IMT (2.73). This difference in the test may have occurred due to the variation in the approaches of the assessors toward the evaluation principles and the influence of their perspectives on the assessment criteria. Another reason may be the element of an outlier that caused the slight upsurge in the BP. While calculating the mean values, it was observed that the *SD*s-1.99 and 1.84 in PT 1 and IMT in BP seemed to be slightly higher than the *SD*s-1.35 and 1.25 of the mean values in PT 1 and IMT in IL. However, the impact of the outlier in BP on the group's average English interaction scores was remarkably minimal. In the initial phase of the STSs, no statistically significant difference was observed in the English interaction skills between IL and BP regardless of these minor variations in the values of the mean of the English interaction scores calculated in PT 1 and IMT. The scores of English interaction between IL and BP were compared and the value of $p$ of this comparison was .74. It also demonstrated a low $F$ value of .113 and an effect size of .004 which was not significant.

**Table 4.1**

*Differences in Interaction Performance in the Initial Two Tests*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | *df* | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Interaction | OI | IL | 2.82 (1.35) | 2.47 (1.25) | 1 | .113 | .74 | .004 |
| | | BP | 2.96 (1.99) | 2.73 (1.84) | | | | |

[a]Partial Eta[2]

### *4.2.2. Difference in Pronunciation Performance in the Initial Rounds of the STSs*

The mean values of the scores obtained by the participants in PT 1 and IMT in both groups were taken into account for comparison and analysis. This statistical analysis was done to measure the difference in the degree of learning in English pronunciation proficiency. The interleaving and blocked practice groups in PT 1 attained mean pronunciation scores (see Table 4.2) of 2.23 and 2.90 respectively. It was remarkable that after the initial round of the training sessions, the participants in the blocked practice group performed better in the pronunciation test conducted in the first place. The fact highlighted in this context is that after the recruitment test (RT) results were analyzed, the participants were divided into two groups- blocked practice and interleaving and it was made sure that each group was distributed with students who had similar English proficiency levels in the pronunciation component. Similarly, in IMT, the resemblance of the same pattern observed in PT 1 was noted with the interleaving and blocked practice groups achieving mean pronunciation scores of 1.96 and 2.67 respectively. At the end of the first two rounds, a substantial drop in the learner's performance was perceived, covering the mean scores of 2.23 in PT 1 to 1.96 in IMT in the case of the interleaving group and from 2.90 in PT 1 to 2.67 in IMT in the blocked practice group. The reason for the decline in mean values of the pronunciation scores might have occurred as a result of the assessors' subjective approach toward the assessment criteria used for the evaluation of the performance of the learners. Additionally, the *SD*s- 1.08 in PT 1 and 1.07 in IMT- of the pronunciation scores in the interleaving group were higher than the *SD*s-1.72 in PT 1 and 1.64 in IMT- in the blocked practice group. The rise in the scores suggested that the slightly better performance of the participants in the blocked practice group may have been caused by the presence of an outlier in the group. Despite these minor variations in pronunciation scores between the performances of the two groups, no statistically significant difference was observed in the initial two rounds of experimentation. Since the *p*-value obtained was .206 between the groups it marked no statistical significance. Moreover, the effect size of .063 and the *F* value of 1.69 were extremely low.

**Table 4.2**

*Differences in Pronunciation Performance in the Initial Two Tests*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | *df* | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Pronunciation | OI | IL | 2.23 (1.08) | 1.96 (1.07) | 1 | 1.69 | .206 | .063 |
| | | BP | 2.90 (1.72) | 2.67 (1.64) | | | | |

[a]Partial Eta[2]

### *4.2.3. Difference in Fluency Performance in the Initial Rounds of the STSs*

The differences in performance between the interleaving group and the blocked practice group were obtained by comparing the mean variations of the scores of the English fluency test attained by IL and BP in the two tests taken initially, i.e., PT 1 and IMT. The participants were required to attempt the tests after the completion of the first two rounds of the STSs (see Table 4.3). After calculating the performance scores of the participants in PT 1, the mean values of IL and BP were obtained which were 2.39 and 2.81 respectively. The distribution of groups was carried out among the participants after an analysis of their scores of fluency on the RT. The group division after an analysis of RT was done to ensure the enrolment of participants with equivalent proficiency levels on average. It was observed that the BP group performed better after the completion of the first round of experimentation. Similar to this performance in PT 1, the participants of the BP group in IMT performed the same where the BP group's score was higher than that of the IL group. The test-IMT was arranged following the end of the second round. In IMT, the IL and BP obtained fluency scores including mean values of 1.98 and 2.77 respectively. In the first two rounds of the STSs, it was remarkable that the participants in the IL and BP groups met a minor fall in performance. IL group scored 2.39 in PT 1 and 1.98 in IMT. Besides, the scores of the BP group too had a modest decline from 2.81 in PT 1 to 2.77 in IMT. The subjectivity in the assessment criteria of the assessors may have affected the slight deviations in assessment. Their influence may further cause a drop in the mean values of the scores in the component of fluency. The observation that the *SD*s for BP in PT 1 and IMT were 1.64 and 1.67 respectively that of IL was 1.13 and 1.04 respectively for the same two tests suggested that there might be an outlier in BP causing this variation. An analysis between the two groups in PT 1 and IMT didn't show a statistically significant difference regardless of the minor variations in fluency performance between IL and BP. A repeated measures ANOVA test produced a *p*-value of .26. The *F*-score was relatable as it was very low, i.e., 1.30. This score corresponded to a low effect size of .05.

**Table 4.3**

*Differences in Fluency Performance in the Initial Two Tests*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | *df* | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Fluency | OI | IL | 2.39 (1.13) | 1.98 (1.04) | 1 | 1.30 | .26 | .050 |
| | | BP | 2.81 (1.64) | 2.77 (1.67) | | | | |

[a]Partial Eta$^2$

### *4.2.4. Difference in Vocabulary & Grammar Performance in the Initial Rounds of the STSs*

In the first rounds of the STSs, the repeated measures ANOVA test was used to make a comparison between IL and BP on the retention of English vocabulary and grammar instructions. The calculation was done by taking the English vocabulary and grammar scores of the participants in the interleaved group as well as the blocked practice group in the initial two tests- PT 1 and IMT. These two tests were conducted at the beginning and end of the first round of the STSs. The mean values and *SD*s were calculated from the scores of these tests. In the pre-test or PT 1, the English vocabulary and grammar scores of the mean for IL was 2.11, and for BP it was 2.34 (see Table 4.4). A day before the beginning of the first round of the STSs, it was noted that the IL and BP participants' achievement was almost equal in remembering English vocabulary and grammar rules in PT 1. The interference of an outlier in BP may have led to a higher *SD* of 1.45 than the *SD* of 1.01 noted for IL. This may have added to a somewhat higher mean value in support of BP. However, the mean value in IL-1.70 specified its drop in performance in the intermediate test or IMT. The mean was calculated from the English vocabulary and grammar scores obtained from IMT which was taken in the middle of the STSs after wrapping up the second round. While, the BP secured an average score in the English vocabulary and grammar performance on the same test and remained the same, i.e., 2.34 similar to its performance in the pre-test. Since the BP's *SD* score stayed higher at 1.45 than the *SD* of .10 observed in IL, the influence of an outlier even in the IMT on the BP's average performance cannot be overlooked. In this regard, the minor disparities observed in the assessor's subjective nature of the assessment may have also given way to the fall in the scores of the participants' performance in IL as compared to BP. In the study on the retention of English vocabulary and grammar rules between IL and BP, no statistically significant difference was found despite this decline in the scores in IL. The *p*-value was insignificant which was .18, also denoted a low *F*-value of 1.90. The effect size of .07 was considered insignificant as well.

**Table 4.4**

*Differences in Vocabulary & Grammar Performance in the Initial Two Tests*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | *df* | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Vocabulary & Grammar | OI | IL | 2.11 (1.01) | 1.70 (.10) | 1 | 1.90 | .18 | .07 |
| | | BP | 2.34 (1.45) | 2.34 (1.45) | | | | |

[a]Partial Eta$^2$

### 4.3. 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?**

#### *4.3.1. Difference in Interaction Performance in the Final Rounds of the STSs*

To measure the performance between IL and BP in the final phase of the STSs, the English interaction scores obtained by IL and BP in IMT and PT 2 were calculated and a comparison and analysis was done taking their mean values (see Table 4.5). A point to be considered here is that the mean values of IL and BP in IMT were recalculated. This calculation was done again as two participants from IL and two from BP- altogether four of them did not turn up in the test, PT 2. The four participants withdrew from the STSs subsequently at the end of the third round and were excluded from the recalculated mean values of the English interaction scores of IL and BP in IMT. Therefore, the mean scores of the English interaction performance in IMT (see Table 4.1) in both groups changed marginally from the mean scores in IMT displayed here (see Table 4.5). Considering these minor circumstances, it can be assumed that the dearth of English interaction scores of the dropouts should not have an impact on the overall pattern of the scores of both groups witnessed in the first two rounds of the STSs. After eliminating the dropouts' interaction scores, the IL and BP obtained mean values of 1.92 and 2.54 respectively in their English interaction performance in IMT. There was an increase in the mean values both in IL and BP. The growth in IL score was from 1.92 to 2.43 and, in the case of BP it rose from 2.54 to 2.74. The display of these scores in IL and BP demonstrated that both groups performed marginally better in PT 2 than in IMT. Contrary to the minor drop observed in their interaction scores during the initial phase of the STSs (see Table 4.1), an increase was noticed in the mean values in PT 2 of the English interaction scores (see Table 4.5). Nevertheless, another fact to be contemplated upon is the presence of a noticeably greater difference in the mean scores of English interaction was not exhibited by the two groups in IMT and PT 2.

**Table 4.5**

*Differences in Interaction Performance in the Last Two Tests*

| Speaking skill | Test mode | Group | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *df* | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Interaction | OI | IL | 1.92 (1.52) | 2.43 (1.81) | 1 | .51 | .483 | .017 |
| | | BP | 2.54 (2.01) | 2.74 (2.13) | | | | |

[a]Partial Eta[2]

In this context too, the dual impact of the partialities of the four assessors' standard of assessment accompanied by the existence of an outlier in BP affecting the interaction scores in BP cannot be ignored. A minor difference in the mean values of the English interaction scores between the *SD*s of IL and BP was seen in IMT and PT 2. The *SD* of IL in IMT was 1.51 and 1.81 in PT 2, whereas, BP achieved an *SD* score of 2.01 in IMT and 2.13 in PT 2. Thus, the difference in the skill of English interaction between IL and BP based on this analysis cannot be considered statistically significant, and the *p*-value was 0.483. Moreover, the *F*-value of .51 and the effect size of .017 were exceedingly low (see Table 4.5).

### *4.3.2. Difference in Pronunciation Performance in the Final Rounds of the STSs*

After the calculation of the English pronunciation scores in IMT and PT 2 (see Table 4.6) obtained by the participants of interleaving and blocked practice groups, an analysis was done and mean values were considered to arrive at the results of this study. The mean values presented in Table 4.6 were measured from the scores secured by the participants in the pronunciation test-IMT after four learner participants were excluded- two from IL and two from BP. They had to be omitted from the groups as it was obvious that they decided not to continue with the teaching sessions until the third round. This significant factor was to be taken into attention as consequently, the mean values displayed here for IMT are a bit dissimilar from the mean values in Table 4.2 for IMT. In both groups, there are an equal number of dropouts, so it is anticipated that the pattern noticed in the rate of progress in the initial two rounds (see Table 4.2) will not be disturbed by the lack of the outliers' scores in the calculation of mean value applied in Table 4.6. The rate of learning English pronunciation among the participants in the final phases of the teaching sessions was determined by measuring the mean values of the scores of pronunciation tests in IMT and PT 2. The mean values were obtained from the participants of interleaving and blocked practice groups and the values were compared and analysed.

**Table 4.6**

*Differences in Pronunciation Performance in the Last Two Tests*

| Speaking skill | Test mode | Group | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *df* | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Pronunciation | OI | IL | 1.53 (1.26) | 1.94 (1.51) | 1 | 1.121 | .298 | .036 |
| | | BP | 2.21 (1.80) | 2.48 (1.99) | | | | |

[a]Partial Eta$^2$

After withdrawing the scores of the dropouts from IL and BP, the mean values of the pronunciation scores attained in IMT by the participants in IL was 1.53 and that of BP was 2.21. There was an increase in the mean pronunciation scores in PT 2 among the participants in both groups. This improvement in the value of 1.94 in the interleaving group and 2.48 in the blocked practice group hinted towards a slight enhancement in their performance. In both groups, the participants exhibited progress in their pronunciation scores in PT 2 (see Table 4.6), contrary to what was noticed in the progress rate in the beginning phases of the teaching sessions (see Table 4.2). However, this improvement or rise observed in the participants' scores may be assumed to be the effect of the assessors' biases during the evaluation process since the variation in the mean values of the two test scores in IL and BP cannot be considered exponential. As the *SD*s in IMT (1.80) and PT 2 (1.99) of the values of the mean scores in the English pronunciation achieved by the participants in the blocked practice group in both tests were again greater than the *SD*s in IMT (1.26) and PT 2 (1.51) of the mean values derived from the scores of pronunciation tests by the interleaving group in these two tests. It is, therefore, possible to consider the effect of the outlier in the blocked practice group contributing to this variation. In the final phase of the practice sessions, the difference measured in the degree of improvement between the two groups in English pronunciation is not statistically significant indicating a *p*-value of .298. The low effect size of .036 along with the low *F*-value of 1.121 contributed to a statistically insignificant result.

### *4.3.3. Difference in Fluency Performance in the Final Rounds of the STSs*

To analyze and comprehend the diverse aspects of English fluency, the procedure of calculating the English fluency scores of interleaved and blocked practice groups and analyzing the mean values in IMT and PT 2 was adopted in the study (see Table 4.7). As a result of the dropouts of four participants out of whom two members in each group chose not to participate in the teaching sessions of the third round, the calculation of the mean scores in the final phases was re-done. The scores attained by the four participants were eliminated and the mean values of the

**Table 4.7**

*Differences in Fluency Performance in the Last Two Tests*

| Speaking skill | Test mode | Group | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *df* | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Fluency | OI | IL | 1.54 (1.24) | 2.09 (1.60) | 1 | 1.12 | .30 | .04 |
| | | BP | 2.34 (1.88) | 2.55 (2.03) | | | | |

[a]Partial Eta[2]

fluency performance scores were thus calculated once again. As a result, the mean values of IL and BP in the fluency performance in IMT offered in the previous section (see Table 4.3) vary to some extent from the mean values as shown in Table 4.7. A supposition can be made that the slight variations shown in Table 4.7 with regards to the fluency performance undoubtedly recorded an identical pattern seen in the initial phase of the STSs (see Table 4.3) by holding the same number of dropouts and keeping the outliers in IL as well as BP.

In an attempt to compare and analyze the mean values of the scores of English fluency attained by the participants in IMT and PT 2, the fluency performance of IL and BP in the last phase of the teaching sessions was measured. The mean scores of IL were 1.54 and that of BP was 2.34 after eliminating the fluency performance scores of the dropouts in IMT. A rise in the values of fluency performance in IL displayed a mean value of 2.09 and 2.55 for BP in PT 2. The performance of both IL and BP was somewhat better in PT 2 than in IMT. Participants in both groups demonstrated enhancement in the mean values of their fluency performance scores in the final phase of the STSs which was in contrast to the differences noted in the initial phase of the practice sessions. It's noteworthy that the difference between the mean values considered in IMT and PT 2 in IL and BP was not statistically significant. It thereby implied that slight differences in the subjective approach of the assessors towards the performance of the participants during the assessment may have contributed to this modest progress in fluency development. As such the *SD*s of BP- 1.88 in IMT and 2.03 in PT 2- were more than the *SD*s of IL-1.24 in IMT and 1.60 in PT 2. The higher mean values may be the result of the outliers in BP that influenced the English fluency performance scores in both tests. A repeated measures ANOVA test was run to measure the mean values of the fluency scores in IMT and PT 2 which yielded a *p*-value of .30. This low value was an indication that there was no statistically significant difference in English fluency performance between the participants of IL and BP. The *F*-value of 1.12 was very small with a low effect size of .04.

### *4.3.4. Difference in Vocabulary & Grammar Performance in the Final Rounds of the STSs*

An analysis was done to measure the mean values and standard deviations of the English vocabulary and grammar scores secured by IL and BP in the IMT and the post-test or PT 2 after removing the scores of the four dropouts. Two dropouts from IL and two from BP were taken out to measure the degree of dissimilarity in their performances (see Table 4.8) in the two tests. In analyzing the scores of English vocabulary and grammar performance of the participants that were used to measure the performance variations in the final stage of the teaching sessions, four dropouts showed up at different phases of the teaching sessions-particularly in the second round in BP and the third round of the training sessions in IL. For that reason, the dropouts had to be removed while calculating and making an analysis of performance. In an attempt to analyze the mean values and *SD*s in the initial stage of the STSs (see Table 4.4) presented for IMT were not used in the final phase (Table 4.8) in analyzing the performance of the participants.

After erasing the scores of the dropouts, the mean score of the English vocabulary and grammar of IL was 1.31 and that of BP was 1.98 during the intermediate test or IMT. The *SD* of 1.62 in BP specified the existence of the outlier in BP since it was higher than the *SD* in IL i.e., 1.13. The values of the mean in the post-test or PT 2, after analyzing the English vocabulary and grammar scores increased in both groups. The IL and BP scores rose to 1.68 and 2.30 respectively. It is noteworthy that in both groups the mean values increased in PT 2. Additionally, the comparatively advanced progress in support of BP could be disregarded because the *SD* in BP was 1.84 which was higher than the *SD* in IL which was 1.35. The slight rise indicated the presence of the outlier. The slight differences in the subjective assessment inclinations towards the assessment of the four assessors may have also contributed to the slight rise in the mean values observed in both groups. In the final phases of the STSs, no statistically significant difference was noticed between IL and BP in terms of recalling English vocabulary and grammar rules. A repeated measures ANOVA test was run to compare the *p*-values of both

groups. The *p*-value was .227 which was characterized by a low *F*-value of 1.52. The effect size of .048 was not statistically significant.

### 4.4. Research Question 3:

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

#### *4.4.1. Difference in the Progression of Interaction Performance during the STSs*

To compare the mean values in the three tests, the English interaction scores of only those participants were used for calculation who took part in all three rounds of the training sessions in the interleaving as well as the blocked practice groups. This has been also mentioned in the section on the difference in the scores of English interaction in the final stage of the STSs above (see Table 4.5). However, the scores of English interaction performance in PT 2 were not included in the final calculation including the mean values comparison of the interaction scores in the three tests. This adjustment was made because two dropouts from the second round of the STSs returned to the sessions in the third round. As a result, the mean values obtained from the English interaction scores for the three tests displayed here (see Table 4.9) varied slightly from the mean values of the interaction scores that were calculated previously for the three tests (see Table 4.1 and Table 4.5). It is again reiterated that the variation noticed in the values of the mean after the calculation of the English interaction scores (see Table 4.9) excluding the dropouts should continue to reproduce the general improvement style in the performance of participants' English interaction (see Table 4.1 & Table 4.5) across the three tests. After eliminating the English interaction scores of the dropouts, the mean values of the scores of English interaction were 2.82 in PT 1, 2.46 in IMT, and 3.12 in PT 2 in the case of IL. Similarly, when the English interaction scores of the dropouts were removed, a similar pattern like that of IL could be seen in the mean values of BP with regards to the English interaction scores in the three tests. In PT 1, IMT, and PT 2, the corresponding mean values were 2.98, 2.82, and 3.09 respectively.

**Table 4.8**

*Differences in Vocabulary & Grammar Performance in the Last Two Tests*

| Speaking skill | Test mode | Group | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *df* | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Vocabulary & Grammar | OI | IL | 1.31 (1.13) | 1.68 (1.35) | 1 | 1.52 | .227 | .048 |
| | | BP | 1.98 (1.62) | 2.30 (1.84) | | | | |

[a]Partial Eta[2]

**Table 4.9**

*Progression in Interaction Performance in the Three Rounds of the STSs*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Interaction | OI | IL | 2.82 (1.35) | 2.46 (1.25) | 3.12 (1.40) | .061 | .81 | .003 |
| | | BP | 2.98 (1.96) | 2.82 (1.86) | 3.09 (2.01) | | | |

[a]Partial Eta$^2$

In contrast to what was seen in the mean values of the English interaction scores for both IL and BP in PT 1 and IMT, the mean values of the scores of English interaction for IL were somewhat more advanced than BP's mean value obtained from the interaction scores in PT 2. However, it is adequate to be considered important as it is not statistically significant. It may be understood from this observation that once again the subjective assessment choices of the four assessors may have influenced the results. Even in this case, an outlier's existence in BP could not be ruled out as there was a slight increase in the *SD*s in the mean values of BP which are 1.96, 1.86, and 2.01 as compared to the *SD*s of the mean values of IL which are 1.35, 1.25, and 1.40 in the three tests. However, it was prominent that there was no statistically significant difference at any stage of the STSs. This was noted for the mean values of the interaction scores in all three tests of IL and BP i.e., PT 1, IMT, and PT 2. Following the statistical comparison, it was found that the *p*-value of .81, the *F*-value of .061, and the effect size of .003 were all very low.

### *4.4.2. Difference in the Progression of Pronunciation Performance during the STSs*

The scores of pronunciation performance were obtained only by those participants who participated in the STSs throughout the three rounds. To find out the mean values only their scores were considered (see Table 4.10) which was also described in the section on differences in the rate of English pronunciation learning in the final phases of the STSs. When a comparison was done after calculating the mean values signifying the progression rate through all three tests, the PT 2 scores of the two dropouts from the first round who joined again in the third round of the STSs were not included. As a result, the mean values of the three tests-PT 1, IMT, and PT 2 shown here (see Table 4.10) are different from the mean values shown earlier (see Table 4.2 and Table 4.6). Thus, the variation seen in the values of mean that result from excluding the dropouts should still be able to show the general style in the progression rate in learning English pronunciation (see Table 4.2 and Table 4.6), as there are only a few dropouts observed in this regard.

**Table 4.10**

*Progression in Pronunciation Performance in the Three Rounds of the STSs*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Pronunciation | OI | IL | 2.23 (1.08) | 1.96 (1.07) | 2.50 (1.22) | 1.66 | .211 | .07 |
| | | BP | 2.98 (1.65) | 2.78 (1.61) | 3.10 (1.76) | | | |

[a]Partial Eta[2]

After excluding the dropouts, a recalculation of the results was done and it was found that the mean values of the scores of English pronunciation obtained by IL in PT 1, IMT, and PT 2 were 2.23, 1.96, and 2.50 respectively. However, after recalculation and elimination of the dropouts, the mean values of the scores of English pronunciation obtained by BP in PT 1, IMT, and PT 2 were 2.98, 2.78, and 3.10 respectively. The occurrence of an outlier for another time in the BP may account for the marginally greater rise in the mean values in all three pronunciation tests of BP. In this case, too, the *SD*s of 1.65, 1.61, and 1.76 obtained from the mean values of BP were seen as more advanced than that of IL since the *SD*s of the mean values were 1.08, 1.07, and 1.22 signifying the possibility of an outlier's influence. In IMT, there was a minor drop in the mean values for both IL and BP. The decline went from 2.23 to 1.96 in IL and from 2.98 to 2.78 in BP. This shift in the mean values may have been caused by the four assessors' subjective attitudes while assessing the participants. There was also a slight increase in the mean values for both groups in PT 2 which may be caused by the same factor. The growth was seen from 1.96 to 2.50 in the case of IL and 2.78 to 3.10 in the case of BP. There was no statistically significant difference found in the participants' pronunciation performance when a comparison was done between both groups concerning the mean values of the English pronunciation scores in PT 1, IMT, and PT 2. The *p*-value obtained from the comparison was .211. Moreover, the effect size was .07 demonstrating a low *F*-score of 1.66.

### *4.4.3. Difference in the Progression of Fluency Performance during the STSs*

The scores of English fluency performance were calculated and the mean values were taken only for those participants in IL and BP who were constant in attending the sessions throughout the three rounds of STSs. So, only their scores were taken into account for the comparison and analysis to measure the difference in the participants' progress in the English fluency performance in both groups (see Table 4.11). That was done because two participants from each group, altogether four participants decided not to continue the fluency sessions at various stages. Even though two dropouts in IL withdrew after PT 2 again joined the teaching

sessions in the third round, the scores of their English fluency performance were not included in the calculation of the final mean values of all three tests. For this reason, a variation is noticed in the mean values of the scores of fluency performance obtained by IL and BP in the three tests- PT 1, IMT, and PT 2 shown here (see Table 4.11) from the mean values of the scores of fluency performance in the previous sections on fluency (see Table 4.3 & Table 4.7) for the similar three tests. Yet, this slight difference observed between the mean fluency scores in addition to dropouts and the mean fluency scores eliminating the dropouts may not affect the difference in the average rate of progression seen during the three rounds of the STSs as the number of dropouts was very low.

After working on the fluency scores a recalculation of the scores was done by removing the dropouts' scores. When the mean values of the participants in IL were measured, it was found that IL achieved 2.39 in PT 1, 1.98 in IMT, and 2.69 in PT 2. Following the elimination of the dropouts in BP, the scores of fluency performance of BP were recalculated and the mean values of PT 1 were measured to be 2.85, IMT was 2.85, and PT 2 was 3.17. The *SD*s of BP were higher than the *SD*s of IL and this rise might have been contributed by an outlier in BP that might have led to a relatively higher increase in the mean values of BP's fluency scores in all three tests-PT 1, IMT, and PT 2. So, the values of *SD*s for BP were 1.55, 1.61, and 1.77 and for IL the values of *SD*s were 1.13, 1.04, and 1.27. Additionally, the slight drop in the mean values of the scores in fluency performance in IL concerning IMT might be attributed to the slight variation in the subjective assessment standards of the four assessors. This drop in IL occurred from 2.39 to 1.98. Other than that, both IL and BP showed an increase in the mean values of the scores of English fluency performance in PT 1 and PT 2. This rise could be observed in IL from 2.39 to 2.69 and it rose from 2.85 to 3.17 in BP. Nevertheless, the comparison of the mean values did not demonstrate a statistically significant difference between IL and BP in terms of their performance in English fluency. From the repeated measures ANOVA test the *p*-value was found to be .29, with a very low *F*-score of 1.16. The effect size of .05 was also very low.

**Table 4.11**

*Progression in Fluency Performance in the Three Rounds of the STSs*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Fluency | OI | IL | 2.39 (1.13) | 1.98 (1.04) | 2.69 (1.27) | 1.16 | .29 | .05 |
| | | BP | 2.85 (1.55) | 2.85 (1.61) | 3.17 (1.77) | | | |

[a]Partial Eta[2]

### *4.4.4. Difference in the Progression of Vocabulary & Grammar Performance during the STSs*

It was found at different stages of the STSs that four participants decided not to join all the sessions in the three rounds. For that reason, the English vocabulary and grammar scores of only those participants were taken from IL and BP who were consistent in attending the sessions and joined from the first round. This consistency was carried through the second round up to the third round of the STSs. A calculation of their scores was done to make a comparison of the two groups' rates of progression. Although two participants from BP who did not continue the sessions after the end of the first round of the STSs joined the sessions again in the third round, a decision was made not to include their English vocabulary and grammar scores in the final calculation as well as analysis of the scores. That is why, to compare the progression rate between the groups in all three rounds of the STSs (see Table 4.12), the mean values of the groups in the initial and final phases of the STSs as shown in the portion on their differences (see Table 4.4 & Table 4.8) were not considered. The rate of dropouts is quite low, so the difference might not be significant between the values of mean which was calculated by considering and eliminating the participant's scores of English vocabulary and grammar as compared to the average progression rate seen separately in the initial and final stages of the STSs. In IL, the mean values of the scores achieved in the pre-test or PT 1 were 2.10, the intermediate test or IMT was 1.70, and the post-test or PT 2 score was 2.17. A recalculation of these mean values was done after taking out the scores of English vocabulary and grammar of the two dropouts. Similar to this, the performance of BP's English vocabulary and grammar performance was assessed and their mean values were calculated once again without taking into account the scores from the two dropouts in this group. So, BP's mean value showed up as 2.88 in PT 1, 2.43 in IMT, and 2.90 in PT 2. Moreover, the *SD*s of 1.62 in PT 1, 1.42 in IMT, and 1.62 in PT 2 noted down for BP were higher than the *SD*s in IL in the three tests which were 1.01 in PT 1, 1.10 in IMT, and 1.12 in PT 2. The rise in BP's mean values might be caused by the interruption of an outlier in the group. In the first two tests, the study found a slight

drop in the participants' performance in IL and BP. The decline went from 2.10 to 1.70 in IL, whereas BP showed a decline from 2.88 to 2.43. On the contrary, the final test demonstrated a slight rise in the performance of the participants. The rise was observed in IL from 1.70 to 2.17 and in BP it rose from 2.43 to 2.90. These variations in both groups might be explained by the four assessors' assessment standards leading to partialities in the assessment that might have caused differences in the scores of the participants. Other than that, during the three rounds of the STSs, there was no statistically significant difference seen in the two groups concerning the rate of learning the rules of English grammar and vocabulary. When a repeated measures ANOVA test was done, the comparison's *p*-value, .17 was very small which corresponds to a low *F*-value of 2.05 with an effect size of .09.

### 4.5. 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?**

#### *4.5.1. Differences in L2 Attitude and Motivation in the Initial Phase of the STSs*

In this current study, the first research question with regards to attitude and motivation was- is there any significant attitudinal and motivational difference towards English language learning in the SA criteria of N, P, CP, NS, and SI between BP and IL in the initial phase of the STSs? This question's objective was to determine how blocking and interleaving differed in affecting the participants' attitude and motivation towards English language learning at the beginning of the program of task scheduling. These differences in attitude and motivation were measured by comparing and analyzing the mean values of the responses of the participants in BP and IL. The responses were gathered using AMTB 1 and FB 1. The responses of the participants from BP and IL were collected using AMTB 1 and FB 1 to examine the five SA criteria of motivation.

**Table 4.12**

*Progression in Vocabulary & Grammar Performance in the Three Rounds*

| Speaking skill | Test mode | Group | PT 1 *M* (*SD*) | IMT *M* (*SD*) | PT 2 *M* (*SD*) | *F* | Sig. | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| Vocabulary & Grammar | OI | IL | 2.10 (1.01) | 1.70 (1.10) | 2.17 (1.12) | 2.05 | .17 | .09 |
| | | BP | 2.88 (1.62) | 2.43 (1.42) | 2.90 (1.62) | | | |

[a]Partial Eta[2]

These include N, P, CP, NS, and SI and a comparison and analysis of all the mean values of the five SA criteria was done in the study (see Table 4.13). The mean values of IL in AMTB 1 were 5.31, 5.10, 5.15, and 5.05 against the SA criteria of N, P, NS, and SI respectively. The mean values of BP were almost the same as that of IL which measured 5.09, 5.13, 5.13, and 5.00 which correspond to the SA criteria of N, P, NS, and SI respectively. However, CP's mean value in IL was 3.66 which was a bit smaller than that of the mean value of CP in BP i.e., 4.10. In the case of FB1, most of the SA criteria did not demonstrate the rate of attitude and motivation on a higher note which was in contrast to AMTB 1. However, the mean values of IL in N, P, NS, and SI were 3.59, 3.72, 3.64, and 3.63 respectively which were somewhat lower than BP's mean values in the SA criteria of N, P, NS, and SI that measured 4.07, 4.27, 4.12, and 4.13 respectively. In comparison to the mean values noted down for AMTB 1 for the CP criterion, the mean values of 4.04 for BP and 3.50 for IL in the CP criterion did not differ significantly. However, this shift in the mean values in the four SA criteria of N, P, CP, and SI from AMTB 1 to FB 1 in support of BP did not hold statistical significance. The differences in the change in attitude and motivation of the participants between BP and IL bore very low *p*-values. This was noted in the four SA criteria- N, P, NS, and SI where it represented *p*-values of .429, .762, .957, and .892 respectively. This was also mirrored in the low *F*-scores in the criteria of N, P, NS, and SI which measured .646, .094, .003, and .019 respectively. The effect sizes were also very low- .024, .004, .000, and .001 against N, P, NS, and SI. However, it is to be noted that there was a statistically significant difference between BP and IL in the shift of the SA criterion of CP from AMTB 1 to FB 1. Thus, there occurred a variation in the comparison of the *p*-value of .004. The *F*-score bore a comparatively higher value of 10.25 with an effect size of .283.

**Table 4.13**

*Differences in Attitude & Motivation in AMTB 1 and FB 1*

| SA variables | Group | AMTB 1 *M* (*SD*) | FB 1 *M* (*SD*) | *df* | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|
| N | IL | 5.31 (.46) | 3.59 (1.58) | 1 | .646 | .429 | .024 |
| | BP | 5.09 (.57) | 4.07 (1.26) | | | | |
| P | IL | 5.10 (.52) | 3.72 (1.49) | 1 | .094 | .762 | .004 |
| | BP | 5.13 (.55) | 4.27 (1.19) | | | | |
| CP | IL | 3.66 (.56) | 3.50 (1.48) | 1 | 10.25 | .004 | .283 |
| | BP | 4.10 (.45) | 4.04 (1.26) | | | | |
| NS | IL | 5.15 (.29) | 3.64 (1.56) | 1 | .003 | .957 | .000 |
| | BP | 5.13 (.46) | 4.12 (1.31) | | | | |
| SI | IL | 5.05 (.71) | 3.63 (1.60) | 1 | .019 | .892 | .001 |
| | BP | 5.00 (.69) | 4.13 (1.34) | | | | |

[a]Partial Eta$^2$

### *4.5.2. Differences in L2 Attitude and Motivation in the Final Phase of STSs*

In the final phase, the research question posed was- is there any significant attitudinal and motivational difference towards English language learning in the SA criteria of N, P, CP, NS, and SI between BP and IL groups in the final phase of the STSs? This question's objective was to compare blocking and interleaving in terms of how the participants' attitude and motivation in BP and IL was affected during the final rounds of the teaching sessions.

To find the answer to this question, the mean values of the participants' responses were gathered using FB 2 and AMTB 2. Taking the mean values, a comparison and analysis were done at the end of the second and third rounds. There were five SA criteria of motivation- N, P, CP, NS, and SI whose mean values of the responses of the respective criterion were used for calculation and analysis. The data was collected from the responses of the participants from BP and IL through FB 2 and AMTB 2 (see Table 4.14). The mean values of IL in FB 2 were frequently slightly lower than that of BP. The SA criteria- N, P, CP, NS, and SI in IL measured 3.29, 3.30, 3.10, 3.30, and 3.21 respectively. While, the mean values of BP in N, P, CP, NS, and SI in IL were 3.89, 3.89, 3.77, 3.91, and 3.88 respectively. With regards to AMTB 2, the mean values of IL were once more marginally lower than the mean values of BP. So, in the three SA criteria of N, P, and CP, the values of the mean in IL were 4.29, 5.10, and 3.80 respectively. On the other hand, BP's mean values in N, P, and CP were 4.36, 5.16, and 4.25 respectively. The mean value of IL in the AMTB 2 was 4.99 and that of BP was 4.96 in the SA criteria of NS which were nearly similar. But, the mean value of IL was 5.51 in the SA criteria of SI which was slightly higher than the mean value of BP which measured 4.75 in the same criterion. The variations observed in the mean values between FB 2 and AMTB 2 in the four SA criteria of N, P, CP, and NS were not statistically significant. The extremely low *p*-values were noted for the comparison of the four SA criteria- N (.659), P (.995), CP (.060), and NS (.958).

**Table 4.14**

*Differences in Attitude & Motivation in FB 2 and AMTB 2*

| SA variables | Group | *FB 2* *M* (*SD*) | AMTB 2 *M* (*SD*) | *df* | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|
| N | IL | 3.29 (1.96) | 4.29 (.71) | 1 | .201 | .659 | .009 |
| | BP | 3.89 (1.65) | 4.36 (.37) | | | | |
| P | IL | 3.30 (1.96) | 5.10 (.44) | 1 | .000 | .995 | .000 |
| | BP | 3.89 (1.65) | 5.16 (.69) | | | | |
| CP | IL | 3.10 (1.88) | 3.80 (.64) | 1 | 3.937 | .060 | .158 |
| | BP | 3.77 (1.71) | 4.25 (.71) | | | | |
| NS | IL | 3.30 (1.93) | 4.99 (.38) | 1 | .003 | .958 | .000 |
| | BP | 3.91 (1.70) | 4.96 (.59) | | | | |
| SI | IL | 3.21 (1.98) | 5.51 (.40) | 1 | 5.981 | .023 | .222 |
| | BP | 3.88 (1.74) | 4.75 (.95) | | | | |

[a]Partial Eta[2]

The *F* scores were low too for N (.201), P (.000), CP (3.94), and NS (.003) accompanied by low effect sizes in N (.009), P (.000), CP (1.58), and NS (.000). There was a statistically significant difference in the variation of motivation as found in the SA criterion of SI where the *p*-value was .023 with an *F*-score of 5.98, and an effect size of .222.

### *4.5.3. Differences in the Progression of L2 Attitude and Motivation*

Examining the differences between blocking and interleaving and its effects on the progression of L2 attitude and motivation toward English in the context of the five SA criteria of motivation with STSs throughout a three-month duration was a key objective of the current study. To accomplish this, the following research question was framed in the study: Is there any significant difference in the progression of L2 attitude and motivation toward English language learning in the SA criteria of N, P, CP, NS, and SI during the three rounds of STSs? To find an answer to this question, the responses of the participants were gathered from the participants of IL and BP using FB 2 and AMTB 2. The mean values of the responses were compared and an analysis was done at the end of the second and third rounds.

A comparison and analysis were done using the mean values of the responses of the participants from IL and BP. The data was collected with the help of FB 2 and AMTB 2 which were used to measure the five SA criteria of motivation- N, P, CP, NS, and SI (see Table 4.15). The mean values of IL in FB 2 were slightly lesser in a constant manner as the values of N, P, CP, NS, and SI were 3.29, 3.30, 3.10, 3.30, and 3.21 than the mean values observed in BP which measured 3.89, 3.89, 3.77, 3.91, and 3.88 in the SA criteria of N, P, CP, NS, and SI. Once again, in AMTB 2 the mean values of IL were marginally lower in the three SA criteria than the mean values of BP. It was demonstrated by N, P, and CP whose mean values were 4.29, 5.10, and 3.80 respectively in the case of IL whereas, BP's mean values were 4.36, 5.16, and 4.25 in N, P, and CP respectively.

**Table 4.15**

*Difference in Progression of Attitude & Motivation in IL and BP*

| SA Variables | Group | AMTB 1 *M* (*SD*) | FB 1 *M* (*SD*) | FB 2 *M* (*SD*) | AMTB 2 *M* (*SD*) | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|---|
| N | IL | 5.31 (.46) | 3.59 (1.58) | 3.29 (1.96) | 4.29 (.71) | .01 | .90 | .001 |
| | BP | 5.09 (.57) | 4.07 (1.26) | 3.89 (1.65) | 4.36 (.37) | | | |
| P | IL | 5.10 (.52) | 3.72 (1.49) | 3.30 (1.96) | 5.10 (.44) | .42 | .52 | .020 |
| | BP | 5.13 (.55) | 4.27 (1.19) | 3.89 (1.65) | 5.16 (.69) | | | |
| CP | IL | 3.66 (.56) | 3.50 (1.48) | 3.10 (1.88) | 3.80 (.64) | 8.88 | .007 | .297 |
| | BP | 4.10 (.45) | 4.04 (1.26) | 3.77 (1.71) | 4.25 (.71) | | | |
| NS | IL | 5.15 (.29) | 3.64 (1.56) | 3.30 (1.93) | 4.99 (.38) | .19 | .66 | .009 |
| | BP | 5.13 (.46) | 4.12 (1.31) | 3.91 (1.70) | 4.96 (.59) | | | |
| SI | IL | 5.05 (.71) | 3.63 (1.60) | 3.21 (1.98) | 5.51 (.40) | 4.49 | .04 | .176 |
| | BP | 5.00 (.69) | 4.13 (1.34) | 3.88 (1.74) | 4.75 (.95) | | | |

[a]Partial $Eta^2$

The mean value of IL was 4.99 and that of BP was 4.96 in the SA criteria of NS in the AMTB 2 which were nearly the same. But the mean value in the SA criterion, SI in IL which measured 5.51 was slightly higher than BP's mean value of 4.75.
The variations between FB 2 and AMTB 2 in the mean values of the four SA criteria- N, P, CP, and NS- were not statistically significant. When a comparison was done, the *p*-values for the SA criteria, N, P, CP, and NS were .659, .995, .060, and .958 respectively. These *p*-values were extremely low. Along with it, the *F*-scores in N (.201), P (.000), CP (3.94), and NS (.003) were also low. The same observation was noted for low effect sizes in N (.009), P (.000), CP (.158), and NS (.000). There was a statistically significant difference between BP and IL in the variation of motivation among the participants as measured by the SA criterion of SI where the *p*-value, *F*, and effect size was .023, 5.98, and .222 respectively.

To establish a link with this research question and provide an answer to that, the data was analyzed on two different levels (see Table 4.15). Firstly, the mean values of all the collected data throughout the four rounds were compared. Secondly, the data which were collected at the beginning and the end of the study were taken for comparison. The first-level comparison of the data from AMTB 1, FB 1, FB 2, and AMTB 2 showed that there was no statistically significant difference between BP and IL in the values of the means that changed in the three SA criteria of N, P, and NS. The *p*-values for N (.90), P (.52), and NS (.66) were low. The same low score was observed in *F*-values too in the case of N (.01), P (.42), and NS (.19). Similarly, the effect sizes were also low in N (.001), P (.02), and NS (.009). Moreover, there were statistically significant differences in the variations observed in the mean values between BP and IL for the two SA criteria of CP whose *p*-value, *F*-score, and effect size were .007, 8.88, and .297 respectively, as well as SI whose *p*-value was .04, *F*- score measured 4.49, and the effect size was .176.

**Table 4.16**

*Differences in Attitude & Motivation in AMTB 1 and AMTB 2*

| SA variables | Group | AMTB 1 *M* (*SD*) | AMTB 2 *M* (*SD*) | *df* | *F* | *p* | Effect size[a] |
|---|---|---|---|---|---|---|---|
| N | IL | 5.31 (.46) | 4.29 (.71) | 1 | .019 | .89 | .001 |
| | BP | 5.09 (.57) | 4.36 (.37) | | | | |
| P | IL | 5.10 (.52) | 5.10 (.44) | 1 | .649 | .43 | .030 |
| | BP | 5.13 (.55) | 5.16 (.69) | | | | |
| CP | IL | 3.66 (.56) | 3.80 (.64) | 1 | 5.20 | .03 | .199 |
| | BP | 4.10 (.45) | 4.25 (.71) | | | | |
| NS | IL | 5.15 (.29) | 4.99 (.38) | 1 | .005 | .94 | .000 |
| | BP | 5.13 (.46) | 4.96 (.59) | | | | |
| SI | IL | 5.05 (.71) | 5.51 (.40) | 1 | 4.872 | .03 | .188 |
| | BP | 5.00 (.69) | 4.75 (.95) | | | | |

[a]Partial Eta$^2$

Additionally, to determine if the two reformed versions of AMTB were capable of producing similar findings that could be taken for comparison or not, a second-level comparison of the data from AMTB 1 and AMTB 2 was made ready (see Table 4.16). The analyses executed on the data gathered from both varieties of AMTB produced almost identical results. The comparison done on the second level also showed that the three SA criteria of N, P, and NS were not statistically significant in the variation observed among the participants of IL and BP in terms of attitude and motivation. The *p*-values of N (.89), P (.43), and NS (.94) were not significant. Low *F* scores were noted for N (.019), P (.649), and NS (.005) with corresponding low effect sizes in N (.001), P (.030), and NS (.000). In contrast to IL, the differences between IL and BP in the two SA criteria of CP and SI regarding attitudinal and motivational changes were statistically significant. The *p*-values of CP and SI measured .03 and .03 respectively. The *F* score of CP was 5.20 and that of SI was 4.872. The effect sizes were noted as .199 and .188 for the respective SA criteria of CP and SI. Similar outcomes in support of BP in CP and IL in SI were seen in both the reformed version of AMTB. It is to be taken into account that for both IL and BP, the progression of the five SA criteria of N, P, CP, NS, and SI displayed descending curves in the middle of the STSs. On the other hand, in reaching the final round of the STSs, all the curves for the five SA criteria showed ascending curves for both IL and BP (see Figures 4.2, 4.3, 4.4, 4.5, and 4.6). However, once that data was assembled using AMTB 1 and AMTB 2 and considered for analysis, the curves showed a downward slide for both groups in the majority of the SA criteria of motivation (see Figure 4.7).

Figure 4.2 indicate the difference in the SA variable of Novelty between BP and IL at various stages of feedback

**Figure 4.2**

*Difference in Progression in Novelty*

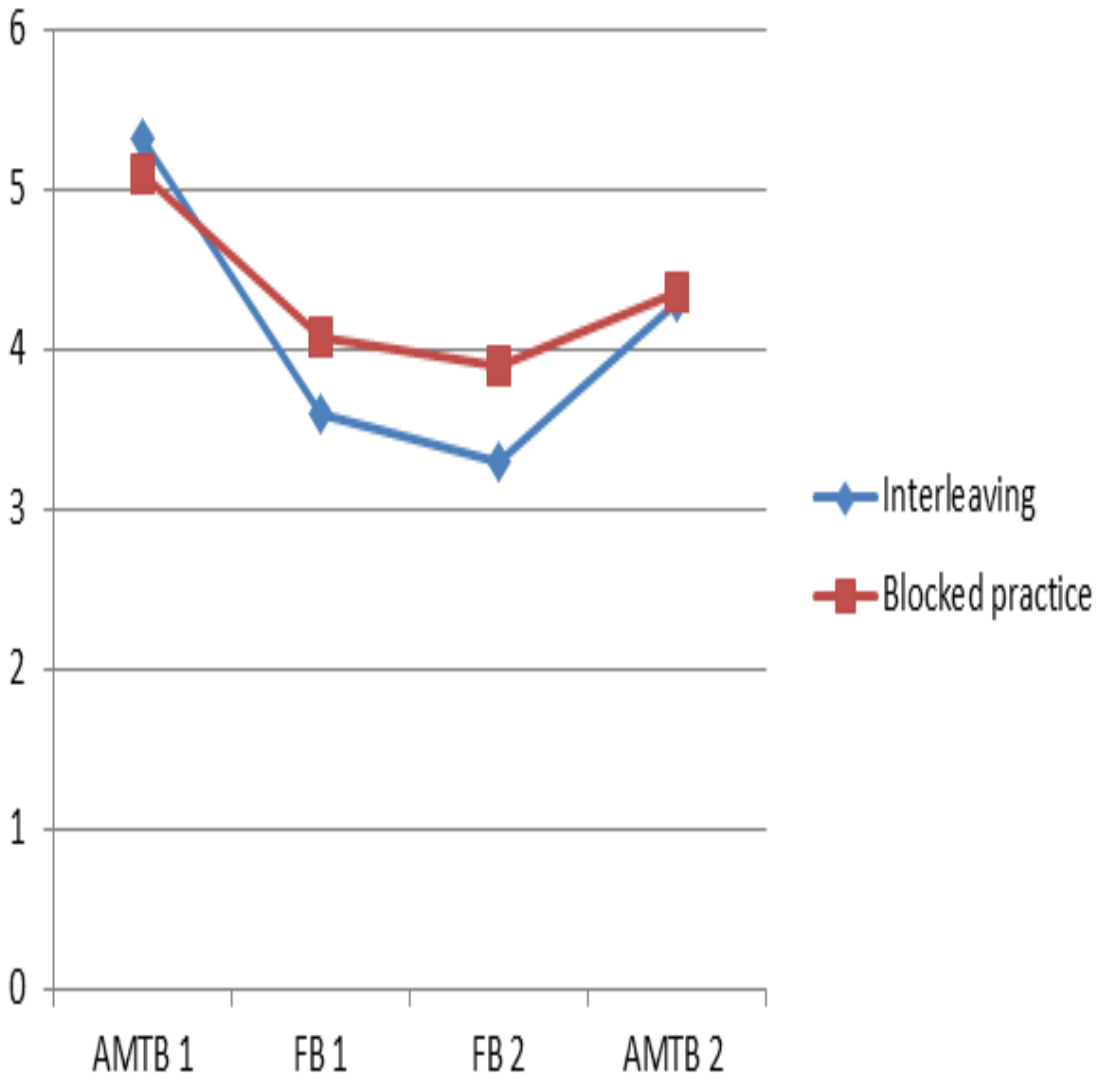


Figure 4.3 indicate the difference in the SA variable of Pleasantness between BP and IL at various stages of feedback

**Figure 4.3**

*Difference in Progression in Pleasantness*

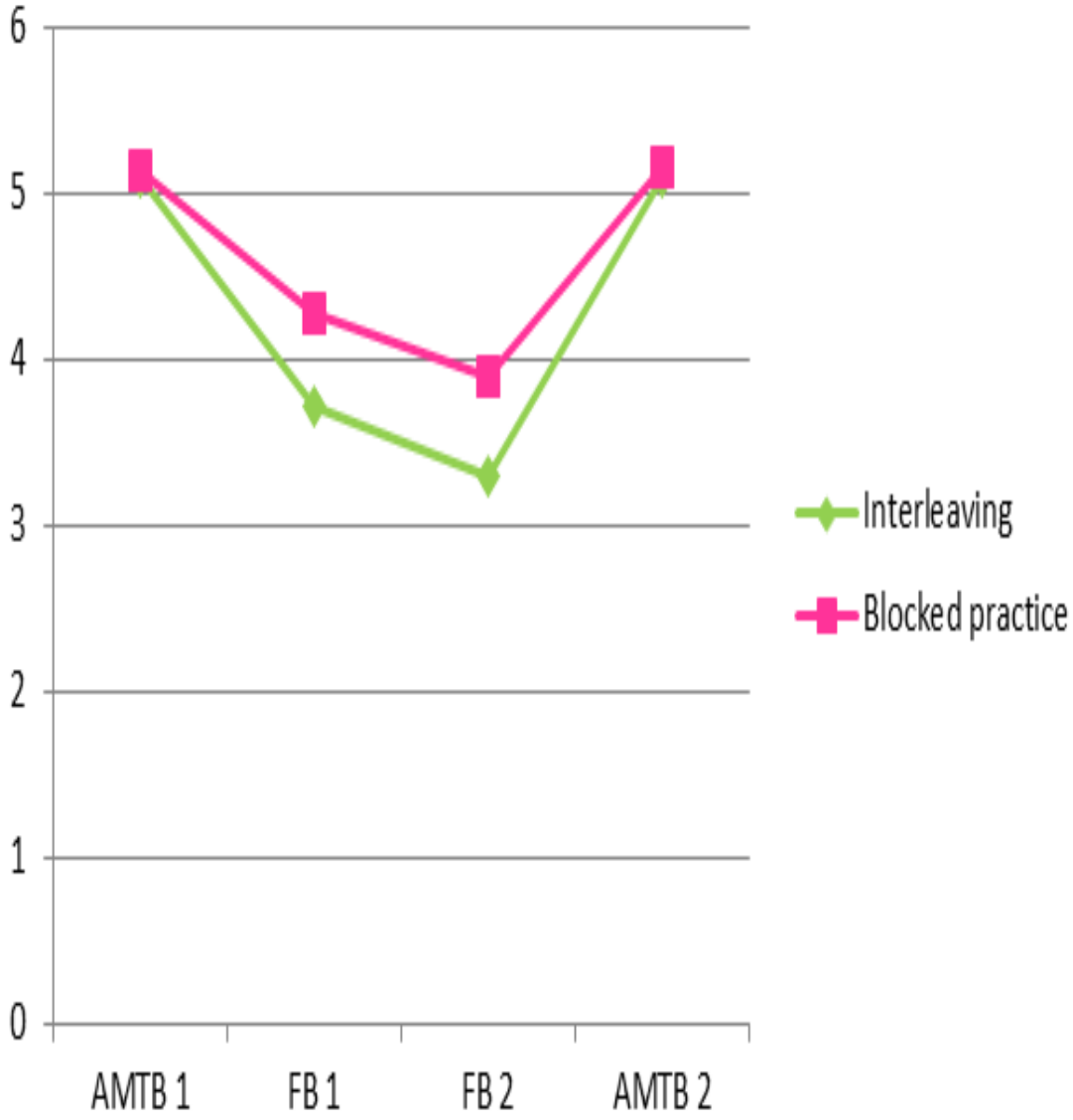


Figure 4.4 indicate the difference in the SA variable of Coping Potential between BP and IL at various stages of feedback

**Figure 4.4**

*Difference in Progression in Coping Potential*

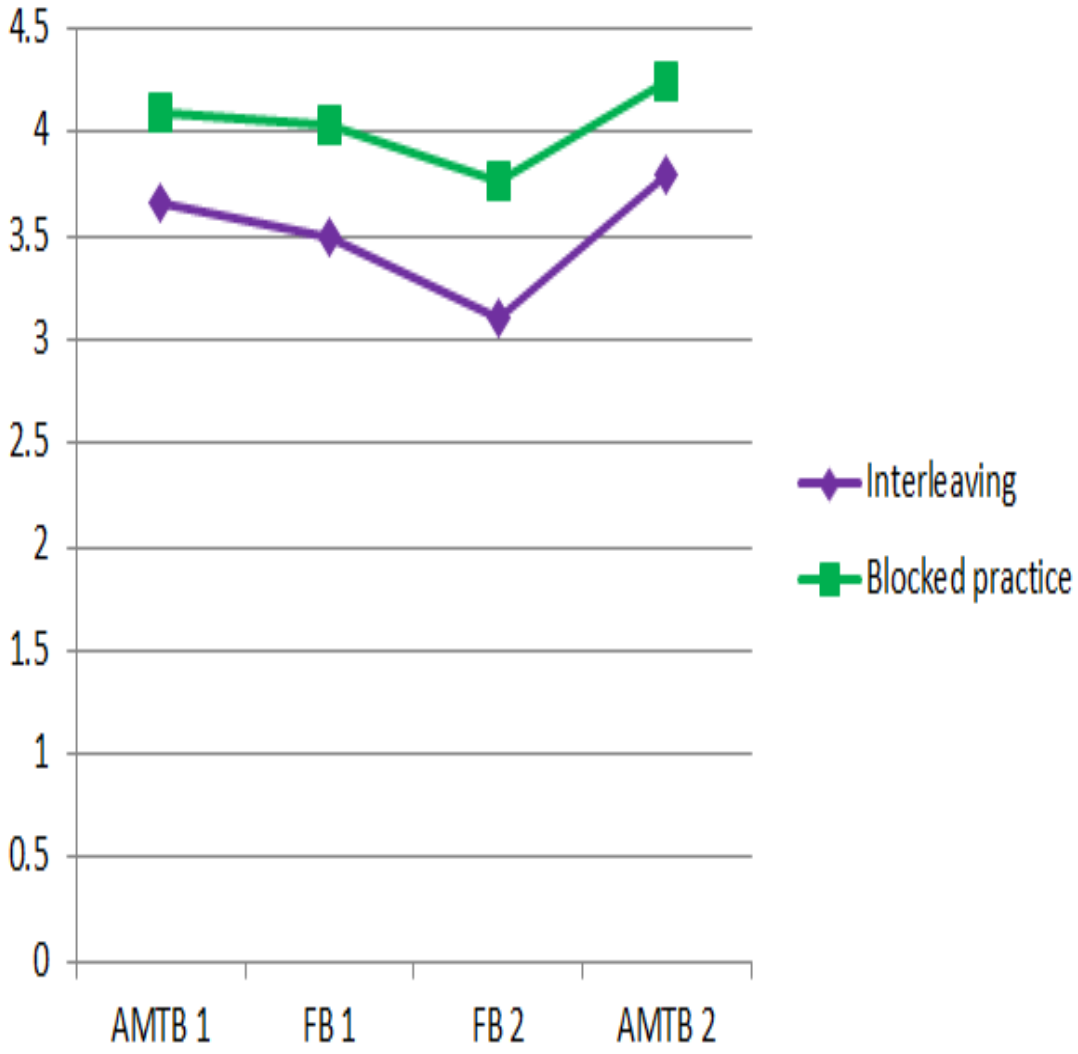


Figure 4.5 indicate the difference in the SA variable of Need Significance between BP and IL at various stages of feedback

**Figure 4.5**

*Difference in Progression in Need Significance*

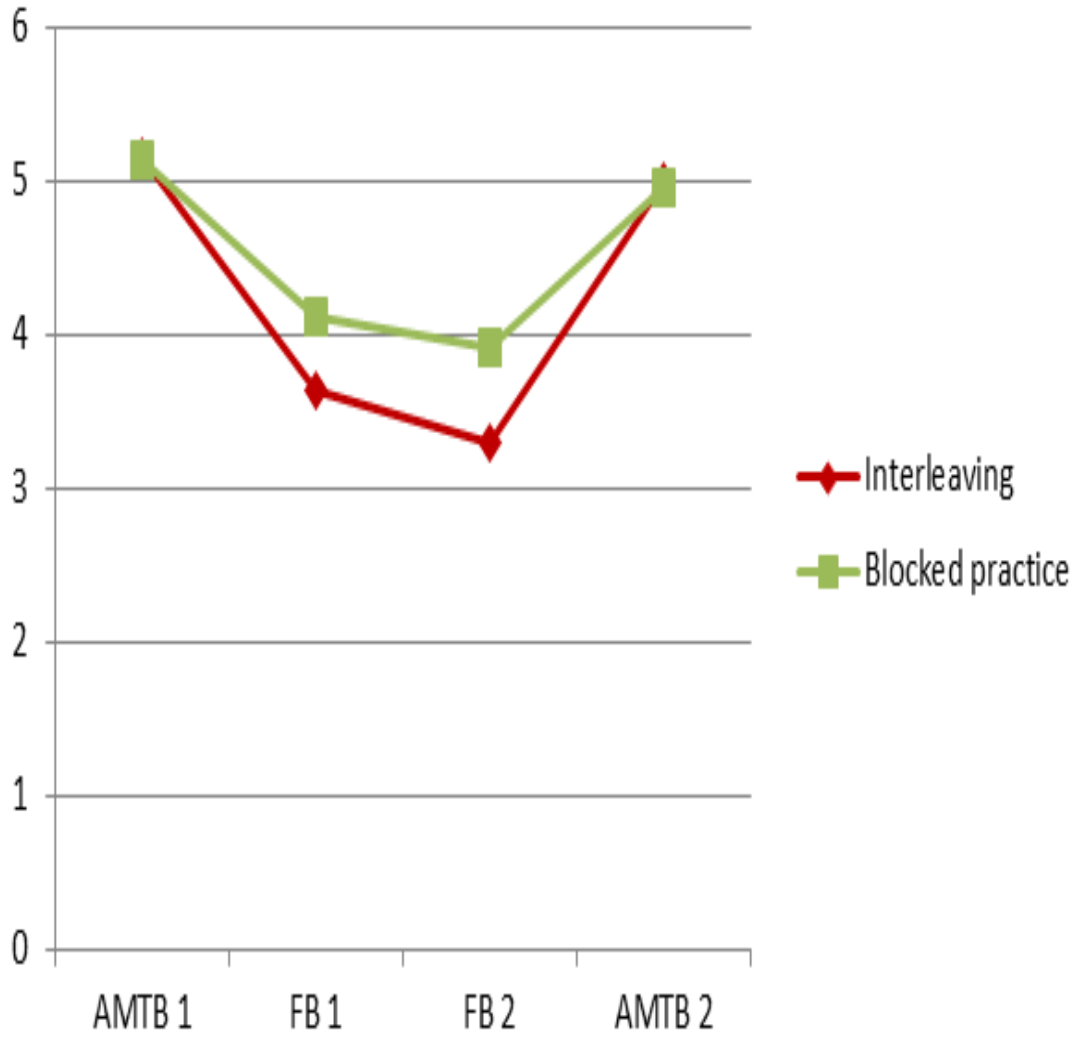


Figure 4.6 indicate the difference in the SA variable of Self/ Social Image between BP and IL at various stages of feedback

**Figure 4.6**

*Difference in Progression in Self/Social Image*

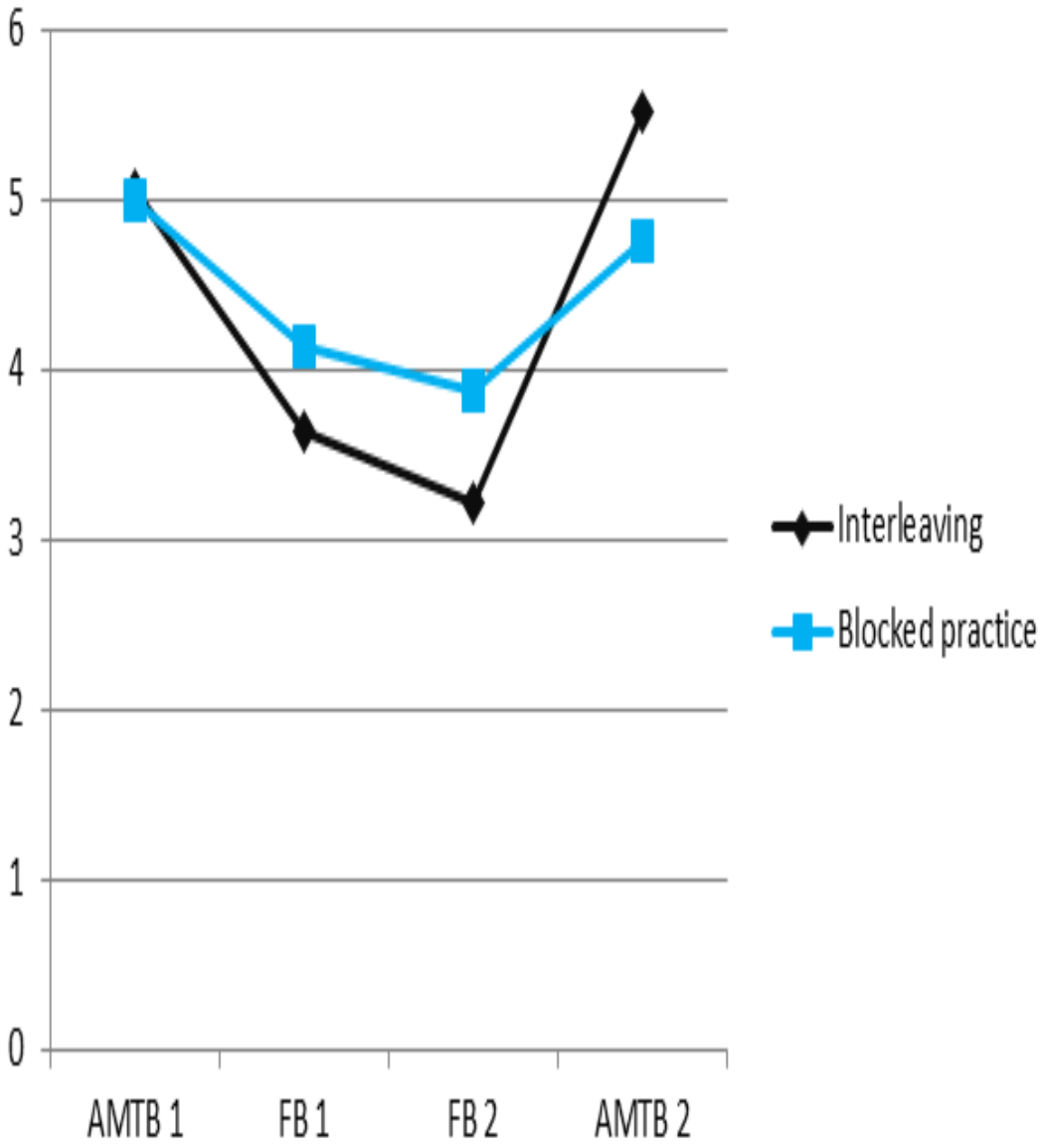
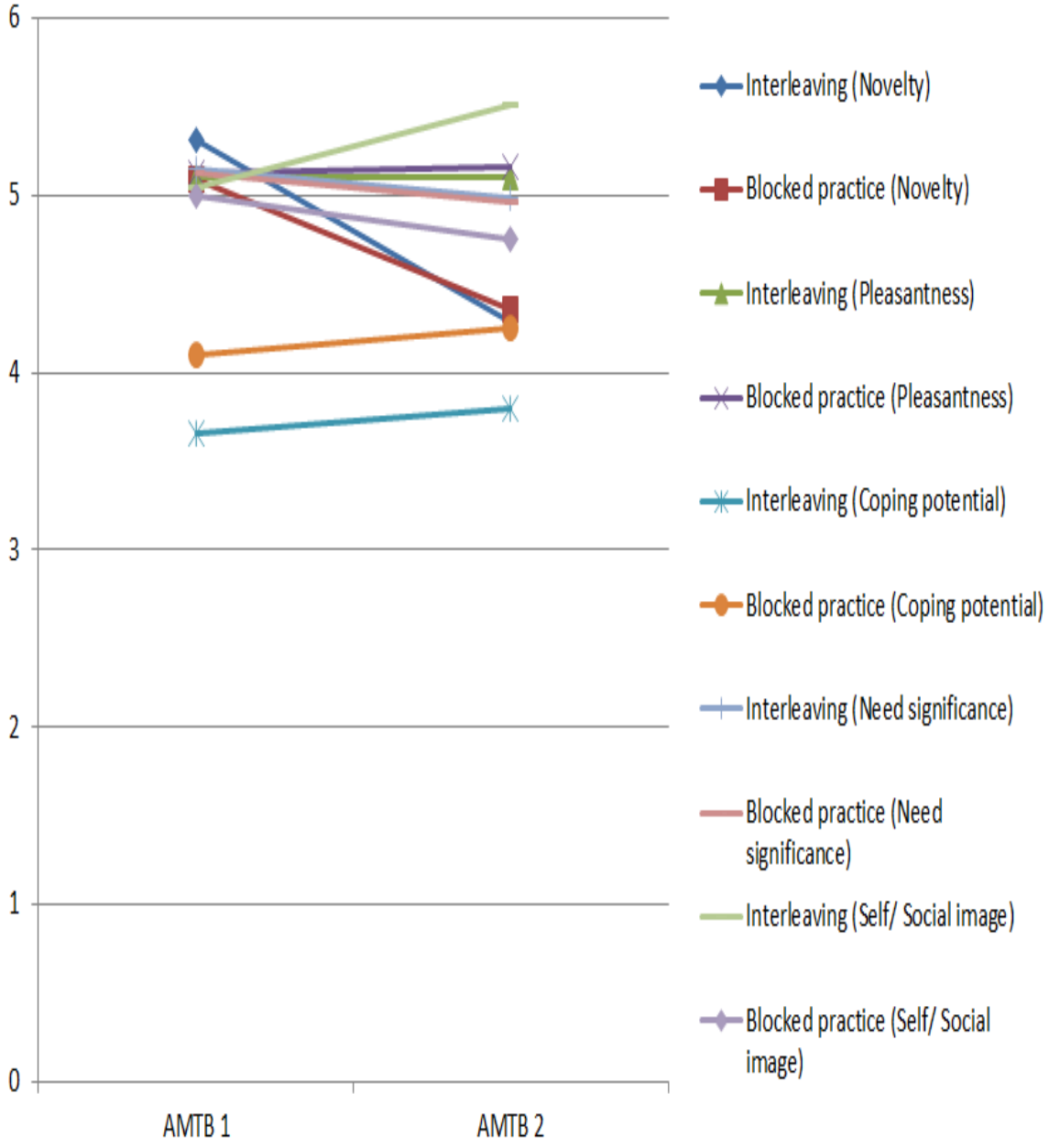


Figure 4.7 indicate the differences in the SA variables of Novelty, Pleasantness, Coping Potential, Need Significance, and Self/ Social Image between BP and IL at various stages of feedback

**Figure 4.7**

*Difference in the SA Variables between AMTB 1 & AMTB 2*

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