education sciences

MDPI

Article

Effects of Japanese Special Moras Education Using Evernote

Hyun-jin Lee [1], Min-seok Kang [2] and Hee-ju Kwon [3,*]

[1] College of Kyedang General Education, Sangmyung University, 20, 2-gil, Honggimun, Jongno-gu, Seoul 03016, Korea; ihyeonjin@hanmail.net
[2] Department of Media Development, Kyunghee Cyber University, 7-13, Kyungheedae-ro 6-gil, Dongdaemun-gu, Seoul 02453, Korea; philthou@khcu.ac.kr
[3] KU China Institute, Konkuk University, 120, Neungdong-ro, Gwangjin-gu, Seoul 05029, Korea
* Correspondence: shiawase@konkuk.ac.kr

Abstract: In this study, we designed a class model using the Evernote application for the pronunciation learning of special moras, and applied it to a class to verify the learner's recognition of special moras and the effectiveness of pronunciation duration. This study consisted of 30 students who took an intermediate Japanese language class, which started in the first semester of 2019, and Japanese literature majors who had not yet been in Japan for more than 6 months. We conducted special mora pre- and post-tests and surveyed them. Positive results were obtained based on the research question of whether the application affects the self-awareness of special moras, which represented a significant academic achievement in terms of pronunciation duration. In addition, it was observed that learning using Evernote enabled a significant change in lecture satisfaction through one-to-one feedback work with learners. Although the research results were limited by the small size of the group, it was possible to suggest a method of special moras learning using Evernote, and it is believed that it will help in-class learning in the future.

Keywords: Evernote; special moras; Japanese phonetics; self-monitoring; feedback

Citation: Lee, H.-j.; Kang, M.-s.; Kwon, H.-j. Effects of Japanese Special Moras Education Using Evernote. *Educ. Sci.* **2022**, *12*, 270. https://doi.org/10.3390/educsci12040270

Academic Editor: Peter Williams

Received: 5 March 2022
Accepted: 5 April 2022
Published: 12 April 2022

1. Introduction

One of the issues often raised in Japanese phonetics classes is special moras [1–3]. Special moras are different entities to single moras, but closely resemble them, which causes non-native speakers to experience problems when learning Japanese. Kitamura [1] highlighted that it is difficult for students to pronounce special moras correctly. Toda [2] stated that students whose native languages do not include the mora concept fail to recognize the correct lengths of moras and consequently tend to mispronounce them. Lee and Sakai [3], in particular, highlighted that there is no unit for duration in Korean, as there is in Japanese, making it problematic for Korean learners to recognize special moras. Teaching Japanese special moras effectively is a crucial issue in practical language instruction.

Studies have examined interactions between learners and instructors, learner-centered learning environments, and so-called "social constructivist" learning environments in Japanese language education, and these studies are ongoing [4]. The educational paradigm has changed from teacher-led education to learner-led learning. Social constructivist learning theory involves the reconstruction of students' knowledge through interactions with relevant social and cultural environments. Both learners and instructors are active principal agents in these environments, and both drive and adjust their learning-related activities. In other words, learners, as principal agents, develop their knowledge through interactions with other people (e.g., the instructor and other students). Recently, a great deal of attention has been paid to student-centered instruction in Japanese phonetics education, aiming to improve the results of language instruction [4]. Ogawara [4] claimed that a student's self-awareness of his/her pronunciation problems, the pursuit of reasonable pronunciation according to criteria, and self-evaluation and self-correction are important.

In other words, it is necessary to recognize the problems with one's own pronunciation, to find appropriate pronunciation standards, and to evaluate and correct one's pronunciation.

These authors have demonstrated that students of Japanese phonetics gain knowledge through self-monitoring based on their interactions with teachers and other students.

Information and communications technology (ICT) is increasingly employed as a tool to improve the effectiveness of learning, and some studies have examined its effective use in Japanese phonetics education. Such studies have used online educational tools, such as Moodle [5], pronunciation evaluation using other software [6], and on-demand classes [7]. These tools have been reported to improve pronunciation and enhance the educational effects of offline learning. However, they can be affected by limits in Internet availability, speed, and function, and their effectiveness can vary for different students.

Therefore, in this study, we designed a class model using the Evernote application to learn special moras, and applied it to verify the effect of learners' recognition of special moras and pronunciation duration. Evernote is an application that uses "notes" to enable individuals to collect, save, and share information, regardless of file type. Only five years after its launch in 2015, 255 million people around the world had begun to use it, demonstrating its popularity. Evernote is highly accessible, and it is compatible with many platforms, such as Windows, Mac OS, iOS, and Android operating systems.

The purpose of this study was to determine how hosting classes using the Evernote application affects the self-monitoring of special moras, and how the pronunciation duration of special moras is affected by college students who attend Japanese talking classes. In addition, three research questions were set as follows, with the aim of determining whether the perception of the use of the Evernote application is related to the learning satisfaction of each student.

(1) Does the self-monitoring process of speaking special moras using Evernote affect the learning of special moras?
(2) Does attending a class using Evernote affect the pronunciation duration of special moras?
(3) Does attending a class using Evernote affect the learner's lecture satisfaction?

2. Literature Review

2.1. Special Mora Education in Japanese

In Japanese, a single syllable usually consists of a normal mora. However, with a special mora, a single syllable consists of two moras: one is a normal mora and the other is a special mora. In Japanese, there are three types of special moras: long vowels (/R/), choked sounds (/Q/), and syllabic nasals (/N/).

Special moras represent one of the difficulties of Japanese phonetics education [1–3]. Native Japanese speakers are able to differentiate normal and special moras in a single syllable, however, because non-native Japanese learners who are learning Japanese lack moras in their native languages, it is difficult to recognize special moras as single units [8]. For this reason, special mora education mainly discusses the issue of the recognition of special moras. A pioneering study on this is the study by Uchida. Uchida [9] argues that learners should first recognize the special moras before pronouncing them. When learning the special moras, the learner's self-awareness of the pronunciation duration must precede the proper pronunciation of the special moras. Shiga [10] highlighted that learners who cannot recognize the single-mora pronunciation of special moras are unable to achieve the correct duration of the mora, Ogawara [4] emphasized that it is important for learners to practice self-monitoring. This means that they should be able to recognize their problems and correct them by themselves based on reasonable criteria established through their Japanese phonetics learning.

A study on Korean learners is a study by Yoon·Simbo [11] in which Korean Japanese learners were taught at the intermediate and upper levels, using the syllable structure of Korean, to learn special moras. In other words, in order to be conscious that the special moras have a duration of one mora, the Japanese special moras were newly organized and

presented according to the syllable structure of the Korean language. This study statistically proved that educational effects were obtained through these educational methods.

Previous studies as above highlight that the biggest problem with acquiring special mora is the difficulty of recognizing what a mora is. For special mora learning, an explicit guidance method that can be performed by applying the concept of one mora of time should be presented. In other words, in order to improve pronunciation skills in an environment where opportunities to use Japanese are limited, it is essential not only to listen to teachers' guidance and copy model voices, but also to recognize and evaluate self-pronunciation problems.

2.2. The Use of ICT to Support Self-Monitoring of Pronunciation Learning

Recently, research on self-monitoring for pronunciation recognition has been actively conducted in Japanese speech education. First, a study using a learning management system (LMS) is mentioned as a method of magnetic monitoring. Toda and Okubo [7] designed pronunciation education using both face-to-face classes and on-demand classes using PCs. The class was implemented for Japanese as a second language (JSL) students on a trial basis for one semester. The final analysis based on students' term papers revealed that the on-demand autonomous learning platforms improved educational outcomes.

As a notable study using ICT, Matsuzaki's research [6] also reported the results of using Prosody Tuner to evaluate pronunciation. In that study, a model voice and a student's articulation were divided into consonants and vowels so that each syllable could be presented at the same time interval. The model voice was presented at the top of the screen, and the learner's voice was presented in the middle of the screen to allow for playback and concomitant visual and auditory comparisons. Half of the users rated the software as effective for understanding pronunciation.

Jin [12] obtained positive results in improving pronunciation by visualizing learners' pronunciation using Praat, a voice analysis program, for learners' pronunciation recognition and self-monitoring. In addition, through self-monitoring training, learners developed the ability to modify their own pronunciation by comparing the pronunciation that is standard for Japanese intonation, resulting in pronunciation correction and improvement. These previous studies have achieved results that self-monitoring using ICT can have a positive effect on improving Japanese pronunciation. However, in the case of LMS, there is a limitation that cannot be used in educational institutions without an LMS system, and login is essential. In addition, in the case of class materials, content can be checked only when downloaded as a file and using a specific computer software.

On the other hand, Evernote allows one to engage in a variety of learning activities, such as learning lecture materials, listening to audio, and watching videos, just by clicking on the necessary materials. In addition, it is possible to easily compare and analyze model voices and one's own voice using the recording function, and it is effective for self-monitoring because it is easy to write reflection notes. By using online note-taking apps such as Evernote, it is expected that learners can take the lead in pronunciation learning anytime, anywhere, and implement a Japanese voice learning environment where they can continuously interact with their teachers.

2.3. Lecture Using Evernote

In this study, Evernote, an online note-taking app, was used for special mora learning. Education using Evernote is reported to have a positive effect on learning Japanese.

First, the research of Schepman et al. [13] is the most pioneering, and they analyzed the eight-week usage of Evernote in an independent study of undergraduate students at Chester University in the United States. As a result, Evernote is said to have had a positive effect on learners' self-directed learning, including information collection and management, planning, and idea recording. In addition, as a result of investigating the form of Evernote use, it was confirmed that learners use Evernote in innovative ways, such as checking schedules, managing ideas, summarizing discussions, diaries, and creating photo albums. In other words, the tendency pursued by individuals is reflected in the use of the service.

Watanabe [14] introduced Evernote to Japanese speech classes. A model voice was provided to learners along with voice guidance and scripts through Evernote. In addition, various types of learning materials, including picture files, were provided, suggesting that smart devices would contribute to speech classes. However, there was no specific verification of learning achievement. Vendityanningtyas et al. [15] reported that Evernote could be used in writing classes. Evernote provides examples for both students and instructors in organizing ideas and tasks, which are saved automatically. This study focuses on the functions of the Evernote as an alternative tool to the common method of classical lecturing. As such, research on the introduction of Evernote to the classroom is underway, but research on the effectiveness of specific speech education, such as learners' pronunciation awareness and pronunciation improvement, is insufficient.

3. Material and Methodology

3.1. Research Subjects and Data Collection

This study targeted 30 students who took an intermediate Japanese language class at Seo-il University, which was opened in the first semester of 2019. This class was conducted with the aim of improving Japanese listening skills and developing accurate pronunciation. All students were Koreans, who had not stayed in Japan for more than six months, and were majoring in Japanese literature. The samples used in this study were 18 female and 12 male students, with a higher proportion of female students, all in their 20s. The instructor was female.

3.2. Research Tools

3.2.1. Special Mora Improvement Analysis

In Japanese, a special mora cannot convey its meaning without maintaining the length of one mora. However, learners whose native language does not include the concept of a mora have problems with pronunciation duration. Therefore, learners need to properly recognize and correct their special mora pronunciation.

We assessed learning achievements and learner responses to examine the effects of the instructional sessions. For learning achievement, we conducted pre- and post-tests of the learners' pronunciation for an empirical analysis of the effects before and after instructional learning. For pronunciation, we assessed the duration of the special moras, /R/, /Q/, and /N/. For reference, Sakoda [16] highlighted that instructing the learner to read words consisting of only special moras aloud is not the best way to ensure learning effectiveness because students tend to selectively pronounce certain words. In this investigation, we conducted an experiment instructing learners to read sentences aloud using senryu. Japanese senryu is considered suitable for measuring the duration of moras, since each verse requires a standard number of moras (17) in which /R/, /Q/, and /N/ can be recognized as the same mora.

We also assessed the pronunciation duration using the Praat program for pronunciation analysis. We calculated the pronunciation duration value by dividing the overall word pronunciation duration by the pronunciation duration for special moras. Considering the characteristics of Japanese special moras, accurate meaning transfer can be achieved with a proper pronunciation duration for each mora. This study employed the mean senryu pronunciation duration of five Japanese native speakers from Tokyo as the standard pronunciation duration. We evaluated the phonetic achievement of the learners based on this standard. We measured the total data length of learners in detail, divided the mean duration of special moras per syllabic location to measure the syllabic duration, and calculated the duration. The same sentence was used in the pre- and post-tests. The sentence used for /Q/, /R/, and /N/ evaluation is shown in Table 1.

3.2.2. Survey Tools

We conducted a post-instruction opinion survey to obtain the learners' evaluations. The survey consisted of two questions as shown in Table 2, and each question was rated

using a 5-point Likert scale. In addition, a total of two questions were composed of one descriptive question that freely stated what was specifically beneficial for each question.

Table 1. Test sentence.

	Sentence
/Q/ evaluation	んんんんと　いってばかりの　おとうさん
/R/ and /N/ evaluation	しんがっき　マスターするぞ　にほんごを

Table 2. Questions to evaluate learners' responses.

Instructional	Content
Questions	Q1. Do you think the learning method of recording your voice and documenting your reflections in Evernote is useful? Q2. Do you think the provision of feedback by the instructor through Evernote is useful?
Scale	5 points = very useful, 4 points = useful, 3 points = moderately useful, 2 points = not so useful, 1 point = not useful at all

3.3. Introducing Evernote

Evernote, which was used in this study, is an application with which one can write, organize, work, and store memos. Instructors can provide voice files, links, photos, and various files for class progress in the form of notes, and learners can immediately check all kinds of notes in real-time, without requiring a separate file conversion process. In particular, voice files and text files can be uploaded to one note, so they are not affected by the type of file. After providing the task to the learner, the learner's task performance can be checked in real-time.

The first instructional session covered Evernote registration and usage (note documentation) for out-of-classroom learning. Evernote is available for smartphones, tablets, and PCs, but as all the learners owned smartphones, a simple note-taking practice was carried out after installing the application during the instructional session. The instructor checked the learners' registration IDs and created both task notebooks and learning material notebooks for the interactions between the learners and between the instructor and learners, which were announced via an email notification. The learners were asked to share two notebooks after checking their emails prior to the instructional session in week two. This established an Evernote usage environment for out-of-classroom learning.

In this study, the instructor generated weekly class material notes and uploaded a file explaining the native pronunciation and pronunciation principles of the special moras. Each learner created a preliminary test note, three special mora task notes over three weeks, and a post-test note; that is, 30 learners uploaded 5 notes each, so 150 notes were created in total. The instructor provided feedback on 90 task notes regarding 3 special moras.

3.4. Instructional Design Construct

In this study, we designed an instructional model using Evernote for the effective learning of special mora. The instructional design considered teaching and learning aspects and technical aspects, and the design structure is as follows.

3.4.1. Instructional and Learning Construct

Modeling

In this study, we modeled the entire process of learners listening to recorded instructions, recording their own voices, uploading their recordings to Evernote, and receiving feedback on their pronunciation of special moras from the instructor. We modeled how learners recorded and uploaded their voices for task notes created weekly in Evernote and received feedback from an instructor for interaction between the teacher and students in online learning. This modeling process using Evernote had the educational advantage of facilitating one-to-one feedback between learners and instructors, regardless of time and

location. It also enabled students to listen to audio recordings and check the teacher's feedback by sharing their task notebooks in the system.

Consistent Participation

Participation was not limited to face-to-face instruction but included a mixed model of online and classroom learning. Such blended learning can enrich the learning experience by expanding the classroom and promoting individual learning and communication. Evernote has the advantage of facilitating online education-related questions and exchanges of opinions that may not be actively expressed in face-to-face instruction. Learners were able to record their pronunciations and receive feedback on them. They could also submit questions and receive responses from the instructor through Evernote. This process could be used to provide supplementary lessons within and outside the classroom, and to facilitate learners' participation.

Interactivity

Interactivity was realized through feedback from instructors regarding tasks performed by learners (via a voice recording file). Interaction between students was possible because they could check their own and other learners' voices and the teacher's feedback. Learners could examine their learning achievements through this interactivity. The voice file recorded by the learner and the corrected file containing feedback from the instructor could be uploaded to the Task Note function in Evernote. Such feedback facilitated interactive pronunciation correction, enabling learners to increase their self-awareness of proper pronunciation.

Self-Directed Learning

Self-directed learning means that the learner voluntarily and independently selects, organizes, and participates in the instruction with a sense of responsibility [17]. In particular, learners had the ability to check published learning materials in Evernote regardless of time, and independently choose the time and space for learning, unlike with instructor-driven face-to-face instruction. Additionally, learners could upload their pronunciation recording files to Task Note several times, check the feedback, and repeat the recording and uploading process for correction at any time. This learning environment empowered learners to carry out self-directed learning autonomously. This instructional facility was designed to encourage self-directed learning and self-management through task notes.

Reflection

Reflection was achieved through the process of learners documenting problems and improvements in learning via task notes after comparing their voices with a model voice. This type of self-reflection allowed learners to review errors in learning, as well as learning achievements that they were previously unaware of. Evernote enabled learners to document and save their reflections anytime and anywhere. For this instruction facility, learners recorded their voices after listening to the model voice and then uploaded the recordings to Evernote so that they could listen to them at any time for comparison. This allowed the learners to be objectively aware of the differences in pronunciation between their voices and the model voice.

3.4.2. Technological Construct

Ubiquity

Ubiquity means that Evernote is available within and outside the classroom via a smartphone or computer. Most Korean universities provide free Wi-Fi, which allows the easy downloading of and access to the Evernote application on smartphones and smartpads on campus. By virtue of this accessibility, learners could learn in any place with a network connection. Learners were able to easily download the Evernote application on their smartphones and access it anytime to learn via the Instructional Note and Task Note

functions. The Notebook function in Evernote, which is a collective folder for notes, could be used for learning materials and tasks, and was easily accessible.

Accessibility

Accessibility was achieved through the sharing of voice data and materials saved on individual servers via the downloaded Evernote application on smartphones, without the need to purchase any software. This accessibility had the advantage of imposing no financial burden on learners, since they did not have to purchase additional software. In particular, Evernote provides services for platforms such as Windows, Mac OS, iOS, and Android to serve the various types of devices used by learners. Evernote provides three types of services: Basic (free of charge), and Plus and Premium (charged). The learners registered for the basic service, whereas the instructor registered for the premium service, which provided additional note and notebook sharing capacity.

3.5. Instructional Design

Table 3 shows the progress of classes designed based on class design recruitment. The circled numbers of Table 3 refer to the order of the classes. Each construct is marked with a symbol in the table and the order of the classes is shown by circles.

3.5.1. In-Classroom Learning

The in-classroom learning (face-to-face) proceeded in an instructor-driven format. The instruction was carried out as follows: (1) learners read, recorded, and listened to the basic training portion of the learning material (file uploading and saving using Evernote) for reflection on their pronunciation; (2) learners listened to the model voice and compared it with their own voices to understand the differences (voice sharing using Evernote); (3) learners learned the theories relevant to each pronunciation from the learning material and PowerPoint (PPT), then practiced distinguishing the correct pronunciation using minimal pairs; and finally, (4) learners listened to the model voice in the learning materials, basic training, and expression training, while trying to imitate the material.

3.5.2. Out-of-Classroom Learning

Upon the completion of in-classroom learning, the results of out-of-classroom learning had to be submitted to Evernote as a weekly task. The learners were notified weekly of new learning materials (PPT and voice files) and task details via Evernote for out-of-classroom learning, and tasks could be submitted anywhere and at any time.

In the out-of-classroom learning, the learners examined and managed their own learning processes using the following methods: (1) the learners selected the learning method for practicing pronunciation; (2) after practice, the learners recorded the basic training in the Task Notebook function; and (3) the learners documented their reflections in the Task Note function. Reflection included a comparison of the learner's recorded voices with the model voice, evaluation of the pronunciation practice method used, and learning achievements. Additionally, the instructor provided feedback for each learner's task note to support autonomous learning, since the concept of autonomous learning involves interdependence between learners and instructors, which enables learners to gradually understand their own responsibility for learning, with the instructor's guidance [18]. The learners continued to submit questions and evaluate their learning achievements while receiving feedback from the instructor and uploading all learning content, including their voice recording files, to Evernote. In the final stage of learning (4), the learners evaluated their pronunciation once again after checking the feedback from the instructor.

The model voice and learning materials for the week were uploaded using the Instructional Notebook function for the learners to check at their convenience. In Figure 1, ① shows the weekly model voice, ② is an example word explaining the special mora, and ③ is an example sentence. The left part of Figure 2 shows an instructional notebook, and the right shows feedback on a 2019 intermediate Japanese listening comprehension assignment.

Table 3. Japanese phonetics practice instructional session.

Main	Learning Content		In-Classroom	Out-of-Classroom	Evernote Function
1	L1. Orientation, Evernote registration, and use preliminary test	Instructor	① Explaining Evernote registration and use ③ Establishing learners' registration IDs	⑤ Documenting in the Task Notebook and Learning Material Notebook functions and providing notification via email	Sharing two Notebooks
		Learner	② Practicing creating notes after registration in Evernote ④ Carrying out a preliminary test that required the learner to read aloud with no prior information	⑥Sharing two Notebooks after checking email	
2, 3, 4	Chouon /R/ Learning in week two Sokuon /Q/ Learning in week three Haneruon /N/ Learning in week four	Instructor	③ Model voice suggestion (●, ★) ⑤ Providing a theoretical explanation of pronunciation using learning materials and PPTs (●)	① Uploading learning materials (PPT and model voice; ●, ●, ★, and ★) ⑨ Documenting feedback via voice files and reflection (●, ●, ★, and ★)	Uploading learning materials for the week, PPT files, and model voice via the Learning Material Notebook function for sharing Documenting feedback on completed tasks via the Task Note function
		Learner	② Checking usual pronunciation Basic training with no prior information via the Task Note function (●, ★, and ★) ④ Documenting reflections on differences from the model voice via the Task Note function (●, ●, ★, and ★) ⑥ Reading basic training learning materials again (●)	⑦ Practicing basic training using the Task Note function (●, ●, ●, ★, and ★) ⑧ Comparing one's own voice with a model voice and documenting reflections via the Task Note function (●, ●, ●, ★, and ★) ⑩ Checking feedback from instructor (●, ★, and ★)	Uploading pronunciation file via the Task Note function Documenting reflections via the Task Note function
5	Posttest	Instructor	① Presenting the model sentence for the learner to read aloud in the pretest		
		Learner	② Reading the model sentence as in the pretest and uploading it to Evernote		

Instructional and Learning Construct. Modeling(●), Participation(●), Interactivity(●), Self-directed learning(●), Reflection(●). Technological construct. Ubiquity(★), Accessibility(★).

The learners uploaded the voice task and performed reflection weekly, and the instructor documented the feedback in the Task Notebook function (Figure 2). This student wrote that he thought about the pronunciation duration before pronouncing special moras. One learner asked whether he should pronounce /Q/ with a shorter duration (Figure 2 ④). The instructor gave concrete feedback to be aware of the sound of /Q/ before pronouncing it. Alongside the feedback, the instructor presented contrasting pronunciation pairs to

confirm the student's pronunciation duration for special moras and provided a supplementary explanation of the tongue's position when pronouncing special moras by comparing the learner's pronunciation with the recorded pronunciation after class (Figure 2 ⑤). The instructor gave the students feedback on the importance of understanding special moras. We designed the system so that students could check a checkbox after reviewing feedback to ensure that they reviewed the feedback (Figure 2 ⑥).

Figure 1. Assignment notice and provision of course materials.

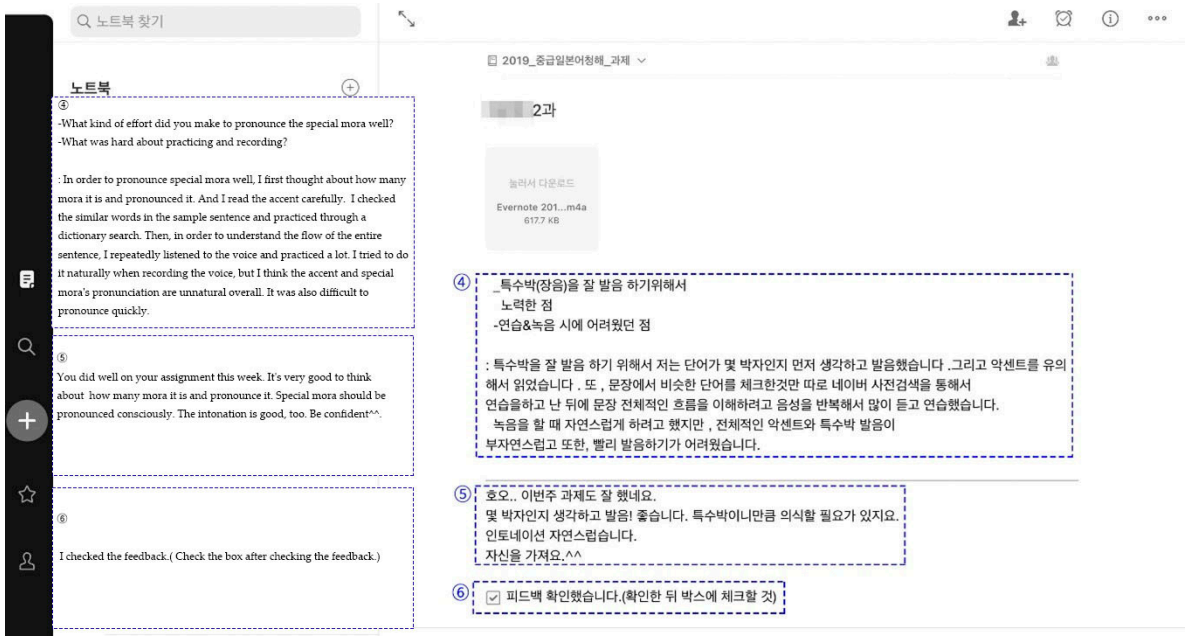

Figure 2. A learner's question and the instructor's feedback.

4. Results

4.1. Learning Achievement Results

In this study, the pronunciation durations of special moras /R/, /Q/, and /N/ were measured to evaluate each learner's achievement. The following were conducted: in the first week, a pre-test; second week, /R/learning; third week, /Q/learning; fourth week, /N/learning; and fifth week, a post-test. Pronunciation achievement was based on the standard pronunciation duration of native speakers and the conversion of the pronunciation durations of the learners into percentages. As a result, as shown in Table 4, there were statistically significant differences for /Q/, /R/, and /N/. For /Q/, the means for the pre- and post-tests were 81.94 and 87.49, respectively, resulting in higher post-test scores at the 0.05 significance level. For /R/, the means for the pre- and post-tests were 81.43 and 87.93, respectively, resulting in higher post-test scores at the 0.05 significance level. For pronunciation, the means for the pre- and post-tests were 70.96 and 78.55, respectively, resulting in higher post-test scores at the 0.05 significance level.

Table 4. Results for the pre- and post-test pronunciation analyses.

Field	Pre/Post	N	M	SD	t
/Q/	Pre	30	81.94	12.06	−2.70 *
	Post	30	87.49	7.71	
/R/	Pre	30	81.43	14.98	−2.29 *
	Post	30	87.93	8.10	
/N/	Pre-	30	70.96	13.81	−2.41 *
	Post	30	78.55	11.28	

* $p < 0.05$.

4.2. Learner Response Evaluation Results

We examined the learners' responses to the instructions using Evernote. We explored the learners' responses to the learning methods, such as recording and self-monitoring, and feedback from the instructor. As a result, as shown in Table 5, the means for the benefits of the learning methods and the instructor's feedback were 4.47 (SD = 0.57) and 4.53 (SD = 0.51), respectively, indicating that the learners thought the learning methods and instructor feedback were useful in general.

Table 5. Learners' responses regarding the use of Evernote.

Question	M	SD
Benefit from learning methods, such as recording and self-monitoring.	4.47	0.57
Benefit from instructor's feedback	4.53	0.51

Additionally, we explored the learners' opinions on 'What other benefits might exist?' for each question.

The analysis results were found to be largely beneficial in the two fields of class content and class management. In terms of class content, a total of 15 cases (50.0%) responded that they could objectively evaluate their pronunciation. Learners said that time-limited practice is beneficial in the field of class management. The results are shown in Figure 3.

For the comparison of pronunciation, one learner commented, "It is useful to compare with native speaker's pronunciation to understand difficult areas". The responses regarding the objective evaluation of individual pronunciation were numerous—specifically, "It is useful to discover inaccurate pronunciations that were previously unknown". The processes of the reflection and self-evaluation of pronunciation were assessed separately. For active participation, a large number of learners valued the ability to express their opinions outside the classroom, online, because they felt more reticent during in-classroom learning.

For example, students stated, "It was good to repeat the recording of my pronunciation in Evernote compared to listening only in the classroom" or "It was good to continue practicing and uploading what I learned every week". Another student stated, "I noticed the difference clearly by hearing other students' pronunciations and comparing them with my own." This shows that other students' pronunciation, as well as that of native speakers, was a good guide for learning, and it fostered interaction. Regarding practicing with no time limit, one of the virtues of online learning, learners claimed, was "It was good to practice what I could not complete in class but take time off whenever I wanted" and "It was good to practice and upload what I learned at home so I would not forget it". One learner commented, "Since the recording was available, it was beneficial to use it in learning whenever I wanted", suggesting a high rating for the voice data. Figure 4 shows learners' opinions in a word cloud.

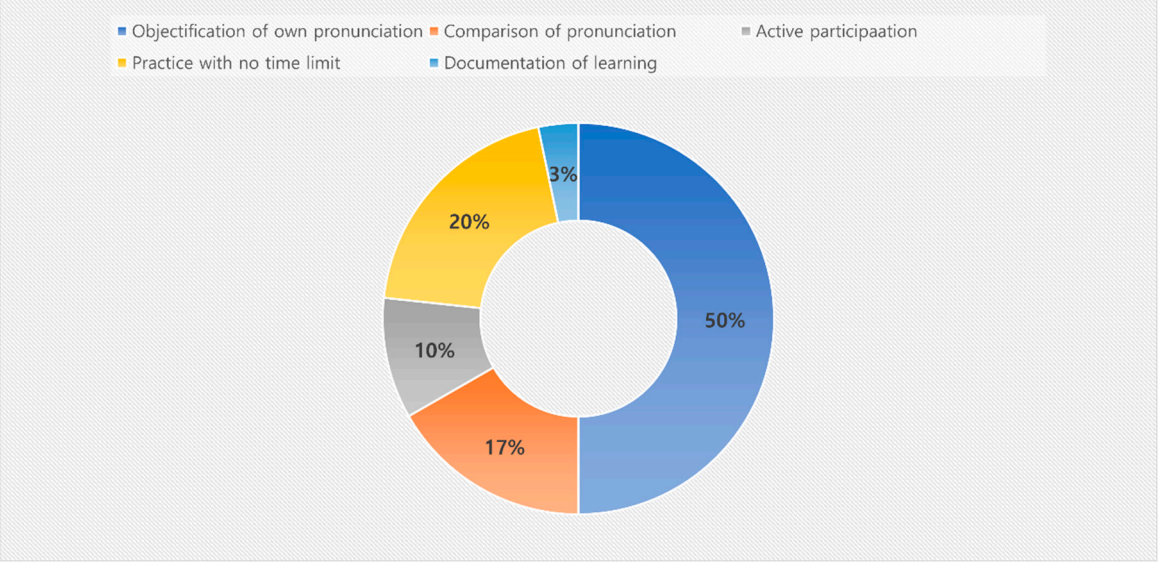

Figure 3. Learners' responses regarding the benefits of the lesson.

Figure 4. Learners' opinions in a word cloud.

The results of the survey, in which most of the learners expressed their opinions on the practice, showed that freedom from restraint in students' pronunciation comparisons and school hours, participation, and documentation, in particular, were recognized as the possible effects of Evernote. Uploading, checking, and comparing one's own voice recordings were confirmed as an effective method to objectively evaluate one's pronunciation. The benefits, according to the feedback, are shown in Figure 5.

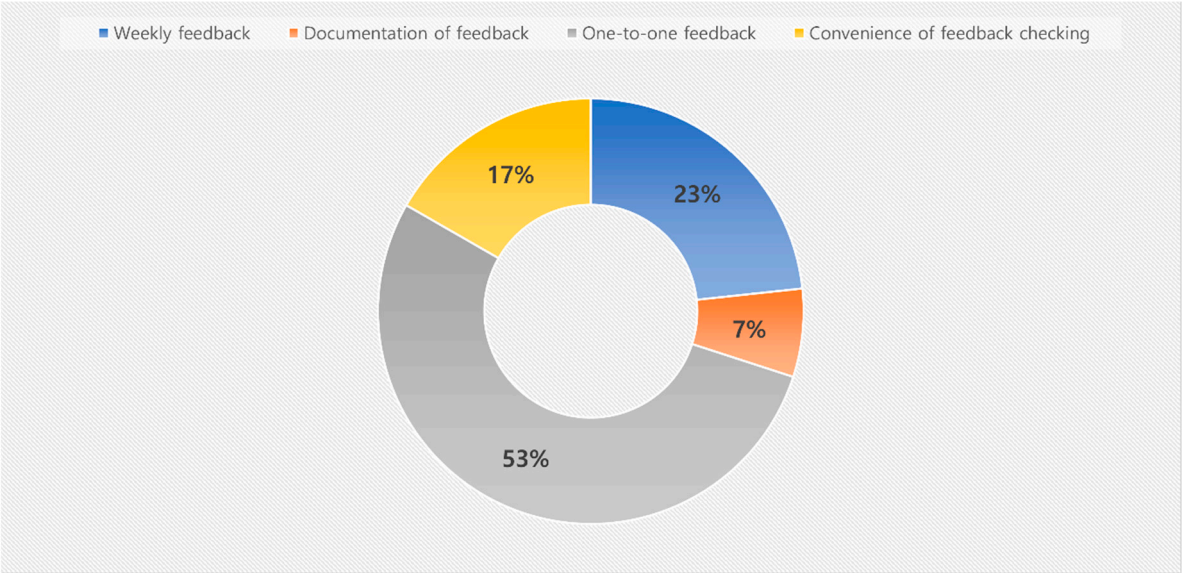

Figure 5. Benefits of the feedback on the lesson.

In addition, we explored the learners' opinions of 'What other benefits might exist?' for each question. The results confirmed that Evernote was useful in terms of learning content and management. For learning management, the largest number of learners, 16 (53.3%), responded that one-to-one feedback from the instructor was useful.

The opinions "Feedback from instructor has a similar effect to one-to-one learning" and "It is useful to have direct evaluations for each person" comprised a large proportion of responses. Learner satisfaction was very high, since individual feedback and management were available through Evernote, as well as easy checking, even when direct face-to-face feedback was not provided. Additionally, the rate of use was noteworthy: "Immediate checking is useful, and weekly checking of errors is available". This response might have referred to weekly feedback, which facilitated review and reflection. The learners also rated the easy feedback checking highly: "Online feedback is convenient, in contrast to the difficulty of receiving direct instruction from the lecturer due to a large number of learners". There were a few comments stating that it was nice to be able to document the feedback.

5. Conclusions

This study was conducted with the aim of examining the effects of learning in Japanese special moras /R/, /Q/, and /N/ using Evernote.

Positive results were obtained based on the research question of whether education using Evernote affects the self-awareness of special moras. In the open question, more than 50% of the students said that their voice recording contributed to the objective evaluation of self-pronunciation. In Japanese voice learning using Evernote, one can record their pronunciation online and upload it over and over again, and students tend to objectively evaluate their pronunciation through repeated recording tasks. Watanabe [14] hypothesized that cloud computing, including Evernote and Dropbox, would contribute to the Japanese phonetics class in his study, and this study presented empirical evidence to support this. The case of pronunciation learning using these applications suggests that it is more suitable for voice learning than LMS, which is strongly used mainly by instructors, e.g., to provide lecture materials or announcements [19].

Second, based on the research question of whether the Evernote application affects the pronunciation duration of the special moras, it was found that academic achievement was significantly improved. The pre- and post-tests on Japanese special moras conducted at the start and end of the lessons showed a statistically significant difference for all the special moras, /R/, /Q/, and /N/. This result was statistically significant at the level of

$p < 0.05$. This result matches the results of a preceding study, which showed that Japanese phonetics learning using ICT had a positive effect on Japanese pronunciation accuracy by promoting autonomous learning and improving the understanding of pronunciation [6,20]. This implies that Evernote is effective for learning Japanese phonetics, suggesting that the use of ICT in Japanese language education can help improve learning effectiveness.

Third, the instructor's feedback is a result of the research question of what factors influence learners' satisfaction using the Evernote application. In the case of classes with a large number of students, it is very difficult for instructors to give customized feedback to students one-on-one. In learning through Evernote, instructors could easily check the voice recordings of students submitted in Task Notes and provide feedback accordingly. In fact, the learners mentioned advantages, such as practice with no time limits, learning notes, and active participation in learning.

Foreign language learning using Evernote has positive effects on self-motivated learning as the students themselves can take the learning contents beyond the understanding of the class.

The following suggestions are made for further study: first, in this study, in order to analyze the educational effect of the special moras, the pronunciation duration of the special moras was analyzed using students' voice recordings. In the future, it will be necessary to comprehensively analyze the operation status of special moras in the voice recordings of students. Second, the effect of learning using Evernote might include various factors beyond teaching/learning methods. Third, this study targeted only a small number of samples and has the limitation that a separate control group was not formed for this study. In addition, there is a possibility that there are various variables in addition to teaching and learning methods that contribute to the effect of learning using Evernote on students. Therefore, our instrumental design should be supplemented with the consultation of leaders' tendencies, genders, learning levels, and other factors. Therefore, our instructional design should be supplemented based on the consideration of learners' tendencies, gender, learning levels, and other factors.

In this study, we were able to explore the possibility of learning Japanese special moras using Evernote. Evernote-based learning is currently at an early stage, which means that it has rarely been implemented within actual education settings. However, this study suggests that blended learning via Evernote is an effective method of education, and the data from this study support the use of such learning.

Author Contributions: Conceptualization, M.-s.K.; methodology, M.-s.K.; software, H.-j.K.; validation, M.-s.K.; formal analysis, H.-j.K.; investigation, H.-j.L.; resources, H.-j.L.; data curation, H.-j.K.; writing—original draft preparation, H.-j.L.; writing—review and editing, H.-j.K.; visualization, H.-j.K.; supervision, H.-j.K.; project administration, H.-j.L. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data is contained within the article.

Acknowledgments: This paper was supported by the KU Research Professor Program at Konkuk University.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Kitamura, Y. Difficulties in learning Japanese long vowels and geminate consonants: A case of a Korean learner. *Bull. Foreign Stud. Educ. Cent. Tokai Univ.* **2000**, *20*, 27–44.
2. Toda, T. Acquisition of special morae in Japanese as a second language. *J. Phon. Soc. Jpn.* **2003**, *7*, 70–83.
3. Lee, K.S.; Sakai, M. Pitch pattern in special moras created by Korean Japanese language learners. *J. Jpn. Lang. Lit.* **2015**, *66*, 147–162.
4. Ogawara, Y. Reconsideration of Japanese phonetics education objectives and role of instructor. In *Past, Present and Future of Japanese Language Education: Phonetics*, 4th ed.; Kawano, T., Ed.; Bonjinsya: Tokyo, Japan, 2009; pp. 48–69.

5. Umeda, K.; Yamakawa, K.; Chisaki, Y.; Usagawa, T. A Japanese utterance training system using LMS: On subsystem for teacher support. *Tech. Res. Rep. Inst. Electron. Inf. Commun.* **2006**, *106*, 1–6.
6. Matsuzaki, H. The development of software to study Japanese prosody using an automatic speech recognition system: Studies in language and literature. *Language* **2012**, *61*, 177–190.
7. Toda, T.; Okubo, M. A new model for teaching pronunciation in Japanese language education: Pronunciation learning through on-demand lessons. *Waseda Stud. Jpn. Lang. Educ.* **2014**, *16*, 1–18.
8. Kiyonaga, Y.; Ito, H.; Masataka, N. Training for special mora perception in non-native Japanese students learning japanese. *Psychologia* **2009**, *52*, 267–276. [CrossRef]
9. Uchida, T. Characteristics of auditory cognition of long vowels and double consonants for Chinese students in learning the Japanese language. *Jpn. J. Educ. Psychol.* **1993**, *41*, 414–423. [CrossRef]
10. Shiga, K. Acquisition of Japanese long vowels by Korean learners. *Jpn. Lang. Lit. Assoc. Korea* **2008**, *36*, 71–90.
11. Yoon, E.K.; Shimbo, T. Teaching pronunciation of Japanese morae. *Foreign Lang. Educ.* **2012**, *19*, 523–543.
12. Jin, Z. *Using Praat to Teach Japanese Prosody*; Departmental Bulletin Paper; The Center for Japanese Language and Culture Osaka University: Osaka, Japan, 2019; Volume 17, pp. 9–27.
13. Schepman, A.; Rodway, P.; Beattie, C.; Lambert, J. An observational study of undergraduate students' adoption of (mobile) note-taking software. *Comput. Hum. Behav.* **2012**, *28*, 308–317. [CrossRef]
14. Watanabe, Y. Creating and implementing materials for teaching pronunciation in the pronunciation teaching practicum. *Bull. Jpn. Lang. Teach. Pract.* **2015**, *6*, 200–205.
15. Vendityaningtyas, V.; Styati, E.W.; Natalia, K. Teaching Writing by Using Evernote Application. *J. Phys. Conf. Ser.* **2020**, *1464*, 012017. [CrossRef]
16. Sakoda, K. *Study of Second Language Acquisition Utilized in Japanese Language Education*; Aruku: Tokyo, Japan, 2002.
17. Peters, O. The transformation for the university into an institution of independent learning. In *Changing University: Reflections on Creating Educational Technologies*; Terry, E., Daryl, N., Eds.; Taylor & Francis Group: London, UK, 2000; pp. 10–24.
18. Choi, E.H. The study on the development of learner autonomy through collaboration based on the Vygotskian theory. *Stud. Engl. Educ.* **2004**, *9*, 173–203.
19. Jeon, Y.M.; Cho, J.S.; Kim, K.R. A Study on the effect of LMS on the self-regulated learning competency and learning satisfaction in Higher Education. *J. Korean Assoc. Educ. Inf. Media* **2016**, *22*, 55–84.
20. Min, G.J. Development and utilization planning of self-evaluation program for learning Japanese pronunciation. *Jpn. Lang. Assoc. Korea* **2009**, *25*, 47–58.