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Research Article

The Relative Effects of Motivation and Structured Input on the Acquisition of English Past Tense Regular Forms

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The present study investigates the effects of motivation and structured input on the acquisition of English past tense regular forms. The role of motivation in the positive effects generated by processing instruction has been investigated in one previous study (Farhat & Benati, 2018). However, more research is needed to generalize the initial findings to a different language, language background, processing problem, and age. In addition, the present study measures the effects of the practice component of processing instruction, as no explicit information was given to the participants of this classroom experiment. The Academic Motivation Scale (AMS) questionnaire was used to capture different variables that influence motivation in order to create two different groups (highly- and nominally-motivated). In this experimental study, 43 native Chinese secondary school-age learners (L1 Mandarin) were assigned to three groups: a highly-motivated group (n = 16), a nominally-motivated group (n = 14), and a control group (n =13). The two instructional groups received structured input activities, which lasted for two hours. The control group received no instruction. A one-sentence-level interpretation test was used in a pre-test and post-test design to measure instructional effects on the interpretation of sentences containing past tense forms. The results indicated that both instructional groups improved equally from the pre-test to the post-test. Both groups outperformed the control group, which received no instruction on the target form. Structured input was shown to be the main factor for learners' improvement in performance regardless of their level of motivation.

Keywords: *Structured input, motivation, the lexical preference principle, interpretation test, input processing*

BACKGROUND

The Input Processing Theory and the Redundancy Principle

VanPatten's theory of input processing (VanPatten 1996, 2004, 2007, 2015a) in second language acquisition frames the research questions and procedures used in the current investigation. One of the overarching principles of input processing is the so-called Primacy of Meaning Principle. The Primacy of Meaning Principle asserts that when L2 learners are engaged in communicative, meaningful interchanges, they are primarily concerned with meaning. That is, "…learners are driven to look for the message or communicative intent in the input" (VanPatten, 2004, p. 7). According to the input processing theory, second language (L2) learners attend to grammatical forms in the input to connect one form to one meaning at a time. Research has repeatedly uncovered the varying conditions under which learners successfully make meaning from the input (VanPatten, 2015a). One of these conditions, influencing correct tense assignment, is the presence or absence of temporal adverbials in the input sentences.

The Lexical Preference Principle argues that if grammatical forms express a particular meaning, that specific meaning can also be encoded lexically (making that grammatical marker redundant). If this is the case, L2 learners will prefer to initially process lexical items before grammatical items if they both encode the same semantic information (VanPatten, 2007).

A great number of grammatical features encodes some kind of semantic information (e.g., English verbal inflection –*ed* encodes the past, as in *watched*). The same semantic notion is, however, also expressed in a sentence by lexical items such as temporal adverbs (e.g., in English *yesterday*). Given, as postulated, that L2 learners are driven to process content words before anything else, they would therefore attend to lexical temporal references of pastness before verbal inflections (past tense *-ed*). In other words, L2 learners tend to mark tense lexically before they mark it morphologically.

Overall, languages have ways of encoding and thus signalling the same information in multiple ways, and we refer to this as the natural redundancy of languages. The background research in support of the Lexical Preference Principle has been focused on tense assignment (Benati, 2019; Lee et al., 1997; VanPatten & Keating, 2007). The main result generated from this research is that the factor influencing correct tense assignment is the presence or absence of temporal adverbs in the input (VanPatten, 2007).

The Preference for the Nonredundancy Principle is highly related to the Lexical Preference Principle. According to this principle, L2 learners are more likely to process nonredundant meaningful grammatical markers before they process redundant meaningful markers. A grammatical marker might well have semantic value but other sentence elements might make it redundant. Again, the presence of a lexical item would make the grammatical marker redundant and cause a delay in the ability of L2 learners to make accurate form-meaning connections.

Structured Input: Characteristics and Empirical Evidence

The pedagogical model derived from the input processing theory is called processing instruction (VanPatten, 1996). The main aim of processing instruction is to intervene in the

processes L2 learners use to get data from the input and help them process input more accurately. Processing instruction consists of two main components: (1) L2 learners are given explicit information on a particular processing principle that may negatively affect their picking up of forms/structure during comprehension, and (2) L2 learners are pushed to process forms through structured input activities.

During structured input, L2 learners are pushed to process the target form or structure through activities in which the input is manipulated in particular ways to make L2 learners dependent on the form or the structure to get meaning. Given that L2 learners are driven to process content words before anything else, they tend to rely on lexical temporal references to process tenses rather than verbal inflections, for example. L2 learners prefer to mark tense lexically before they mark it morphologically and therefore a delay in processing grammatical forms would occur. In structured input activities, lexical items are removed from the input so as to facilitate and ensure that L2 learners make appropriate form-meaning mappings.

Prior studies have measured the effects of processing instruction and its components. VanPatten and Oikennon (1996) measured the effects of the three components of processing instruction (explicit information vs. structured input activities vs. full processing instruction) on the acquisition of object pronouns in Spanish. Three groups were compared. One received only explicit information, the other structured input activities, and the third both components (full processing instruction). The main findings from this study revealed that the gains made (on both the interpretation and production sentence-level tests) by both the processing instruction group and the structured input activities group were greater than the group receiving only explicit instruction on the targeted form. The main outcomes of this study revealed that the structured input component was responsible for learners' gains.

Benati (2004a, 2004b) replicated this study by comparing the effects of processing instruction, structured input activities, and explicit information on the acquisition of the Italian future tense and Italian gender agreement. In both studies, the results confirmed that the structured input activities component was responsible for L2 learners' improved performance.

Wong (2004) found positive results for structured input activities when she compared the effects of processing instruction, structured input activities, and explicit information in the acquisition of the French negative plus indefinite article. The addition of explicit information in the processing instruction treatment did not cause improvement.

The main finding of the line of research teasing out the three components of processing instruction has confirmed that the structured input component is responsible for the changes in the learners' ability to interpret sentences containing the feature under investigation. Structured input as the main component of processing instruction is an effective pedagogical intervention that has consistently demonstrated significant improvement in L2 learners' performance on both interpretation and production tests (VanPatten, 2015b).

The effects of structured input have also been compared to other pedagogical interventions (see the full review of this line of research in Benati & Lee, 2010, 2015, and Benati, 2019) using a variety of languages (e.g., Arabic, French, German, Italian, Japanese, Spanish), and linguistic features (e.g. word order, passive and causative constructions, tense markers, aspectual markers, mood with an expression of doubt) affected by different processing principles, populations (groups and individuals from different L1s), and contexts. Overall, the findings from this line of research demonstrate that structured input activities provide L2 learners with

opportunities to process forms and structures in a target language more efficiently than other pedagogical interventions (e.g., meaning-output-based instruction, textual enhancement, input flood).

More recently, the online effects of structured input have also been measured using eye-tracking (Benati, 2020) and self-paced reading tests (see the full review of these studies in Benati, 2021). This new line of inquiry is limited to three empirical studies. The use of online testing to measure the effects of structured input is very much in its infancy; however, this new branch of investigation might offer the possibility of more fine-grained information and analysis about moment-by-moment sentence comprehension and might even be a way to better measure implicit knowledge.

Structured Input and Motivation

Motivation is one of the individual difference factors which has attracted much attention in second language acquisition from both a socio-psychological and a cognitive perspective. Motivation can be defined as the willingness to learn, and scholars in this field (Ryan, 2019) have been attempting to associate motivation with successful language acquisition.

According to Gardner (2001), we should distinguish between (1) integrative and (2) instrumental motivation. Integrative motivation refers to L2 learners' efforts and desire to be part of the target language culture. Instrumental motivation instead refers to L2 learners' desire to learn a language for educational or economic purposes.

Only a few empirical studies have investigated the question of whether or not motivation might have an effect on the results generated by structured input/processing instruction. Abbasian and Minagar (2012) carried out a study comparing the effects of processing instruction and dictogloss in developing grammar ability and motivation among EFL learners. Results from this study suggested that both instructional interventions were significantly beneficial to the development of English grammar ability. A positive correlation between highly motivated participants and the effectiveness of dictogloss instruction was found in this study. However, this was not the case for processing instruction.

Farhat and Benati (2018) provided empirical evidence of the effectiveness of processing instruction no matter the level of motivation of the learners. The main findings from the study conducted by Farhat and Benati (2018) indicated that both groups (nominally motivated vs. highly motivated) benefited equally from processing instruction when measured by interpretation and production sentence-level tests.

Motivation and Research Questions in the Present Study

Although the relationship between motivation and processing instruction has been explored in two previous empirical studies, the results are not conclusive and need to be generalised to a different population, a different linguistic feature, and a different processing principle. In view of the limitations of the existing data and intending to measure the effectiveness of structured input, this study attempts to address the following question: Do L2 learners benefit from structured input activities in equal measure, regardless of their motivation?

The current study builds upon the work of Farhat and Benati (2018) and seeks to investigate the relative effects, at the sentence level, of structured input on one linguistic item of the English verbal system (the past tense regular form *-ed*) among two groups with different motivational levels. The main contributions of the present research to the ongoing debate on the possible role of motivation in the effects generated by structured input are:

1. to investigate the effectiveness of structured input activities on the acquisition of English past tense forms no matter the level of motivation of L2 learners.
2. to generalize previous findings to a different population (secondary school learners), language background (Mandarin as L1), language feature (English regular past tense forms), and a combination of processing principles (The Lexical Preference Principle, The Preference for Nonredundancy Principle).

The study compares the immediate effects of structured input activities when delivered to a group of highly- and nominally-motivated Chinese school-age L2 learners on the acquisition of English past tense regular forms. One specific question was formulated for this study:

> Do school-age L2 learners (L1 Mandarin) exposed to structured input correctly interpret sentences that contain past tense forms in English, regardless of their level of motivation?

RESEARCH DESIGN

Participants

In order to address the research question, a classroom experimental study was carried out. The participants of this study were Chinese native school-age learners of English (aged 12 and 14) studying at a junior high school in China and were a balanced mixture of male and female learners. They had little or no knowledge about the target grammatical form (the English past tense) before the beginning of the instructional treatment. The original pool of 62 participants was reduced to 43, as participants were included in the final pool according to the following criteria: (a) scored below 60% of the maximum score on the pre-test, (b) attended all the phases of the experiment, (c) scored high or low in the motivation questionnaire. All the criteria had to be met for inclusion in the final pool. Subjects who received a middle score in the motivation questionnaire were excluded from this experimental study.

The final pool of participants (*N*=43) was divided into three groups: a highly-motivated group (16 participants), a nominally-motivated group (14 participants), and a control group (13 participants) that received no instruction during normal class time. An academic motivation questionnaire (see Appendix 1) was implemented before the beginning of the instructional period and used to form the two instructional groups (highly motivated vs. nominally motivated) and the control group (highly motivated).

Procedure

The Academic Motivation Scale (AMS) questionnaire (see Appendix) was used in this experiment to measure participants' motivation to study in school in order to form the three groups. Vallerand and Blssonnette (1992) originally developed the AMS based on the so-called Self Determination Theory. This theory suggests that three elements constitute motivation: (i) intrinsic motivation, (ii) extrinsic motivation, and (iii) amotivation.

Intrinsic motivation includes the following aspects: (a) the desire to act for experiencing the pleasure or satisfaction when learning something; (b) the desire to act for experiencing the pleasure or satisfaction from accomplishing something; and (c) the desire to act for experiencing some form of personal stimulation.

Extrinsic motivation can be defined as (a) the desire to act in order to acquire a sense of importance or personal value, (b) the desire to act to avoid pressure and guilt, and (c) the desire to accomplish acts to gain rewards. "Amotivation" refers to L2 learners who lack any motivation.

AMS consists of twenty-eight items that assess L2 learners' motivation levels. The main reason for using this questionnaire in this study is that it is an effective tool for capturing several elements related to L2 learners' motivation. The questions answered by this questionnaire determine L2 learners' level of motivation.

Three days before the implementation of the instructional treatment (structured input), a pre-test was conducted to assess participants' previous knowledge of English past tense forms. The pre-test consisted of an interpretation sentence-level test. This test required participants to interpret correctly whether the sentences heard referred to activities that happened in the past or the present. As previously noted, the original pool of participants was reduced following the established criteria. An immediate post-test was administered to the three groups at the end of the two-hour instructional period.

The Academic Motivation Scale is one of the most widely used instruments to measure motivational levels toward learning. The scale consisted of 28 items utilizing a seven-point Likert scale [1–7]. Based on the mean scores obtained in the AMS questionnaire, participants were assigned to three groups (Table 1). Individuals who scored between 2.00 and 3.25 were assigned to the nominally motivated instructional group. Those who scored between 5.00 and 6.25 were assigned to the highly motivated instructional group and the control group (see Table 1). Participants who scored in the middle range (3.26–4.99) were not included in the study as they could not be classified as highly or nominally motivated individuals.

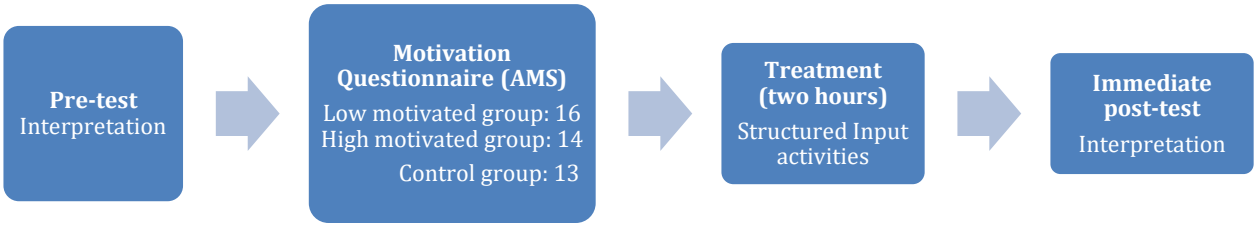
Table 1

Motivation Scores (Mean range)

Mean range	Group	Number of subjects
5.00-6.25	Highly-motivated instructional group	16
2.00-3.25	Nominally-motivated instructional group	14
5.00-6.25	Control group	13

The researcher, not the regular class teacher, was the instructor during the experiment. The duration of the instructional treatment (structured input) was two hours for both groups. The pre-post-test procedure of this experiment is displayed in Figure 1.

Figure 1
Overview of the Experiment



Target Grammatical Form

The target grammatical form for this research was English past tense regular forms. This grammatical form was chosen because it is affected by a combination of processing principles: The Lexical Preference Principle and The Preference for Nonredundancy Principle (VanPatten, 2004). According to the Lexical Preference Principle (VanPatten, 2004), L2 learners are likely to process lexical items before grammatical items when both contain the same semantic information. In the sentence *Last week Daisy cleaned her room*, both the lexical item *Last week* and the *-ed* verb ending convey pastness (the idea that an activity is completed). Based on the redundancy principle (The Preference for Nonredundancy Principle), L2 learners will first rely on the temporal adverb *last week* rather than processing *-ed* to interpret the meaning of the sentence (the activity happened in the past and not in the present).

In addition, this target feature was chosen because, as Benati (2005) noted, in Mandarin, a verb has no tense form to show that something is happening, happened in the past, or will happen in the future. Mandarin uses different lexical devices such as time adverbs or the particle *le* to indicate a time frame. As a result, it is likely that L1 Mandarin learners of English would find tenses difficult (Benati, 2005; Benati & Lee, 2008). L2 learners whose first language does not mark tense grammatically (e.g., L1 Mandarin learners) would process past tense forms and their meaning later than other learners whose first language marks tense grammatically (VanPatten, 2004).

Instructional Materials

One instructional packet was developed and used for this classroom experiment. The two instructional groups received the same treatment (structured input activities), which included both reading and listening activities. Unlike Farhat and Benati (2018), the instruction in this study consisted of only structured input; no explicit information about the target form was provided. Feedback was kept to a minimum, and the instructor told participants only when they were right or wrong. No other explanation was offered. The instructor guided participants to follow the

activities step by step and made sure that they were familiar with the words in these activities. High-frequency words were used to facilitate overall understanding. The language used to instruct the participants was Mandarin. The reason for this was to ensure that participants were able to understand and were clear about what they needed to do for each activity.

In the instructional treatment, structured input activities contained seventy-four tokens. More specifically, the treatment included six referential activities and four affective activities which required students to listen or read to comprehend sentences containing the target feature.

Structured Input activities (Farley, 2004; Lee & VanPatten, 2003; VanPatten, 2004), consist of referential and affective activities. Referential activities are those that have only one correct answer for each item and L2 learners must rely on what they hear or read to make a form-meaning connection. Affective activities refer to those in which L2 learners express their opinions or beliefs or produce other affective responses based on their own perception and/or experience.

An example of a referential activity used in the experiment is provided in Figure 2. In this activity, participants listened to several sentences and had to correctly interpret whether these sentences referred to Cai Xukun's past or present life. This superstar was chosen because he is now very popular among young Chinese learners.

Figure 2

Referential Activity (sample)

Referential Activity: Cai Xukun: Now or in the past?

Step 1

Listen to the sentences about the life of superstar Cai Xukun and decide whether the activity is about his past life as a student or his life now as a superstar.

	STUDENT (PAST)	SUPER STAR (NOW)
1.	□	□
2.	□	□
3.	□	□
4.	□	□
5.	□	□

Activity continues in a similar fashion

Sentences heard:
1) …joins many TV programs
2) …wanted to be a singer
3) …used more time to practice singing
4) …studied in the U.S.
5) …plays basketball with friends

The affective activity in Figure 3 required participants to read sentences containing the target feature and then decide whether they did the same thing on New Year's Day of the previous year.

Figure 3
Affective Activity (sample)

Affective Activity: New Year activities!
Step 1
Read these activities and think about whether you did the same or different things last year on New Year's Day.

	Yes	No
1. I visited my grandparents.	☐	☐
2. I dressed in new clothes.	☐	☐
3. I mailed New Year cards to friends.	☐	☐
4. I played with friends.	☐	☐
5. I enjoyed myself.	☐	☐

Activity continues in a similar fashion

Step 2
Compare your answers with a classmate's to find out how many things you did that were the same.

Structured input activities in the instructional treatment were designed to follow these main guidelines (VanPatten, 1996):

1. Present one thing at a time
2. Keep the meaning in focus
3. Move from sentence to discourse
4. Use both written and oral input
5. Have learners do something with the input
6. Keep learners' processing strategies in mind

Assessment and Scoring

In the present experimental research, the assessment included a sentence-level interpretation test (see sample in Figure 4). The interpretation sentence-level test was administered pre-and post-test. In the interpretation test, vocabulary consisted of high-frequency words to **minimize** participants' difficulty in processing. The interpretation assessment test consisted of 20 audio sentences, of which 10 conveyed pastness (verbs with *-ed*) and 10 were distractors (present tense verbs). These audio recordings were recorded by the

same native-language instructor to make sure they were consistent and were played only once at a normal pace. Participants received 1 point for every correct response and 0 points for an incorrect answer. The maximum possible score was 10 points and the minimum score was 0 points. Distractors were not scored in the analysis (forms in the present). Participants had the option to check *Not Sure* if they were not sure of the answers (these items were not scored).

Figure 4
Interpretation Test (sample)

Interpretation test
Listen to the sentences and decide whether the action happened yesterday or today.

	YESTERDAY	RIGHT NOW	NOT SURE	
[Sentences heard by the students]				
1.	_____	_____	_____	I walk to school.
2.	_____	_____	_____	I talked with my brother.
3.	_____	_____	_____	I cooked a dinner.
4.	_____	_____	_____	I buy beautiful clothes.
5.	_____	_____	_____	I finished my homework.

The directions for the interpretation test were created in such a way to be easily understood by the participants, thereby utilizing the terms “yesterday” for past tense and “right now” for non-past tense. Only the sentences with past tense forms were scored. The raw scores for each assessment were submitted to an analysis of variance with repeated measures where the independent variable was the instructional treatment (structured input) and the dependent variable was the assessment of that treatment (interpretation test).

RESULTS

A one-way ANOVA (Analysis of Variance) was used on the pre-test scores. This analysis showed that no significant differences were found between the highly-motivated group (M=1.38; SD=0.455), the nominally motivated group (M=1.42; SD=0.655), and the control group (M=1.28; SD=0.365) before instruction (F (2, 43) = 1.084 p = .194). Any differences found after the treatment can only be ascribed to the effects of that instructional treatment. Table 2 shows the means of the three groups in the sentence-level interpretation tests (pre-test, post-test). The means indicate an improvement for both structured input groups but not for the control group.

A repeated-measures ANOVA was conducted on the raw scores of the sentence-level interpretation test. Treatment (structured input highly-motivated group, structured input nominally-motivated group, control group) was the between-subjects factor, while Time (pre and post-tests) was the within-subjects factor. The results of the statistical analysis showed a significant main effect for Treatment (F (2, 43) = 17.213, p = .001); a significant main effect for Time (F (2, 43) = 19.690, p = .001); and significant interaction between Treatment and Time (F (2, 43) = 13.129, p = .001).

A post hoc Tukey test was carried out on the raw scores of the interpretation test to show possible contrasts among the three groups. The results of this analysis indicated that the effects of the Treatment were due to the following contrasts: the two structured input groups performed significantly better than the control group (SI highly-motivated = SI nominally-motivated > control group (p = .001)). The scores of the two structured input groups were not significantly different from each other (p = .528).

The statistical analysis indicated that both instructional groups improved significantly and equally from pre-test to post-test no matter the level of motivation of participants. The control group, on the other hand, did not show a significant difference in pre-test and post-test scores.

Table 2

Sentence-Level Interpretation Data (Mean and SD)

Groups	*n*	Pre-test (0-10)		Post-test (0-10)	
		Mean	SD	Mean	SD
SI highly-motivated	16	1.38	0.455	6.41	1.021
SI nominally-motivated	14	1.42	0.655	6.45	1.120
Control	14	1.28	0.365	1.23	1.023

Note: SI = structured input

DISCUSSION

Main Findings

The results of this experimental study reveal that both structured input groups improved equally and obtained similar gains from pre-test to post-test after receiving their treatment. The pre-test mean scores of the three groups were similar, indicating that the groups were equal before the beginning of the instructional period (see Table 2). After the end of the treatment, the mean scores for the highly-motivated and nominally-motivated structured input groups increased to just over 50% from pre-tests to post-tests. The control group did not improve from the pre-test to the post-test. The mean scores suggest that both instructional groups improved equally from pre- to post-test. The statistical analysis ANOVA and the post hoc analysis confirmed that both structured input groups performed equally and better than the control group.

The main research question that guided this investigation was: Do school-age L2 learners (L1 Mandarin) exposed to structured input correctly interpret sentences that contain past tense forms in English no matter their level of motivation?

The statistical analysis of pre- and post-test scores showed no significant differences between groups, but significant effects in terms of instruction (structured input vs. no

instruction) and time (pre- vs. post-test). Both instructional groups (highly-motivated and nominally-motivated) improved no matter their level of motivation. The control group made no improvement and motivation was not considered a key element in the results generated by this study.

The structured input treatment helped participants in both groups equally in processing and correctly interpreting new regular past tense forms. Structured input positively affects the way L2 learners process English past tense forms. In the case of this study, the target form is affected by The Lexical Preference Principle and The Preference for Nonredundancy Principle. This study shows that school-age L2 learners (L1 Mandarin) exposed to structured input can learn to interpret correctly sentences containing past tense forms in English no matter their level of motivation. In addition, the main findings from this study build on previous research in this field by demonstrating that motivation does not affect the positive results generated by structured input among a population with a different background (Mandarin L1), age (school-age secondary school learners), acquiring a different grammatical form (English past tense forms).

Implications

Overall, the main findings from this study make several theoretical and pedagogical contributions.

First of all, the main results from this study contribute directly to the discussion on the crucial role that input processing plays in second language acquisition. The scores on the pre- and post-tests further demonstrate that L2 learners rely on a combination of processing principles to process forms such as the English past tense. Subsequently, structured input activities are an effective pedagogical intervention, no matter the level of motivation of the L2 learners, to help learners to become better processors of input.

Secondly, the main findings from this study reaffirm the importance of input-based practice as a key pedagogical tool for grammar instruction. Structured input provides an effective option for teaching grammar when linguistic features such as past tense forms are affected by processing problems. Grammar instruction should not be viewed as the explanation and practice of grammatical forms but as a pedagogical intervention to facilitate the processes and strategies used by L2 learners during input processing. Structured input practice does not intend to pour knowledge into L2 learners' heads, but rather to assist certain processes which can aid the growth of learners' internal language system. L2 learners receiving structure input can make appropriate meaning connections (in the case of this study by processing English past tense forms correctly). In this respect, a subsequent pedagogical implication of this study is that acquiring grammar requires L2 learners to process meaning-bearing input first. A coherent approach to grammar instruction takes L2 learners from processing a grammatical feature in the input to accessing the feature from the internal language system to create output.

Thirdly, the findings from this study provide support to several hypotheses previously formulated within the processing instruction/structured input research framework (Benati & Lee, 2008; Benati & Lee, 2010; Benati & Lee, 2015). The results obtained in this study lend further support to the so-called Age Hypothesis (Benati & Lee, 2008). Structured input is just as effective an intervention with young learners as it is with older learners. Our results, with secondary school-age L2 learners, confirmed previous research (Benati, 2019) demonstrating the

effectiveness of structured input activities with learners of different ages, no matter the level of motivation of those learners. The results obtained in this study in using native speakers of other languages than English (Mandarin L1) also support the so-called Native Language Hypothesis (Benati & Lee, 2008). Structured input is effective for instilling target language-specific processing strategies, no matter the native language of the learners. The present study contributes to the expansion of the Native Language Hypothesis by adding Mandarin to the current list of languages in which the effectiveness of structured input practice has been observed.

Limitations and Further Research

As with all empirical research, the present study is limited in several ways. While the positive outcomes in this study have been underscored, we acknowledge certain limitations. Firstly, the lack of a delayed post-test (due to practical reasons) is a methodological limitation. Further research should measure the durability of the structured input treatment among L2 learners with different levels of motivation.

Secondly, the number of participants in this study was relatively small. Therefore more research needs to be conducted in the future with a larger population to generalize these initial findings.

Thirdly, the present study measures motivation and offline effects of structured input on the acquisition of English past forms. Future research should investigate the effects of this pedagogical intervention and motivational factors with the linguistic features of other languages that might be affected by similar processing principles, among different populations (e.g., L1s, language backgrounds) and using online measurements (e.g., eye-tracking and self-paced reading tests) to measure language processing.

Fourthly, future research should consider a longer instructional period to see whether structured input practice might have further beneficial effects in improving the accuracy of processing of forms/structures among L2 learners.

Finally, future studies measuring structured input and motivational factors should use two motivation questionnaires to make the measurement of motivation more accurate in capturing different and additional aspects of it. For example, the Attitude Motivation Test Battery (AMTB) questionnaire could be added.

CONCLUSION

The results from this study indicate that academic motivation as an individual difference does not seem to have an impact on the positive effects generated by structured input. Previous research investigating a possible correlation between structured input and motivation is limited and more research is needed within this field of inquiry. From the data collected in this study, structured input alone is beneficial for school-age learners' (L1 Mandarin) interpretation and effective processing of English past tense forms (affected by a combination of processing principles) regardless of learners' level of motivation.

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REFERENCES

Abbasian, G., & Minagar, N. (2012). PI-based vs. DG-oriented instruction in developing grammar ability and motivation of EFL learners. *Iranian EFL Journal*, *8*, 94–112.

Benati, A. (2004a). The effects of processing instruction and its components on the acquisition of gender agreement in Italian. *Language Awareness*, *13*, 67–80.

Benati, A. (2004b). The effects of structured input and explicit information on the acquisition of Italian future tense. In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 207– 255). Erlbaum.

Benati, A. (2005). The effects of PI, TI and MOI in the acquisition of English simple past tense. *Language Teaching Research, 9*, 67–113.

Benati, A. (2019). Classroom-oriented research: Processing instruction. *Language Teaching*, *52*, 343–359.

Benati, A. (2020). The effects of structured input and traditional instruction on the acquisition of the English causative passive forms: An eye-tracking study measuring accuracy in responses and processing patterns. *Language Teaching Research, 24*, 1–21.

Benati, A. (2021). *Input processing and processing instruction: The acquisition of Italian and Modern Standard Arabic*. Benjamins Publishing.

Benati, A., & Lee, J. (2008). *Grammar acquisition and processing instruction: Secondary and cumulative effects.* Multilingual Matters.

Benati, A., & Lee, J. (2010). *Processing instruction and discourse*. Continuum.

Benati, A., & Lee, J. (2015). Processing instruction: New insights after twenty years of theory, research and application. *International Review of Applied Linguistics, 53*, 87–90.

Farhat, A., & Benati, A. (2018). The effects of motivation on processing instruction in the acquisition of Modern Standard Arabic gender agreement. *Instructed Second Language Acquisition*, *2*, 61–82.

Farley, A. (2004). *Structured input: Grammar instruction for the acquisition-oriented classroom*. McGraw-Hill.

Gardner, R. C. (2001). Language learning motivation: The student, the teacher, and the researcher. *Texas Papers in Foreign Language Education*, *6*, 1–18.

Lee, J., Cadierno, T., Glass, W., VanPatten, B. (1997). The effects of lexical and grammatical cues on processing temporal reference in second language input. *Applied Language Learning*, 8, 1-24.

Lee, J., & VanPatten, B. (2003). *Making communicative teaching happen* (2nd ed.). McGraw-Hill.

Ryan, S. (2019). Language learner motivation: What motivates motivation researchers? In J. Schwieter & B. Benati (Eds), *The Cambridge handbook of language learning* (pp. 409–

429). Cambridge University Press.
Vallerand, R., & Blssonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality*, *60*, 599–620.
VanPatten, B. (1996). *Input processing and grammar instruction: Theory and research*. Ablex.
VanPatten, B. (2004). *Processing instruction: Theory, research, and commentary*. Lawrence Erlbaum Associates.
VanPatten, B. (2007). Input processing in adult second language acquisition. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp.115–135). Lawrence Erlbaum Associates.
VanPatten, B. (2015a) Input processing in adult SLA. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition* (pp.113–135). Routledge.
VanPatten, B. (2015b) Foundations of processing instruction. *International Review of Applied Linguistics, 53*, 91–109.
VanPatten, B., & Oikkenon, S. (1996). Explanation versus structured input in processing instruction. *Studies in Second Language Acquisition, 18*, 495–510.
VanPatten, B., & Keating, G. (2007). Getting tense: Lexical preference, l1 transfer, and native and non-native processing of temporal reference. [Unpublished manuscript].
Wong, W. (2004). Processing instruction in French: the roles of explicit information and structured input. In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 187–205). Erlbaum.

APPENDIX

Academic Motivation Scale

Your name 您的名字：

WHY DO YOU GO TO SCHOOL?
Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to school.

你为什么上学？
使用下面的量表，表明以下每个项目在多大程度上与您上学的原因之一相对应。
1 表示“完全不符合”，4 表示“基本符合”，7 表示“完全相符”。

1 完全不符 2 挺不符合 3 比较不符合 4 基本符合 5 比较符合 6 挺符合 7 完全符合

1. Because I need at least a middle school degree in order to find a high-paying job later on.
因为我至少需要一个中学学历，这样以后才能找到一份好工作。

2. Because I experience pleasure and satisfaction while learning new things.
因为我在学习新事物的同时能体验到快乐和满足。

3. Because I think that a middle school education will help me better prepare for the career I have chosen.

因为我认为中学教育将帮助我更好地为我理想的职业做好准备。

4. Because I really like going to school.
因为我真的很喜欢上学。

5. Honestly, I don't know; I really feel that I am wasting my time in school.
老实说，我不知道; 我真的觉得我在学校是在浪费时间。

6. For the pleasure I experience while surpassing myself in my studies.
为了我在学习中超越自我时所体验到的快乐。

7. To prove to myself that I am capable of completing my middle school degree.
向我自己证明自己有能力完成我的中学学业。

8. In order to obtain a more prestigious job later on.
为了以后获得一份更有声望的工作。

9. For the pleasure I experience when I discover new things never seen before.
为了当我发现以前从未见过的新事物时，我所体验到的快乐。

10. Because eventually it will enable me to enter the job market in a field that I like.
因为上学最终能让我进入我喜欢的领域的就业市场。

11. Because for me, school is fun.
因为对我来说，学校很有趣。

12. I once had good reasons for going to school; however, now I wonder whether I should continue.
我曾经有充分的理由来上学；然而，现在我不知道我是否应该继续。

13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.
为了我在我的个人成就中超越自我时所体验的快乐。

14. Because of the fact that when I succeed in school I feel important.
因为当我在学校取得成功时，我觉得自己很重要。

15. Because I want to have "the good life" later on.
因为我希望以后拥有“美好的生活”。

16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.
为了在拓宽我喜欢的科目的知识时，我所体验到的快乐。

17. Because this will help me make a better choice regarding my career orientation.
因为这样可以帮助我更好地选择我的职业方向。
18. For the pleasure that I experience when I am taken by discussions with interesting teachers.
为了当我被有趣的老师吸引时，我所体验到的快乐。

19. I can't see why I go to school and frankly, I couldn't care less.
我不明白我为什么要上学，坦白说，我一点也不在乎。

20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.
为了我在完成困难的学术活动的过程中所感受到的满足感。

21. To show myself that I am an intelligent person.
为了向我自己证明我是一个聪明的人。

22. In order to have a better salary later on.
为了以后有更好的薪水。

23 Because my studies allow me to continue to learn about many things that interest me.
因为我学习能让我继续学很多我感兴趣的事情。

24Because I believe that my middle school education will improve my competence as a worker.
因为我相信我的中学教育将会提高我的工作能力。

25. For the "high" feeling that I experience while reading about various interesting subjects.
为了我在阅读各种有趣的科目时所体验到的兴奋感觉。

26. I don't know; I can't understand what I am doing in school.
我不知道; 我不明白我在学校做什么。

27. Because middle school allows me to experience a personal satisfaction in my quest for excellence in my studies.
因为中学让我体验到了在学习上追求卓越的个人满足感。

28. Because I want to show myself that I can succeed in my studies.
因为我想证明我能在学习上取得成功。

AUTHORS

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