

Is Form-Focused Instruction Really a Waste of Time? A Review of Past Mistakes and Future Possibilities through the Analysis of Input Enhancement

Andrew Schenck (State University of New York, Songdo, South Korea) & Matthew Baldwin (KAIST, Daejeon, South Korea)

Abstract

When viewed through a generic, one-size-fits-all perspective, use of input enhancement does not appear effective. Through analysis of individual grammatical features and different learner proficiency levels, a significant impact may be revealed. To study the impact of input enhancement on diverse grammatical features, 16 short reading texts and writing activities (both timed) were given to a treatment group ($n = 11$) and control group ($n = 9$). While results suggest that average grammatical accuracy of the treatment group did not significantly differ from that of the control group ($U = 11559.00$; $p = .30$), input enhancement on individual morphosyntactic features yielded a significant result for the plural-s feature at ($U = 122.50$; $p = .04$). In addition to this less salient, redundant feature, input enhancement at specific proficiency levels appears to promote learner accuracy for some grammatical features. At CEFR level B1, for example, learners benefited most from input enhancement of grammatical features at intermediary stages of the Processability and Natural Orders of acquisition. Tailoring emphasis of grammatical features to learner proficiency during the communication process may foster greater accuracy.

1 Introduction

While increased globalization has compelled many nations to promote English, achievement continues to be lackluster. In EFL countries such as Malaysia, for example, government efforts to increase English ability have failed to curb declining proficiency rates among undergraduates (Shuib, Abdullah, Azizan & Gunasegaran 2015). In other countries like South Korea, massive private spending has also failed to yield results (Kang 2009, Kim 2012). In 2016, Korean parents spent 18.1 trillion won on extracurricular education for their children (Statistics Korea 2016), yet TOEFL achievement in 2017 remained merely average (Educational Testing Service 2017). Despite extreme expenditures in both the public and private sector, educational achievement in English continues to be marginal, leading educators to call for rethinking and redesign of curricular goals.

In an attempt to rectify problems with English curricula, researchers have investigated how technology can improve the accuracy of speech and writing. One research study used text-chat to provide recasts and metalinguistic information about the zero article (Sauro 2009). While insightful, results showed no clear advantage of either feedback type for participants of intermediate proficiency (Sauro 2009). Another study used mobile phones to promote the learning of English grammar but cited problems with insufficient teacher monitoring, a lack of student involvement, and a dearth of engaging learning materials (Wang & Smith 2013). Yet another study described the use of online corpora to facilitate grammatical accuracy (Hegelheimer & Fisher 2006). As with other studies, efficacy of the featured pedagogical technique was not concretely proven (Carlstrom 2014, Schenck & Cho, 2012).

Although clear attempts have been made to increase grammatical accuracy of English speech and writing, student achievement has remained nominal. This problem exposes a fundamental truth, that more money and technology do not equate to increased acquisition. Without a clear knowledge of how grammatical accuracy is enhanced, one cannot simply “buy” effective reforms. Currently, research reveals that we lack a clear understanding of how instruction or technology may be used to enhance grammatical accuracy. Some studies suggest that corrective feedback is effective (Bitchener, Young & Cameron 2005, Ferris 2004), whereas others contend it has little or no impact (Truscott 1996, 1999). Some research implies that recasts are effective (Goo & Mackey 2013, Sakai 2011), yet other studies claim they are not (Ellis & Sheen 2006, Sheen 2010). It is clear that a concrete understanding of grammar, as well as effective means to hasten the process of acquisition, has yet to be realized. As a result, reforms continue to use a trial-and-error approach toward form-focused instruction. It is no surprise that researchers like VanPatten (2014) fail to identify the influence of explicit grammatical emphasis on morphosyntactic development. Without knowing how and when to emphasize grammar, educators cannot hope to provide effective curricula or technology. Because knowledge of acquisition and instruction of grammatical features is not adequately understood, more research is needed.

2 Literature Review

Like other types of form-focused instruction, input enhancement, which refers to the modification of text using bolding, italics, underlining, or highlighting, has yielded mixed results. From a theoretical perspective, the technique is believed to promote acquisition by

focusing attention on a specific grammatical feature (Park 2017, Smith 1993). Some studies reveal that input enhancement may increase awareness of a target feature, leading to a better understanding and more accurate usage of grammatical forms (Jourdenais, Ota, Stauffer, Boyson & Doughty 1995, Lee 2007). Other research suggests that such enhancement has a negligible or even negative impact on comprehension (Lee 2007, Lee & Huang 2008, Leow, Egi, Nuevo & Tsai 2003). Like other types of form-focused instruction, the efficacy of input enhancement has not been firmly established.

While information about input enhancement is indeed insightful, one key problem is that it appears to limit the generalizability of findings. Research studies often utilize a reductionist approach, targeting similar features or single grammatical features in one study (Lee & Huang 2008, Leow, Egi, Nuevo & Tsai 2003). Grammatical features may differ in several distinct ways (Goldschneider & DeKeyser 2005). Some features, like the irregular past tense, are easier to see and hear, since they are comprised of an entire word with sonorant vowels; other features, like the plural or third person singular -s, are more difficult to perceive within input, containing only a single non-voiced consonant (Song, Sundara, & Demuth 2009, Yavas 2016). Features like the regular past -ed, plural -s, and third person singular -s, are highly regular, whereas past irregular verbs vary considerably in form. Yet another morphological feature, the definite article, is highly systematic in form, yet contains a variety of meanings to include general use (e.g. *the* moon), immediate situational use (e.g. Don't go in there. *The* floor is wet!), or local use (e.g. the cafeteria) (Celce-Murcia & Larsen-Freeman 1999). In contrast to morphology, syntactic features, such as questions or clauses, require an ordering of words for accuracy (Pienemann 1999, 2005). Clearly, morphosyntax is highly diverse in form and meaning. Despite such disparity, researchers often test pedagogical techniques by using only one grammatical feature. Such methodology often leads to erroneous generalization of results to all other types of grammar. To more accurately understand the role of form-focused instruction, there is a need to test how different grammatical features are acquired via each pedagogical technique (Schenck 2017, Schenck 2018, Williams 2013).

In addition to the type of grammar emphasized, timely emphasis of a morphosyntactic feature may influence acquisition. Research reveals that the timely introduction of grammar can increase both frequency and accuracy in production (Gholami & Zeinolabedini 2018). According to the Teachability Hypothesis, well-timed emphasis of grammar just above a learner's level of cognitive proficiency may result in acquisition (Pienemann 1989). While the determination of a "Goldilocks Zone" for the introduction of form-focused instruction may be problematic, research reveals two stage-by-stage processes of linguistic development that serve as a partial guide (Dyson 2018, Dyson & Håkansson 2017). These sequences of morphosyntactic acquisition are outlined in Table 1 (Krashen & Terrell 1983, Pienemann 1999):

Stages	Processability Order	Stages	Natural Order
1	Single Words	1	Progressive (-ing) Plural (-s) Copula (<i>is</i>)
2	SVO Sentences Plural (-s)		
3	Negative + Verb Do-Fronting Topicalization Adverb-Fronting	2	Singular Auxiliary (<i>is</i>) Article (<i>a(n), the</i>)
4	Yes/No Question Inversion Particle Verb Separation Wh-copula Question Inversion	3	Past Irregular
5	Wh-auxiliary Question Inversion Third Person Singular (-s)	4	Regular Past (-ed) Third Person Singular (-s) Possessive (-s)
6	Cancel Inversion		

Table 1: Stages of Acquisition

According to the Processability order of acquisition, learners progress from single words, to SVO sentences, to more advanced inter-phrasal constructions like subject / verb inversion in questions (which requires a cognitive understanding of subject and verb phrases). Finally, learners manipulate independent and dependent clauses as in cancel inversion (e.g. Could you tell me *where the post office is?*). For grammatical features like the plural -s, awareness of the adjacent noun is the only information required, explaining why it may be acquired earlier, in stage two. The third person singular -s, in contrast, requires an understanding of the relationship between a subject and verb (making it an inter-phrasal feature), which explains later emergence in Stage Five. According to this model, presenting explicit grammar emphasis at a stage just above a learner's competence would result in acquisition. For example, verbs with a negative (*didn't go*), a hallmark of Stage Three, would be appropriate when learners have acquired features like the plural -s.

In contrast to the Processability Sequence, the Natural Order lacks a clear explanation for the emergence of individual features. Phonological salience, frequency within input, morphological regularity, and semantic complexity may explain this order (Goldschneider & DeKeyser 2005). Features in the first three stages tend to be easier to hear or comprehend within input (they have a vowel), are more frequently used, and do not require a cognitive link between multiple phrases in a sentence. Grammatical features in Stage Four are less

frequent, less salient (often lack a vowel), and may require an understanding of multiple phrases. Whereas the third person singular -s requires an understanding of the subject noun phrase and a verb, the possessive -s requires an understanding of the link between two nouns.

While acquisition orders have some variability (Dyson 2018, Dyson & Håkansson 2017, Lowie & Verspoor 2015), the highly systematic process of their manifestation has the potential to transform pedagogy. Through assessment of a learner's cognitive stage of proficiency, developmentally appropriate grammatical features can be emphasized through form-focused instruction. Although Acquisition Order research accurately identifies the importance of proficiency level in grammar instruction, other studies have been carried out at only one proficiency level, limiting the generalizability of findings. Most teachers' written feedback, for example, has been studied with higher proficiency learners (Jakobson 2018), making adaptation of results to all learners problematic. Since a recent meta-analysis suggests that proficiency level is a major factor impacting the efficacy of grammar instruction (Schenck 2017), the respective levels of linguistic development should be considered when pedagogical interventions are designed.

Despite a clear potential for utilization, acquisition orders are not currently mapped to any standard measures of language proficiency (e.g. TOEFL, IELTS), making timely introduction of grammatical features impossible for most instructors or curriculum designers. Without attachment to a generally accepted measure of language competence, each individual learner's stage of development would have to be assessed separately, making timely curricular emphasis of grammar impractical. If stages or sequences of grammatical acquisition could be associated with a common standard, such as the Common European Framework of Reference (CEFR), specific pedagogical techniques like *input enhancement* could be used at more opportune times, ensuring that the right grammatical features are selected according to cognitive proficiency. In addition to possibilities for instruction, binding a stage-by-stage designation of grammar acquisition to frameworks like the Common European Framework of Reference (CEFR) may allow for the automation of computer programs designed to promote grammatical accuracy in production. While such computer programs could not address anomalies associated with individual learners, they could lead to much larger linguistic gains for accuracy as a whole.

Essentially, conflicting research results concerning the efficacy of grammar emphasis are a reflection of research methodologies, which have largely dealt with grammatical features as one generic unit. Some morphosyntactic features may benefit from input enhancement, while others may not; some grammatical features may be acquired at a specific proficiency level, while others may not. Therefore, it is important that both the grammatical feature type and cognitive level of proficiency in question be considered when designing instruction. Currently, acquisition sequences such as the Natural Order and the Processability Order provide useful information, yet teachers, educators, and software programmers cannot effectively provide explicit instruction without a concrete understanding of when to introduce grammatical features. The present study is in accordance with the need to discover more about *what* grammatical features should be emphasized at each level of linguistic proficiency.

3 The Study

3.1 Research Questions

Systematic examination of multiple grammatical features may increase the efficacy of English instruction or computer-assisted language learning, thereby heightening the grammatical accuracy of student writing. To investigate the impact of input enhancement on the acquisition of grammatical features at each stage of proficiency, the following research questions were posed:

1. Does input enhancement significantly impact the accuracy of grammar in timed writing tasks?
2. In what way does the impact of input enhancement differ according to the type of grammatical feature to be taught?
3. How does the impact of input enhancement differ based upon the respective level of English proficiency?

3.2 Participants

After obtaining IRB approval, twenty-one students from two different Korean universities were selected for the present study. Ages ranged from 18 to 32. While most learners were of Korean nationality (17), there were learners from Pakistan (one), the Czech Republic (one), and Vietnam (two). Learners were purposively selected if they had taken a TOEFL, TOEIC, or IELTS exam less than one month before the study was administered. After obtaining their TOEIC, TOEFL, or IELTS scores, learners were separated into five CEFR categories (A1, A2, B1, B2, or C1+). Eleven of the participants were at the C1+ level, seven participants were at the B2 level, and three participants were at the B1 level. Due to limitations in mapping standardized test scores to the CEFR (*British Council*, n.d.; *Educational Testing Service*, 2014, 2015), only one level could be designated for scores that surpassed C1. Thus, any scores at or above C1 were designated C1+.

3.3 Method

After participants were selected, they were randomly assigned to either a treatment group or a control group. Eleven of the participants were assigned to the experimental group, and ten participants were assigned to the control group. One Korean participant from the B1 level did not complete the testing instrument and needed to be excluded from the study. Thus, the final number of participants in the control group was nine. Following selection, each participant used a computer program specially designed for the study. The program delivered 16 short texts from 50 to 200 words. After being given three minutes to read the text, learners had to rewrite the text within the same limited time period (three minutes). The time limit was used to help ensure that implicit knowledge was utilized for the writing task. Moreover, initial instructions conveyed the importance of reconstructing meaning. Collectively, task delivery promoted writing for the communication of ideas, exerted pressure

to prevent conscious correction, focused attention on meaning, and prevented the use of meta-language, which ensured that implicit knowledge was utilized (Ellis, 2009).

Whereas the control group had no input enhancement on reading texts, the treatment group had the target grammatical features bolded (See Figure 1):

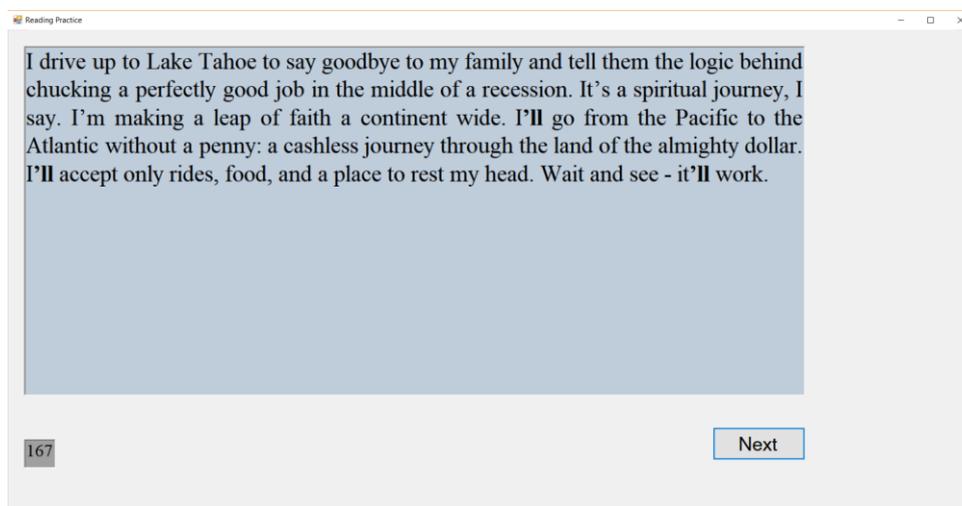


Figure 1. Computer program user interface display of reading and treatment (bolding).

Due to the range of student participants from B1 to C1 / C2, learners were given text commensurate with or slightly more difficult than their proficiency levels. Readings that ranged from C1 to C2 were selected from the book *Northstar 5*. Small texts from the book were chosen based upon the clear communication of a story or point and the presence of target grammatical features. Texts with the following grammatical features were chosen: Contracted *will* (3), past regular tense (3), past irregular tense (4), questions (8), conditionals (4), gerunds (6), plural -s (18), third-person singular -s (4), articles (15), adjective clauses (3), noun clauses (4). Since authentic texts were chosen, the number of grammatical features in texts (the numbers in parentheses) varied according to normal patterns of distribution. In order to prevent distraction, only one grammatical feature was emphasized within each text for the treatment group.

Following completion, the texts written by the participants were evaluated for correct use of the target feature and accurate reconstruction of textual meaning. First, grammatical accuracy was evaluated using Pica (1983), who established a formula for the target-like use of grammatical features. The formula to be used is as follows:

$$\frac{\text{Number of Grammatical Morphemes Accurately Supplied}}{\div (\text{Number of Obligatory Contexts} + \text{Number of Overused Forms})}$$

Two native English-speaking researchers scored the resulting texts to ensure reliability. To confirm that reliability was adequately established, assessments of grammatical accuracy were correlated between raters A and B. The resulting correlation of $r = .71$ ($p < .01$) was above the accepted value of .7 for determination of adequate reliability (Kline 1986). Following individual assessment of grammatical accuracy, scores were averaged together.

Tests of significance were performed in three steps. To assess the overall impact of input enhancement (the aim of Question One), the Mann-Whitney U test was used to evaluate differences in grammatical accuracy between the treatment group and the control group. To evaluate the impact of input enhancement on individual grammatical features (Question Two), the Mann-Whitney U was used to compare mean accuracy of individual grammatical features of the treatment group to those of the control group. Finally, to evaluate the effect of proficiency level on input enhancement (Question Three), the Kruskal Wallis test was used to compare input enhancement across proficiency levels. As a large number of grammatical features were tested with a small number of participants, nonparametric tests were used. The non-parametric tests did not assume that there was a normal distribution of grammatical accuracy scores among participants.

Following statistical calculations of significance, mean accuracy scores were charted for each grammatical feature (separated based upon control and treatment group). Three charts were constructed for analysis, one for each CEFR proficiency level represented in the study (B1, B2, and C1+). Results were then collectively analyzed.

4 Results and Discussion

Average grammatical accuracy of the treatment group did not significantly differ from that of the control group ($U = 11559.00$; $p = .30$). In fact, the accuracy of the control group (51%) was slightly higher than that of the treatment group (47%), suggesting that input enhancement has a negligible or negative impact on acquisition. While insightful, a general evaluation of results may obscure underlying differences due to grammatical feature type and proficiency level.

Results for Research Question Two, which sought to examine the impact of input enhancement on individual morphosyntactic features, yielded significant results for the plural -s feature at the $p < .05$ level ($U = 122.50$; $p = .04$). While not significant for other grammatical features, the findings support a prior meta-analysis, which suggests that input enhancement is more effective for insalient and redundant morphological features like the plural -s, past -ed, and third-person singular -s (Schenck 2018). These features are difficult to perceive within input and occur alongside other words that signal tense (e.g. *yesterday*, *next week*, *two weeks ago*). Using input enhancement in reading may prime a learner's lexicon, facilitating the use of these features more easily in speech and writing.

Our analysis of the impact of input enhancement at different CEFR levels yielded additional insights. While results of the Kruskal Wallis test yielded insignificant results ($\chi^2 = 3.17$; $p = .205$), Table 2 reveals a pattern of mean accuracy based upon level. At the lowest CEFR level, B1, learners benefited more from input enhancement. As proficiency increased, the impact of input enhancement decreased. This finding also supports findings of a prior meta-analysis, which suggests that form-focused instruction may be more beneficial at lower proficiency levels (Schenck 2018).

Effect of Treatment

Level	Mean	N	Std. Deviation
B1	.0575	11	.44048
B2	-.0275	11	.23300
C1+	-.0486	11	.21500
Total	-.0062	33	.30695

Table 2: Mean Gains (or Losses) from the Use of Input Enhancement

Each proficiency level reveals a distinct pattern of accuracy based upon the respective type of grammatical feature. At the B1 level, accuracy was larger for the input-enhancement group when contracted *will* (+100%), third person singular *-s* (+22%), articles (+18%), irregular past (+25%), question inversion (+25%), and noun clauses (+25%) were emphasized (Figure 2). For all other grammatical features, accuracy was higher for the control group. When viewing B1 learner performance along with the Processability and Natural orders, the results become more apparent:

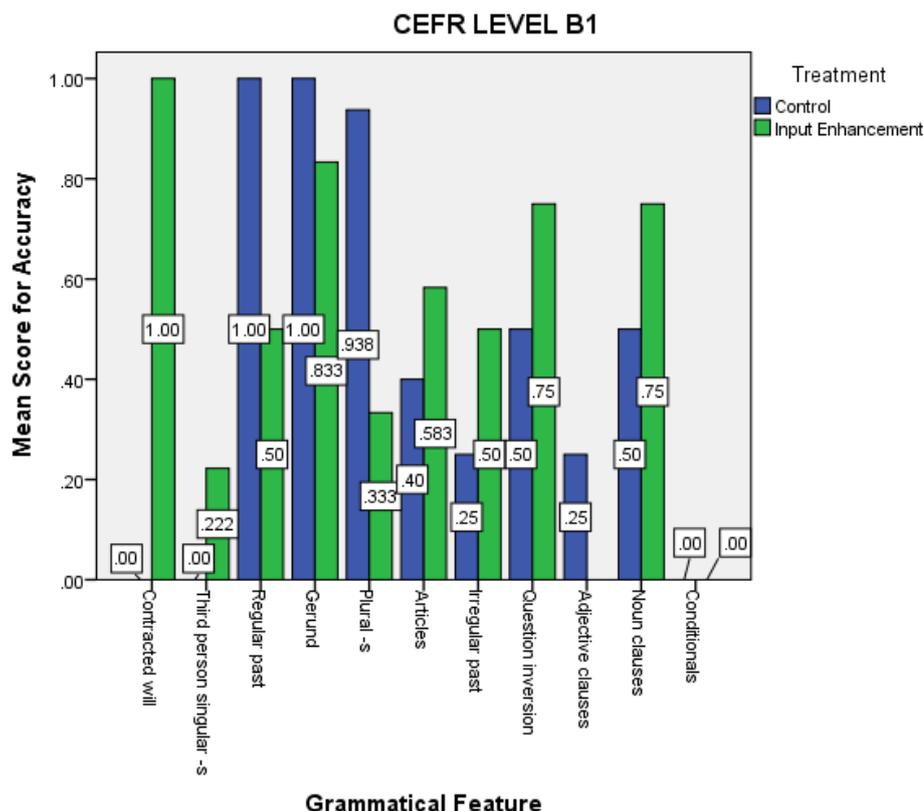


Figure 2: Grammatical Accuracy Scores for Treatment and Control Groups for the B1 Level

Grammatical features like the plural -s and the gerund, which emerge at early stages of the Natural and Processability acquisition orders, reveal higher values for the control group, yielding negative effects for the treatment group, -61% and -17%, respectively. This finding may not be surprising when viewed in the context of acquisition order. Since learners at the B1 level may already have mastered these grammatical features, unnecessary cognitive effort can distract, rather than assist the learner. It may be analogous to other forms of procedural learning. Teaching someone how to perform an action like driving, for example, may only be beneficial before a habit is formed. Following mastery, constant instruction may serve as a distraction.

Learners at the B1 level are intermediate language learners, which may explain why question inversion, the third person singular -s, the article, and past irregular features yielded more effective results for the treatment group. All of these features occur at intermediate stages of the acquisition order theories (Figure 3):

Stages	Processability Order	Stages	Natural Order
1	Single Words	1	Progressive (-ing) Plural (-s) Copula (is)
2	SVO Sentences Plural (-s)		
3	Negative + Verb Do-Fronting Topicalization Adverb-Fronting	2	Singular Auxiliary (is) Article (a, the)
4	Yes/No Question Inversion Particle Verb Separation Wh-copula Question Inversion	3	Past Irregular
5	Wh-auxiliary Question Inversion Third Person Singular (-s)	4	Regular Past (-ed) Third Person Singular (-s)
6	Cancel Inversion		Possessive (-s)

Figure 3. Location of Mean Gains for Grammatical Accuracy Using the Treatment at the B1 Level

Question inversion and third person singular are acquired at stages 4 and 5 of the Processability order. Articles, past irregular, and the third person singular occur at stages 2, 3, and 4 of the Natural order, respectively. The larger effect of the treatment suggests that learners may benefit from form-focused emphasis of this grammar. While features like the plural -s have already been mastered, learners may still need to work on grammatical features like question inversion and the third person singular -s. Whereas the plural requires understanding of the noun phrase in which it is embedded (intra-phrasal), question inversion and the third person singular both require an understanding of the relationship between the subject noun phrase and the predicate verb phrase (inter-phrasal). In order to perfect such features, learners must understand the link between a subject and its predicate (e.g. auxiliary verbs and main verbs). At the B1 stage, the sentence-level manipulation of features like independent and dependent clauses may be too cognitively difficult for focused attention to be effective. This perspective may explain why teaching conditionals is not even attempted at this level.

As revealed from our analysis of B1 learners, the evaluation of input enhancement according to both grammatical feature type and proficiency level confirms the importance of timing in the emphasis of form-focused instruction. If a specific type of grammar is not used at the correct stage of proficiency, the treatment may have no effect. This view appears to have even more support at the B2 proficiency level (Figure 4):

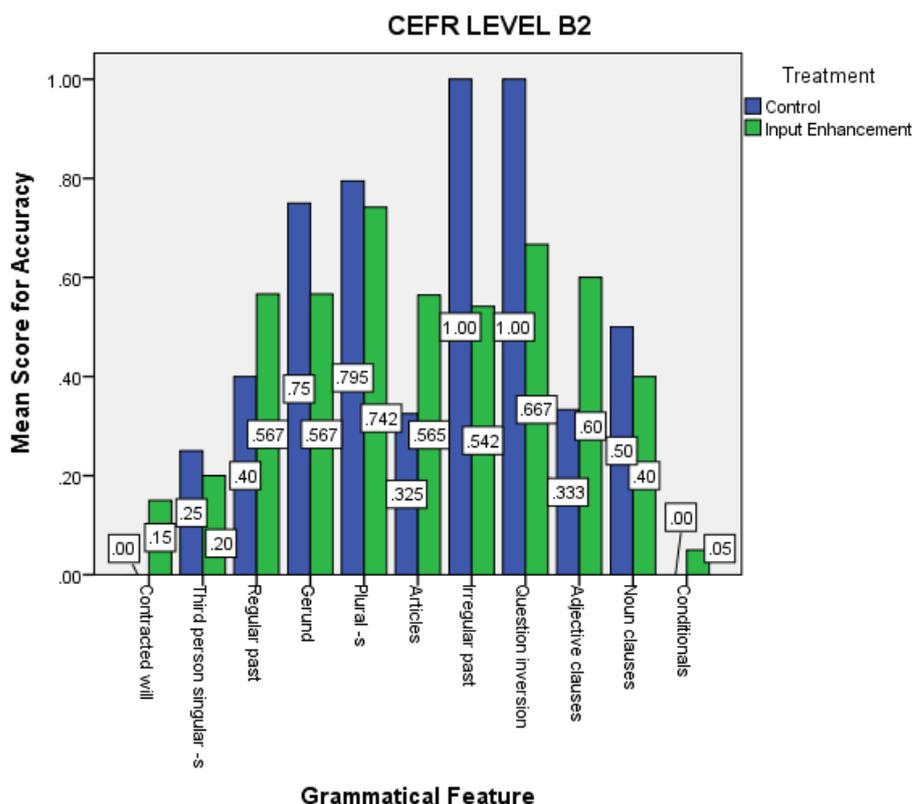


Figure 4: Grammatical Accuracy Scores for Treatment and Control group for the B2 Level

Contracted *will* (+15%), regular past *-ed* (+17%), articles (+24%), adjective clauses (+27%), and conditionals (+5%) all yielded positive results for input enhancement. As at the B1 level, less salient and redundant features appeared to benefit from input enhancement. Both the regular past *-ed* and contracted *will* yielded greater accuracy scores for the treatment group.

Grammatical features like question inversion and the past irregular, which benefited from input enhancement at the B1 level, did not show greater accuracy for the treatment group at the B2 level. This result may be explained by the Acquisition Order. Question inversion and past irregular features emerge at lower stages of the Processability Order (Stage 4 and early Stage 5) and Natural order (Stage 3), respectively. Thus, these features may already have been acquired at the B2 level, making input enhancement a distraction for natural communication. Cognitive resources may be devoted to more developmentally appropriate grammatical features.

Features at lower stages of the Processability Order (below Stage 5) and Natural Order (below Stage 4) show a larger impact for the control group (with the exception of articles). This finding may suggest that these features have been acquired and are being used procedurally (by habit). Articles, which are semantically more complex than their counterparts in equivalent stages, may require additional form-focused instruction at the B2 level. There is a tendency for more advanced features like the past regular (Stage 4 of the Natural Order) or conditionals to benefit from input enhancement. Like the emergence of conditionals, increased accuracy for adjective clauses may signal a cognitive readiness to develop more complex clauses and sentences. It is important to note that the third person

singular does not benefit from input enhancement, contrary to the preceding proficiency level. Unlike other insalient and redundant features like regular past (-ed) and contracted *will*, the third-person singular feature requires an inter-phrasal understanding of the subject and its predicate verb, explaining the difficulty.

At the C1 level, the effects of input enhancement decrease considerably (Figure 5):

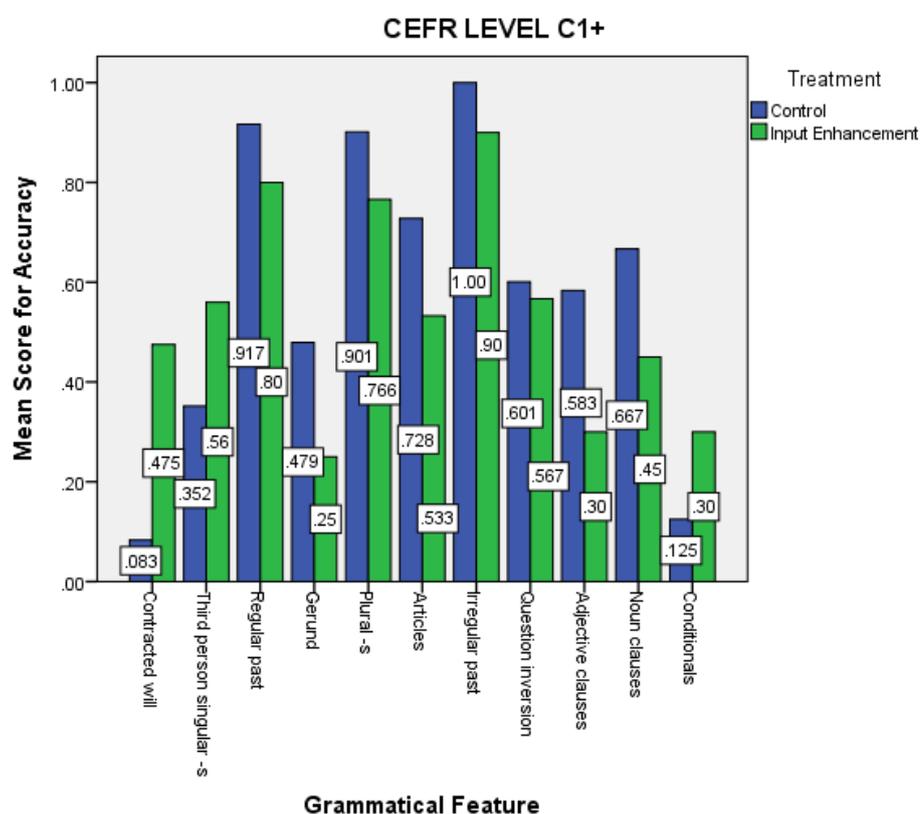


Figure 5: Grammatical Accuracy Scores for Treatment and Control group for the C1+ Level

Input enhancement has a negative impact on most grammatical features, except less salient features like third-person singular -s (+21%) and contracted *will* (+39%), as well as complex inter-sentential features like conditionals (+18%). By this stage of the order, it appears that learners have acquired most features, meaning that input enhancement serves more as a detriment than a benefit. As third-person singular -s and conditionals have yet to be acquired, an additional emphasis of these, or other similar features, may be beneficial.

5 Conclusion

When viewed through a generic, one-size-fits-all perspective, the use of input enhancement does not appear effective. Through analysis of individual grammatical features and different CEFR proficiency levels, a potential for significant impact may be realized. Results obtained from this study suggest that input enhancement has a positive, albeit insignificant effect on less salient features like contracted *will*, past regular (-ed), and third person singular -s. Not only are these features more difficult to perceive within input, they are often redundant, coexisting with other words that signal verb tense or number (e.g. *yesterday*, *tomorrow*, *he*).

Learners may benefit from the input enhancement of these features while reading. Further research is needed to assess how the duration of this input enhancement may impact acquisition.

In addition to the emphasis of less salient, redundant features, input enhancement used in a timely fashion may help to develop learner accuracy over time. At the B1 level of the CEFR, learners appear to benefit most from input enhancement that emphasizes grammatical features at intermediary stages of acquisition orders. Learners may benefit from the emphasis of lexical grammatical features like past irregular, which require a variety of different simple form-to-meaning mappings. Learners benefit from features needed to construct a basic noun phrase. Articles (e.g. *the black car*) and noun clauses (e.g. *He knows that I like it*) each develop the noun phrase. Finally, the learner seems to be developing an understanding of the relationship between subject and predicate verbs, which explains the effects of input enhancement on question inversion and third person singular.

At CEFR level B2, grammatical features in lower stages of acquisition, such as question inversion and past irregular, do not benefit from input enhancement, which suggests that these features may already have been mastered. For those features that learners are comfortable using, input enhancement may distract the natural process of communication. As is true for the B1 level, less salient and redundant features reveal a benefit from emphasis. Both the contracted *will* and regular past reveal gains from input enhancement. The further development of adjective clauses and articles suggests that learners are developing more complex noun phrases at this level. The third person singular and larger grammatical features that require dependent or independent clauses (e.g. conditionals, relative clauses, and noun clauses) do not appear to benefit from input enhancement. Learners may not have the necessary cognitive resources (i.e. the lexicon and short-term memory) required to concentrate on such emphasis. The slightly positive impact for input enhancement with conditionals suggests that inter-sentential complexity is developing in the learner.

At CEFR level C1, learners do not benefit from input enhancement as far as most grammatical features are concerned. The most complex of the less salient features, the third person singular -s, does reveal a benefit from input enhancement. The most complex conditionals also benefit from such an enhancement. At this stage, learners appear to have mastered the basic sentence structures and can develop more intricate noun, verb, and adjective phrases. They may, however, need help developing more complex sentences with both independent and dependent clauses.

Overall, our results suggest that learners may benefit from input enhancement when it is provided at a cognitively appropriate time, just before mastery. For other procedural activities like driving a car, learners may benefit from instruction in the beginning. As the activity becomes internalized, as it becomes a habit, instruction may serve to distract the learner. Grammar acquisition may proceed in a similar way. Such an interpretation explains why less proficient learners appear to benefit more from an explicit enhancement of the features.

It is also important to note that only a limited number of participants could be recruited for study of each level. While the results of this study are potentially insightful, in unison with results from a prior meta-analysis, replication and expanded inquiry is needed with a larger

number of participants from all proficiency levels. Further research of lower proficiency levels may reveal an even more significant impact for input enhancement.

Is form-focused instruction really a waste of time? As this study suggests, the efficacy of input enhancement primarily depends on the time that it is introduced. Seen in this light, the results of the present study reveal a need for further inquiry of this and other forms of form-focused instruction. While the correct time to introduce grammatical emphasis is now difficult to assess, further research can reveal more effective means to evaluate student progress, thereby facilitating the timely introduction of grammatical features.

A larger corpus of studies is needed to provide a more holistic perspective about when to introduce form-focused instruction. Ultimately, further research into language acquisition must be tied to a universal framework such as the CEFR. Otherwise, a timely introduction of form-focused instruction will not be possible. Tailoring the emphasis of grammatical features to learner proficiency may increase accuracy in student essays. It may also assist in the development of more effective computer-assisted language learning. Further examination of the differences that exist between proficiency, grammatical features, and the duration of instruction has the potential to transform the teaching of English in such a way that grammatical accuracy is fostered while learners simultaneously gain communicative competence.

References

- Bitchener, J., Young, S., & Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing, 14*(3), 191-205.
- British Council. (n.d.). *Common European Framework equivalencies*. Retrieved from <https://takeielts.britishcouncil.org/find-out-about-results/understand-your-ielts-scores/common-european-framework-equivalencies>
- Carlstrom, B. (2014). Data-driven learning made easy. In M. Pinto & D. Shaffer (Eds.), *KOTESOL Proceedings 2013: Proceedings of the 21st Annual KOTESOL International Conference* (pp. 95–102). Seoul, Korea: Korea TESOL.
- Celce-Murcia, M., Larsen-Freeman, D., & Williams, H. A. (1999). *The grammar book: An ESL/EFL teacher's course* (2nd ed.). New York, NY: Heinle & Heinle Publishers.
- Dyson, B. (2018). Developmental Sequences. *The TESOL Encyclopedia of English Language Teaching*, 1-8.
- Dyson, B. P., & Håkansson, G. (2017). *Understanding Second Language Processing: A Focus on Processability Theory* (Vol. 4). John Benjamins Publishing Company.
- Educational Testing Service. (2014). *TOEFL ITP® test score descriptors*. Retrieved from https://www.ets.org/s/toefl_itp/pdf/test_score_descriptors.pdf
- Educational Testing Service. (2015). *Mapping the TOEIC® and TOEIC Bridge™ tests on the Common European Framework of Reference for Languages*. Retrieved from https://www.ets.org/s/toeic/pdf/toeic_cef_mapping_flyer.pdf
- Educational Testing Service (ETS). (2017). *Test and score data summary for TOEFL iBT and PBT tests: January 2017– December 2017 Test Data*. Retrieved from https://www.ets.org/s/toefl/pdf/94227_unlweb.pdf
- Ellis, R. (2009). Task-based language teaching: Sorting out the misunderstandings. *International Journal of Applied Linguistics, 19*(3), 221-246.
- Ellis, R., & Sheen, Y. (2006). Reexamining the role of recasts in second language acquisition. *Studies in Second Language Acquisition, 28*(4), 575-600.
- Ferris, D. R. (2004). The “grammar correction” debate in L2 writing: Where are we, and where do we go from here? (And what do we do in the meantime...?). *Journal of Second Language Writing, 13*(1), 49-62.
- Gholami, J., & Zeinolabedini, M. (2018). Learnability and Teachability Hypothesis. *The TESOL Encyclopedia of English Language Teaching*, 1-7.
- Goldschneider, J. M., & DeKeyser, R. M. (2005). Explaining the “Natural Order of L2 Morpheme Acquisition” in English: A meta-analysis of multiple determinants. *Language learning, 55*(S1), 27-77.
- Goo, J., & Mackey, A. (2013). The case against the case against recasts. *Studies in Second Language Acquisition, 35*(1), 127-165.
- Hegelheimer, V., & Fisher, D. (2006). Grammar, writing, and technology: A sample technology-supported approach to teaching grammar and improving writing for ESL learners. *CALICO journal, 257-279*.

- Jakobson, L. (2018). Teacher written feedback on adult beginners' writing in a second language. *ITL-International Journal of Applied Linguistics*, 169(2), 235-261.
- Jourdenais, R., Ota, M., Stauffer, S., Boyson, B., & Doughty, C. (1995). Does textual enhancement promote noticing? A think-aloud protocol analysis. *Attention and awareness in foreign language learning*, 183-216.
- Kang, S.W. (2009). Koreans ranked bottom in English proficiency test. *The Korea Times*. Retrieved from http://www.koreatimes.co.kr/www/news/nation/2009/04/117_42399.html
- Kim, B.E. (2012). Koreans' TOEFL scores on the rise. *The Korea Times*. Retrieved from http://www.koreatimes.co.kr/www/news/nation/2013/08/117_116035.html
- Kline, P. (1986). *A handbook of test construction: Introduction to psychometric design*. London: Routledge.
- Krashen, S. D., and T. D. Terrell. (1983). *The Natural Approach*. New York: Alemany Press.
- Lee, S. K. (2007). Effects of textual enhancement and topic familiarity on Korean EFL students' reading comprehension and learning of passive form. *Language learning*, 57(1), 87-118.
- Lee, S. K., & Huang, H. T. (2008). Visual input enhancement and grammar learning: A meta-analytic review. *Studies in Second Language Acquisition*, 30(3), 307-331.
- Leow, R. P., Egi, T., Nuevo, A. M., & Tsai, Y. C. (2003). The Roles of Textual Enhancement and Type of Linguistic Item in Adult L2 Learners' Comprehension and Intake. *Applied Language Learning*, 13(2), 1-16.
- Lowie, W., & Verspoor, M. (2015). Variability and variation in second language acquisition orders: A dynamic reevaluation. *Language Learning*, 65(1), 63-88.
- NorthStar, Third Edition, correlated to TOEIC®, TOEFL® and CEF Ranges. (2009). London, England: Pearson Education Inc.
- Park, Y. (2017). Syntactic enhancement: Bootstrapping for second language reading. *Journal of Cognitive Science*, 18(4), 473-509.
- Pica, T. (1983). Methods of Morpheme Quantification: Their Effect on the Interpretation of Second Language Data. *Studies in Second Language Acquisition*, 6(1), 69-78. doi:10.1017/S0272263100000309
- Pienemann, (1989). Is language teachable? Psycholinguistic experiments and hypotheses. *Applied Linguistics*, 10, 52-79.
- Pienemann, M. (1999). *Language processing and second-language development: processability theory*. Amsterdam: John Benjamins Publishing Company.
- Pienemann, M. (2005). *Cross-linguistic aspects of processability theory*. Amsterdam: John Benjamins Publishing Company.
- Sakai, H. (2011). Do Recasts Promote Noticing the Gap in L2 Learning?. *The Asian EFL Journal Quarterly*, 13(1), 357-385.
- Sauro, S. (2009). Computer-mediated corrective feedback and the development of L2 grammar. *Language Learning & Technology*, 13(1), 96-120.

- Schenck, A., & Cho, Y. W. (2012). The efficacy of corpus-based pedagogical techniques for academic writing. *Multi-media Assisted Language Learning*, 15(2), 167-186.
- Schenck, A. (2017). Learning to improve grammar instruction through comprehensive analysis of past research. *International Review of Applied Linguistics in Language Teaching*, 55(2), 165-195.
- Schenck, A. (2018). An investigation of the relationship between grammar type and efficacy of form-focused instruction. *The New Studies of English Language & Literature*, 69, 223-248.
- Sheen, Y. (2010). Differential effects of oral and written corrective feedback in the ESL classroom. *Studies in Second Language Acquisition*, 32(2), 203-234.
- Shuib, M., Abdullah, A., Azizan, S. N., & Gunasegaran, T. (2015). Designing an intelligent mobile learning tool for grammar learning (i-MoL). *International Journal of Interactive Mobile Technologies (iJIM)*, 9(1), 41-46.
- Smith, M. S. (1993). Input enhancement in instructed SLA. *Studies in second language acquisition*, 15(2), 165-179.
- Song, J. Y., Sundara, M., & Demuth, K. (2009). Phonological constraints on children's production of English third person singular-s. *Journal of Speech, Language, and Hearing Research*, 52(3), 623-642.
- Statistics Korea. (2017). *Private Education Expenditures Survey in 2016*. Retrieved from <http://kostat.go.kr/portal/eng/pressReleases/11/2/index.board?bmode=read&bSeq=&aSeq=359882&pageNo=1&rowNum=10&navCount=10&currPg=&sTarget=title&sTxt=>
- Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, 46(2), 327-369. <http://dx.doi.org/10.1111/j.1467-1770.1996.tb01238.x>
- Truscott, J. (1999). The case for "the case against grammar correction in L2 writing classes": A response to Ferris. *Journal of Second Language Writing*, 8(2), 111-122. <http://dx.doi.org/10.1016/s1060-374380124-6>
- VanPatten, B. (2014). On the limits of instruction: 40 years after 'Interlanguage'. In Z-H. Han & E. Tarone (Eds.), *Interlanguage: 40 years later* (pp. 105-126). Amsterdam, Netherlands: John Benjamins.
- Wang, S., & Smith, S. (2013). Reading and grammar learning through mobile phones. *Language Learning & Technology*, 17(3), 117-134.
- Williams, K. (2013). A case for explicit grammar instruction in English as second/foreign language classrooms. *Academic Leadership Journal in Student Research*, 1(1), 7.
- Yavas, M. (2016). *Applied English Phonology*. John Wiley & Sons.

Author:

Andrew Schenck, Director of the English Program, State University of New York (SUNY), Songdo, South Korea
andrew.schenck@sunykorea.ac.kr

Matthew Baldwin, English as a Foreign Language (EFL) Program, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea
mbaldwin@kaist.ac.kr