

# Story-Listening vs. Traditional Memorization: Impact on Vocabulary Size

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## ABSTRACT

The shift in education in Japan to a curriculum that significantly expands vocabulary calls for a reevaluation of teaching methods that promote efficient vocabulary acquisition. This paper focuses on junior high school students at the beginner level. It examines the efficacy and efficiency of acquisition-based and traditional conscious learning approaches. A previous study using the same subjects (Mason, Ae, & Krashen, 2022) revealed that the students mainly rely on forced repetition and memorization using mnemonic devices. The control group used traditional methods in this experiment, and the experimental group was exposed to auditory input (story listening). The results showed that the experimental group was statistically inferior to the control group in terms of vocabulary size after 17 months. However, when the time spent was considered, the experimental group showed higher efficiency, consistent with previous studies that examined test score improvement relative to time spent (Mason, 2013, 2018). In other words, the actual effect cannot be understood in terms of the efficiency of a learning method unless the time spent is considered. The "Story-Listening" language acquisition method is based on the Input Theory. The theory emphasizes "optimal language input" (Krashen, 1982; Krashen & Mason, 2020) and suggests eliminating anxiety-provoking activities such as forced output, memorization, error correction, drilling, and weekly tests. English tests, including high school entrance exams, prioritize listening and reading skills. Because input-based instruction develops overall language competence, including vocabulary, it seems a better option for language development and test preparation.

**Keywords:** vocabulary size, memorization, story-listening, the input hypothesis.

## BACKGROUND

Until 2020, Japanese students were typically tasked with learning around 1,200 vocabulary words by the time they finished junior high school. However, with the introduction of new curriculum guidelines from 2021 onward by the Ministry of Education, this expectation significantly increased. Combining the 600 to 700 words learned during elementary school with the 1,600 to 1,800 words learned during junior high school, the total vocabulary size by graduation has increased to approximately 2,200 to 2,500 words, nearly doubling in magnitude.

In our survey aimed at finding out the methods students employed to learn new English vocabulary, we observed that the majority relied on brute repetition, writing and rewriting the target words, as well as employing various mnemonic techniques (Mason, Ae, & Krashen, 2022). Based on insights from the second author, who previously taught at the public junior high school until 2023, the students in junior high school are typically assigned 20 English words per week, with testing on these words conducted the following week. With 40 weeks of classes in a year, the objective is to master 2,400 English words within 120 weeks (3 years) by memorizing 20 words weekly. Additionally, students dedicate around two hours per week to homework focused on learning grammar rules, which naturally includes vocabulary used in the textbook, in preparation for high school entrance exams.

Many students also attend private tutoring schools after regular classes to further prepare for high school entrance exams. They engage in additional practice questions and vocabulary memorization to ensure they can provide correct test answers. This pattern persists throughout the six years of junior and senior high school in Japan. Despite these efforts, a 2017 survey by the Ministry of Education revealed that third-year high school

students still exhibited beginner-level English proficiency (A1/A2 on the CEFR test) despite more than five years of study. <sup>(1)</sup> This suggests a long-standing issue of inefficient teaching and learning methods in Japan.

While public junior high schools in Japan may have made surface-level progress by updating textbooks, integrating computer-assisted learning, and introducing Graded Readers, they continue to employ teaching methods rooted in behaviorism principles when teaching English as a foreign language.

The Input Theory (Krashen, 1982, 1985, 2003) predicts that abundant input (listening to and reading) that students understand and enjoy is necessary and sufficient for successful language acquisition, making language acquisition easier and faster (Krashen, 1998). The theory maintains that input is the cause of language acquisition and *not output*. The theory warns that *forced* output (speaking and writing) can increase anxiety and hinder language acquisition (The Affective Filter Hypothesis). Other activities that are said to be obstacles to language acquisition include error correction (Truscott, 1996) and homework (Kohn, 2012). Researchers widely agree that "comprehensible input" is the cause of language acquisition (Truscott, 2015: Chapter 6; Truscott, 2024). Studies indicate that incorporating more comprehensible input into teaching methodologies leads to improved test scores, attributed to enhanced language skills acquired through listening and reading (Isik, 2000; Sari, 2013; References: <http://www.sdkrashen.com>; <https://www.researchgate.net/profile/Jeff-McQuillan>; <https://www.beniko-mason.net>). However, despite this consensus, there remains a gap between research findings and classroom practice. Teaching methods persist without integrating these research findings, and many educators still use old-fashioned conscious memorization teaching methods.

## EXPERIMENT

Since the number of words to memorize has doubled, our students will not be able to reach their goal if we continue to teach using the same method. It's essential to consider how best to support our students. This study examines the effectiveness of two different teaching approaches for vocabulary acquisition/learning among beginner-level 7th-grade junior high school students who are beginning formal English education. Specifically, it compares the traditional conscious learning approach with a subconscious acquisition approach, which aligns with the Input Theory by incorporating stories and removing skill-based conscious learning activities that act as barriers to natural language acquisition as they raise affective filters to the language acquisition device.

In this experiment, we studied the vocabulary acquisition/learning of junior high school students who graduated in 2022 as the control group and in 2023 as the experimental group. Specifically, we used two theoretically different approaches to determine the number of words these students had acquired/learned by the midpoint of their three-year junior high school education. Since the subjects were in their first year of junior high and had not yet developed English reading skills, the study's independent variable primarily relied on auditory input rather than reading.

The subjects were beginning-level 7th graders at a public junior high school in rural Hyogo Prefecture, Japan. This selection was made to minimize the potential influence of prior English education on the experiment's results. In Japan, English was not compulsory in elementary schools until 2020, and these students had not received formal English education before entering junior high school. The teacher who taught the 2022 graduates for three years provided students with a typical grammar-based English education. <sup>(2)(3)</sup>

Identifying efficient methods for second/foreign language acquisition relevant to high school entrance exams can inform decisions about how to teach English to junior high school students.

## Subjects and the Method Difference

The students in the experimental group were the 2023 junior high school graduates (N=80) in their second year in September. The subjects in the control group were the 2022 graduates (N=112) in their second year in September.

In addition to textbook-based grammar study, the Class of 2022 received traditional instruction that included speaking/writing output practice, error correction, and two hours' worth of homework per week for grammar study. The students were also required to learn 20 new English words each week and take a vocabulary test the following week.

The 2023 graduates received auditory input instruction in English entirely for the first two terms in their first year. The teacher introduced some basic English words using the Total Physical Response Method (Asher, 1969) for 2 weeks (8 lessons) <sup>(4)</sup> and the Teaching Proficiency through Reading and Storytelling (TPRS) method (Ray & Seely, 1998) for 4 weeks (16 lessons) <sup>(5)</sup> in the first term (June to July 2020). In the second term (late August to mid-December), students listened to 46 fairy/folk tales in English in a Story-Listening way (Mason, 2014; Mason & Krashen, 2020; Krashen & Mason, 2020, 2022). <sup>(6)</sup> The teacher first read many stories on the Internet to find interesting ones for his students. He didn't use the original copy-right free texts he found on the Internet but rewrote them and first made stories short and simple for his students. When he told a story, he drew pictures on the board and wrote the words he wanted students to see. First, he told very short stories which were unfamiliar to his students. Then he told longer but familiar stories such as the Three Little Pigs, and then he began to tell longer and more complex stories from the Grimm Brothers Fairytales (e.g., Simeli Mountain). He drew pictures, used facial expressions and gestures, and used the words the students had already heard in previous stories when explaining the characters and events in the story. In short, he delivered his stories using linguistic and non-linguistic Comprehension-Aiding Supplementations (Krashen, Mason, & Smith, 2018).

From the third term (from the second week of January to the third week of March 2021), the teacher could no longer do what he had done till then. He was required to use the textbook prepared by the school to teach grammar. He had to teach English grammar in the students' native language, Japanese, but he didn't want to return to the old ways of traditional teaching because he had doubts about its effects and efficiency.

The traditional teaching methods he used to use until the previous year were as follows. In the textbook, the conversations or texts were presented either from a recording or orally by the teacher, often accompanied by illustrations to explain the meaning. Students memorized lines of dialogue and repeated each line in chorus. Once the dialogue was memorized, the teacher guided the students to adapt it to their situations and interests by substituting words and phrases. Drills included morphological changes such as responding to questions, substituting new words or grammatical structures, negating affirmative sentences, or changing singular to plural. Follow-up activities consisted of speaking, reading, writing, or vocabulary activities based on the dialogs and texts presented in the textbook. This procedure resembles the Audio-Lingual Method. <sup>(3)</sup>

Although the teacher was not allowed to use only the Story-Listening method to teach English from the third term, he did not want to return to traditional teaching methods. This was because he had the impression from both objective and subjective observations that the Story-Listening method he used in the second semester was more productive and rewarding for students than conscious learning, which required students to spend more time and effort on learning and memorizing (Mason & Ae, 2021). He found it easier for his students to remember the meaning of new English vocabulary using stories. Also, when the school administered an English proficiency test purchased from a test-making company at the end of

the second term, the teacher observed that the subjects scored higher on the listening comprehension parts than the students in the previous years.

In the third term, he didn't tell folktales anymore, but he introduced the content of chapters in the textbook using a story that he created from the material in the textbook. For example, when a chapter was introduced as a dialogue between two people talking about their plans for the weekend, the teacher created a story out of the dialog. He described the two characters in detail: their names, ages, hometowns, occupations, families, etc. The teacher created a roughly 10- to 15-minute-long story by describing the content of the characters' conversations and adding some content other than what was included in the textbook. The teacher told the story in English using vocabulary and grammar that the listeners had already been exposed to, and he included the chapter's new grammar and words in the story. The teacher drew pictures and wrote the words and necessary expressions on the blackboard so students could see the written words and sentences. He neither had students memorize the dialogue nor recite it.

After providing students with auditory comprehensible input, he explained the grammar rules in Japanese. Then, the students did their workbook on grammar in class. They self-corrected using the answers at the back of the workbook. This is because it was thought to lower the affective filter for better language acquisition when they self-corrected their errors than when the teacher pointed out the errors (their weaknesses).

Although the time spent listening to stories was much less than what they spent listening to stories in the second term, the subjects still had the opportunity to receive natural English spoken in a way that they could understand.

The teacher not only utilized the contents of the textbook for Story-Listening, but also decided to delete the following activities from his instruction, as the Input Theory had warned that these activities could provoke anxiety: (1) forced output in English using the targeted grammar and words, (2) error correction as it was explained as above, and (3) memorization of new words followed by a test. Furthermore, he removed homework from his instruction. Observing students over the years, he was skeptical about whether homework positively affected learning. He knew some students did not do their homework but instead copied their friends' homework and submitted it as theirs. Some students wrote answers without understanding them and submitted them. They were required to submit weekly homework as part of their grades. Teachers usually give homework to enforce grammar knowledge by giving them worksheets. Still, the second author felt the same as Kohn, who said, "You can't reinforce understanding the way you can reinforce a behavior," and "Homework is all pain and no gain." (Kohn, 2012).

### **Hours Spent Studying English.**

The 2022 group, taught by another Japanese English teacher, underwent 178 hours of classroom instruction and 106 hours of homework in four terms. It is unclear how much time the 2022 group spent memorizing the 20 new English words they were assigned each week. In total, they spent at least 284 hours learning English. The 2023 group also had the same hours of classroom instruction (178 hours) but no homework.

### **The Measurement and the Length of the Study**

The 273 content words on the test were randomly selected from a comprehensive list of 1,340 words expected to be mastered by 1st and 2nd-year junior high school students by the end of the second year of junior high school. As the number of words on the test was too many for one test, the students took the test in four sessions. Only the data from students who participated in all four sessions were analyzed, narrowing the sample size to 80 for the 2023 group and 112 for the 2022 group. The 2022 group, which another Japanese English teacher

taught, underwent 178 hours of classroom instruction in four terms, with additionally spending 106 hours on homework in four terms. It is unclear how much time the 2022 group spent memorizing the 20 new English words they were assigned each week. In total, they spent at least 284 hours learning English. The 2023 group also had the same hours of classroom instruction (178 hours) but no homework. A test on translating English words into Japanese was administered to the students in September when they were in the second year, just when they were halfway through junior high school, and the results were compared. It was roughly 17 months after both groups entered junior high school.

## Results

This experiment revealed a statistically significant difference in vocabulary learning/acquisition between the two groups. The 2023 group averaged 81.1 points out of 273 words on the vocabulary test, while the 2022 group averaged 104.7 points. The unpaired t-test analysis showed that the 2022 group remembered significantly more words ( $t=3.68$ ,  $df=190$ ,  $p=0.0003$ ). When calculating how many words each score corresponds to for 1,340 words, we estimated that the 2022 group had 513.9 words and the 2023 group had 398.1 words (Table 1).

Table 1. Comparison of the Number of Learned / Acquired words after 4 terms.

The total words tested = 273 out of 1,340	2023 Graduates 8 <sup>th</sup> grade September (N=80)	2022 Graduates 8 <sup>th</sup> grade September (N=112)
Test Score Mean (SD)	81.1 (35.8)	104.7 (48.7)
Hours spent studying English in 4 terms	178	284 (178 +106)
The estimated number of words from the raw score corresponding to 1,340 words	398.1	513.9
Estimated Words per Hour Efficiency	2.24	1.81

However, when time efficiency was calculated by dividing the word gains by the time invested, the 2023 group displayed a higher efficiency rate of 2.24 words per hour compared to the 2022 group's 1.81 words per hour. As for scoring, even if the answer was not the same as it had been written in the textbook, it was considered correct if it meant the same thing. Their English teacher graded the class for 2022. The scores of the subjects in this experiment were done by the second author (Table 1).

## Amount of Time They Spent Studying English at a Tutoring School after Regular School.

When comparing the study time spent at cram schools outside of regular school hours, both groups showed similar durations at the private tutoring school they attended after regular school (Mason & Ae, 2023: Table 2, p. 254).

## DISCUSSION

The Input Theory states that comprehensible input is the cause of language acquisition, but not output. However, the input theory also states that although input is the cause, it alone is insufficient. It is argued that acquisition cannot be successful unless activities likely to cause anxiety and fear are excluded from the teaching method (The Affective Filter Hypothesis: Krashen, 1985, 2003). Furthermore, for efficient language acquisition, the input should also be of interest to students, contain rich language, and be abundantly given. (The Optimal Input Hypothesis: Krashen, 1982; Krashen & Mason, 2020).

Empirical studies have already demonstrated that output and error correction are not necessary for efficient language acquisition when optimal input is provided to students (e.g., Mason, 2004, 2011, 2013, 2018). The effectiveness of error correction has long been doubted (Robb, Ross, & Shortreed, 1986; Truscott, 1996; Mason, 2004). This experiment found that adding stories (auditory optimal input) while removing activities that get in the way of acquisition was effective for vocabulary acquisition, even for beginning-level 8th graders. Below is a discussion of this result. There are six (6) points.

### **1) Mnemonic Devices are Inferior to Story-Listening for Remembering the Meaning of New Words.**

When teaching the meaning of new words, teachers often introduce mnemonic devices to students. Creating mnemonic devices can be a helpful way to remember foreign words by associating them with familiar concepts or sounds. The suggested mnemonic devices are:

- (1) Similar-sounding words: Find words in your native language that sound like a foreign word. Create a sentence or phrase incorporating both the foreign word and its similar-sounding counterpart.
- (2) Visual associations: Associate the foreign word with a vivid mental image. This image can be related to the word's meaning or its pronunciation.
- (3) Acronyms or initials: Create an acronym or use the initials of the foreign words to form a memorable word or phrase in your native language.
- (4) Story or narrative: Develop a short story or narrative that includes the foreign word in a context that is easy for you to remember.
- (5) Rhymes or songs: Turn the foreign word into a rhyme or include it in a simple song. The rhythm and melody can aid in memory retention.

The first drawback of this strategy is the additional demand it places on students' creativity, effort, and time to apply mnemonic devices to each word. Secondly, while students may initially perform well on tests after memorizing words using mnemonic devices, they tend to forget them more rapidly than when they acquire word meanings through a comprehensible and interesting story provided by the teacher. Mnemonic devices provide only a temporary and artificially constructed understanding. For instance, the vocabulary retention rate from listening to a story was 0.21 words per minute after four weeks (Mason & Ae, 2021). Conversely, when the same students were asked to memorize words from a list using various strategies, including mnemonic devices, and tested after four weeks, their retention rate dropped to 0.10 words per minute (Mason, Ae, & Krashen, 2022). This suggests that consciously memorized words are forgotten twice as quickly as those acquired through engaging narratives.

### **2) Advantages of Listening to Stories with Comprehension-Aiding Supplementation**

Utilizing the Story-Listening method relieves students from relying on mnemonic devices to visualize each word mentally. Take, for instance, a familiar tale such as "The Three Little Pigs," where the teacher engages in narration, gestures, illustrations, explanations, and English word inscriptions on the board. Students grasp language's auditory, visual, and written dimensions through this multifaceted approach. As immersed in the story, they eagerly anticipate what unfolds, listening excitedly.

Consider how the Story-Listening approach helps children acquire a new word, such as "chimney," within the context of "The Three Little Pigs."

When the teacher introduces the word "chimney":

- Students hear the word spoken aloud.

- They witness the teacher drawing a chimney on the blackboard, gradually appearing atop the roof.
- They observe the chimney protruding from the roof.
- The teacher can include an illustration of smoke coming out from the chimney and optionally introduce the word "smoke" concurrently for fun without any intention of her/his wishing for listeners to learn/notice/acquire the word.
- The teacher writes "smoke" on the board beside the illustration. Students hear and observe what the teacher is drawing, saying, and writing.
- Meanwhile, as the chimney is drawn, the teacher incorporates the word "chimney" into various sentences, such as:
  - 1) The wolf saw a *chimney* on the roof.
  - 2) He thought of a good plan.
  - 3) He wants to slide down into the house through the *chimney*.
  - 4) The *chimney* is a good way to enter the house.
  - 5) The wolf went up the roof.
  - 6) He entered the *chimney*.
  - 7) And he slid down the *chimney*!

Simultaneously, students mentally envision the wolf climbing up the roof, entering the chimney, sliding down, and falling into boiling water. They engage in a vicarious experience through auditory and visual stimuli, with the word "chimney" echoing in their minds.

The results of the previous study mentioned above showed that when students were tested on their word memory four weeks after hearing the story of "The Three Little Pigs" from their teacher (the second author), their vocabulary retention rate was 0.21 words per minute (wpm). This was calculated by dividing the number of words the student remembered when the teacher told the story. When we tested their memory after two (2) weeks, using an unfamiliar and longer story (Lazy Jack) told by a person unfamiliar to them (the first author), their remembering rate was 0.19 wpm (Mason & Ae, 2021). These rates are very similar to the rates obtained by high school and college students who were not novice learners but experienced learners (e.g., Mason & Krashen, 2004, 2018; Mason, Vanata, Jander, Borsch, & Krashen, 2009; Clarke, 2019,2020; Mason, Smith, & Krashen, 2020).

People frequently cite age as a barrier to foreign language acquisition, claiming that older individuals find it difficult to learn new words like children. However, at the same time, they may also attribute children's lack of experience in English study as an impediment. They question whether children can understand in sessions like Story-Listening and learn new words when hearing a foreign language. They state that those with experience in English studies find it easier than children because children know very little English.

However, the effectiveness and efficiency of Story-Listening remain unchanged irrespective of age or prior learning experience. This suggests that listening to stories is equally effective whether students are beginners or experienced. When the teacher rephrases, explains, and comments while drawing pictures on the board, the teacher's storytelling helps students with better comprehension, resulting in effortless and natural vocabulary acquisition (e.g., Elley,1989).

### **3) Stories Provide Rich Language Input.**

- (1) Off List Words. Students who listen to stories are exposed to words outside the textbook list. Stories and books contain many words outside the most frequent 2,000-word families. Even fairy/folktales for children contain 2 to 3% or more Low-Frequency words. For example, "Lazy Jack" includes 14 words outside of the first 2,000 high-frequency word families used in the original text. The total number of

words from the 3rd 1,000-word level (K3) to the 11<sup>th</sup> 1,000-word level (K11) in “Lazy Jack” is 14 words, shown **in bold** in Table 2. Table 3 demonstrates a breakdown of the 14 Low-Frequency words in the text of Lazy Jack. Teachers may not use all the low-frequency words used in written stories when telling the stories to junior high school students but in the case of “Lazy Jack,” the story cannot be fully told unless the teacher uses those 14 low-frequency words.

Table 2. Lazy Jack (<https://www.lex tutor.ca/vp/comp/>)

Frequency Level	Families	Types	Tokens	Cumulative Token %
1st 1000 word-level	163	186	548	93.2
2 <sup>nd</sup> 1000 word-level	12	12	22	96.9
<b>3<sup>rd</sup> 1000 word-level</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>97.6</b>
<b>4<sup>th</sup> 1000 word-level</b>	<b>5</b>	<b>5</b>	<b>8</b>	<b>99.0</b>
<b>5<sup>th</sup> 1000 word-level</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>99.5</b>
<b>5<sup>th</sup> 1000 word-level</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>99.8</b>
<b>11<sup>th</sup> 1000 word-level</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>100</b>
TOTAL	189+?	212	588	100

Table 3. Breakdown of the 14 Words from 3K to 11K in the text of Lazy Jack

3 <sup>rd</sup> 1000 word-level	burden_[1] delay_[1] spilled_[1] sum_[1]
4 <sup>th</sup> 1000 word-level	bride_[2] exclaimed_[1] goat_[3] herds_[1] merchant_[1]
5 <sup>th</sup> 1000 word-level	butcher_[1] handkerchief_[1] lad_[1]
6 <sup>th</sup> 1000 word-level	jug_[2]
11 <sup>th</sup> 1000 word-level	overjoyed_[1]

- (2) Polysemous Words. Polysemy refers to the phenomenon where words have multiple meanings. As students engage with various stories, they encounter words that exhibit polysemy, realizing that words with the same spelling and pronunciation can encompass a range of meanings. For instance, in the introductory story "Lazy Jack," students grasp the definition of "burden" as a "heavy object" through the visual of Jack carrying a goat, supplemented by the teacher's gestures. As they progress to different stories, they come to understand that "burden" can also denote responsibility or difficulty.
- (3) Synonyms and Antonyms. As students develop their listening skills and engage in more complex stories, teachers can no longer rely on images and gestures and move toward employing "linguistic supplements." Through descriptions of characters' backgrounds and events provided in the target language, students experience that "burden" can also refer to concepts such as "responsibility," "duty," and "trouble." Using synonyms and antonyms increases the number of words the listeners can understand.
- (4) Contronym. A contronym is a word that holds two contradictory meanings, depending on its contextual usage. For instance, consider the word "out." The sentence "The Stars are out tonight" signifies visibility, while "The lights in that house are always out" implies a lack of illumination. "Out" serves as a contronym, conveying opposing meanings. Through exposure to numerous stories, students naturally acquire the nuanced usage of such words, discerning their meanings from context. However, if



students memorize one definition of "out" in their native language, they may become confused when encountering its opposite meaning. Engaging in listening to stories resolves this confusion.

#### **4) The Gap Between Actual Test Questions and the Current Teaching Approach.**

The high school entrance exam in 2023 <sup>(8)</sup> showed that all the questions required listening and reading skills, that none were tests of formal grammar, and that none used grammatical terminology. For example, there were no questions of this kind: "Change the following sentence from active voice to passive voice" or "Is the following infinitive usage an adjective or a noun usage?"

The three sections of the test involved exclusively listening and reading. The first section was a listening test. The exam questions were "Listen to the following conversation and answer the questions below" and "Listen to the following passage and answer the questions below." The second section was a reading test. The exam questions were, "Read the following passage and answer the questions below." The last section was a conversational discourse question: "Read the conversation between two people and answer by choosing the appropriate sentence below that fits in the blanks."

By listening to stories and reading books, students can develop their listening and reading skills and expand their vocabulary. Since the high school entrance exam questions are about listening and reading comprehension, spending hours doing grammar drills is unnecessary.

#### **5) The Negative Effect of Output Activities, Error Correction, Memorization, Drilling, Frequent Testing, and Homework.**

Past research has also shown that language competence increases more efficiently when students are given only "comprehensible input." (Mason, 2004, 2011, 2013, 2018).

#### **6) What to Improve in Future Studies.**

(1) Regarding independent variables, it would be interesting to see what would happen if we focused entirely on the "optimal input" (Krashen & Mason, 2020) to determine the true effects of input. In this experiment, much time was taken away from classroom time teaching English grammar using the students' native language and having the students do worksheets in class. Time to provide optimal input using stories was taken away because of it.

(2) For the dependent variable, it would have given us more information to select test items randomly from all the 1,800 words instead of 1,340 words. <sup>(9)</sup>

(3) The estimated word-per-hour efficiency for the analyses was 2.24 and 1.81, but we could not determine whether the difference was statistically significant. When using a t-test to determine significant differences in final efficiency, the raw scores must be adjusted by the difference in time used by both groups. <sup>(10)</sup>

### **CONCLUSION**

Our study sheds light on the efficacy and efficiency of two teaching approaches for vocabulary acquisition/learning among beginner-level junior high school students. The doubling of vocabulary size requirements necessitated reevaluating traditional methods of learning new words. By comparing the outcomes of traditional conscious learning with the acquisition approach aligned with the Input Theory, we found differences in vocabulary acquisition/learning and retention between the two groups. The t-test results indicated that while the experimental group, exposed to auditory input and Story-Listening, demonstrated inferior vocabulary size compared to the control group, they exhibited higher time efficiency. This aligns with previous research demonstrating the time efficiency of the acquisition

approach when compared to the traditional approach (e.g., Mason, 2013, 2018). Furthermore, a study investigating the forgetting rate of the traditional memorization approach found that the rate of forgetting using the memorization method was twice as high as with the Story-Listening method (Mason, Ae, & Krashen, 2022).

Using input-based methods can facilitate natural language acquisition by providing students rich language input. Previous research suggests that a greater emphasis on input than output could yield more positive results (Mason, 2013, 2018). Additionally, removing anxiety-provoking activities such as forced output, error correction, memorization, drilling, frequent testing, and homework is beneficial in fostering language acquisition (Mason & Ae, 2023).

This study was part of a more extensive study spanning three years of the 2023 graduates' junior high school education. Notably, despite initial differences in vocabulary retention between the experimental and control groups, the 2023 graduates ultimately performed comparably to the 2022 graduates on the final mock test before graduation, and all students passed their high school entrance exams (Mason & Ae, 2023). This suggests that further research is needed to determine the teaching method of Story-Listening to examine the differences in vocabulary acquisition between groups at the midpoint of junior high school. The test questions should have been created from a list of vocabulary from the three years of junior high school rather than focusing only on vocabulary that should be learned by the end of the second year of Junior High School. Future studies could delve deeper into the effects of optimal input and expand the pool of test items to encompass a broader range of vocabulary words.

Our findings underscore the importance of providing input to students, emphasizing listening and reading skills over grammar drills, particularly in light of the listening and reading-centric nature of high school entrance exams.

Our research advocates a shift towards more input-based teaching methodologies, such as Story-Listening and Guided Self-Selected Reading, to enhance language acquisition efficiency and proficiency among junior high school students. By bridging the gap between research findings and classroom practice, educators can better equip students with the language skills necessary for academic success and real-world communication.

## NOTES

(1) For example, in 2017, the Ministry of Education, Culture, Sports, Science, and Technology in Japan reported that more than 95% of grade 12 students were found to have English proficiency at only CEFR A1/A2 levels, despite five years of English education.

[https://www.mext.go.jp/a\\_menu/kokusai/gaikokugo/\\_icsFiles/afieldfile/2018/04/06/1403470\\_03\\_1.pdf](https://www.mext.go.jp/a_menu/kokusai/gaikokugo/_icsFiles/afieldfile/2018/04/06/1403470_03_1.pdf).

CEFR: Common European Framework of Reference for Languages)

[https://en.wikipedia.org/wiki/Common\\_European\\_Framework\\_of\\_Reference\\_for\\_Languages](https://en.wikipedia.org/wiki/Common_European_Framework_of_Reference_for_Languages)

Based on the TOEFL, the English proficiency of Japanese students has been one of the lowest among the 20 Asian countries for the past 20 years. On the TOEFL test given on the internet, Japan ranked last among Asian countries ((TOEFL Test and score Data Summary 2004-2005 Test Year Data: [www.ets.org/toefl](http://www.ets.org/toefl)).

(2) Grammar-Translation Method: [https://en.wikipedia.org/wiki/Grammar-translation\\_method](https://en.wikipedia.org/wiki/Grammar-translation_method)

(3) Audio-Lingual Method: [https://en.wikipedia.org/wiki/Audio-lingual\\_method](https://en.wikipedia.org/wiki/Audio-lingual_method)

(4) TPR: <https://hlr.byu.edu/methods/content/total-physical.html>

(5) TPRS: <https://hlr.byu.edu/methods/content/storytelling.html>

(6) Story-Listening: “Story-Listening consists of the teacher presenting stories of interest to students, and making them comprehensible in several ways (e.g., drawing pictures, providing an additional explanation, occasional translation: Krashen, Mason, & Smith, 2018). The stories used are those widely acknowledged to be interesting, e.g., Grimm’s Fairy Tales and many are available free of charge on the internet. No attempt is made to test students on the new words, no supplementary traditional vocabulary instruction is provided and there is no encouragement to study the new words as homework. The focus is on the enjoyment of the stories. ... The acquisition rates from listening to stories have been found to range from .17 to .25 words per minute when the delayed post-test was administered one (1) to five (5) weeks

after listening to the story (Mason & Krashen, 2004, 2018; Clarke, 2019, 2020; Mason, Smith, & Krashen, 2020; Mason & Ae, 2021), far more impressive than learning rates reported with the use of traditional pedagogy (McQuillan, 2019).” (Mason, Ae, & Mason, 2022, page 12). Story-Listening YouTube Channel: @story-listening3405

(7) Both The 2022 and 2023 graduates had spent roughly 178 hours in class in four terms. One class lasts 50 minutes. They have 4 lessons per week. Thus, they have 200 minutes of class time per week. (50 minutes class x 4 times a week = 200 minutes per week). They have 40 weeks of classes per year. Therefore, they have 9000 minutes of classes per year. That is 133.3 hours per year. (200 minutes per week x 40 weeks per year = 8000 minutes = 133.33 hours per year). To obtain the total hours that they spent for 4 terms, 133.33 hours were divided by 3 terms to gain the hours spent per term. Then it was multiplied by 4 (133.33/3 terms x 4 terms = 177.77).

(8) Public High School Entrance Exams

[https://www.syogakusya.co.jp/V01\\_VIEW/nyuushi/kouritsu\\_nyuushi.html?fbclid=IwAR2Dx5n7KCgtTgkHmyxhn4QOZPw5fDpNceQeOfnsfOvqN0WldjEb8y3Eats](https://www.syogakusya.co.jp/V01_VIEW/nyuushi/kouritsu_nyuushi.html?fbclid=IwAR2Dx5n7KCgtTgkHmyxhn4QOZPw5fDpNceQeOfnsfOvqN0WldjEb8y3Eats)

(9) Advice given by Dr. Ashley Hastings. Retired Professor who was the Director of the English Language Center at Shenandoah University, where he developed the FOCAL SKILLS approach.

(10) Advice given by Dr. Toshiyuki Saito, a Physics scientist at Shitennoji University Junior College.

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