

# *Development and Evaluation of English Listening Study Materials for Business People Who Use Mobile Devices: A Case Study*

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## **ABSTRACT**

This study aims to verify the effectiveness of English language materials using mobile devices for businesspeople in terms of the effect on motivation, overall learning performance, and practical performance in real business situations. We compared the use of materials developed from business English for a sales department in a company environment, using two cohorts of learners, one from the sales division and the other from other divisions in the company. The results showed that the materials were effective for the enhancement of motivation in both groups of employees. Moreover, the test scores in overall learning performance for both cohorts increased after learning with the materials. However, the learners in sales positions recognized the effectiveness of the output activities (e.g., speaking) more than that of nonsales personnel because of the direct applicability of the learning materials to their business needs.

**KEYWORDS**

Mobile Learning, English Education, Listening, Authenticity, Corporate Education, English for Specific Purposes (ESP)

**INTRODUCTION*****Background***

Given recent economic and social globalization, interest in practical proficiency in foreign languages is increasing day by day. For English, a language used worldwide, the focus is now on the ability to use the language in real communication as a practical English skill as well as the mastery of knowledge-based grammar and vocabulary. In the realm of business, there is a trend to cultivate English communication abilities that prove useful in negotiating and other business situations. This trend is spreading in non-English speaking countries (Nickerson, 2005).

However, even for students graduating from universities or colleges, most companies treat the improvement of employees' English skills as an important topic, as do higher education institutions. More and more newly hired people are being tested to objectively assess their English ability (e.g., the Test of English for International Communication [TOEIC]), either at the time of the offer of employment or at the point of joining the company. In addition, the "Global Strategy" released by the Council on Economic and Fiscal Policy in May 2006 clearly states the aim to double the number of people who can handle business communication in English by 2010 in order to achieve stronger international competitiveness in human resources (Council on Economic and Fiscal Policy, 2006). However, the average TOEIC score for new employees in the fiscal year 2006 was 466, a significant difference from score of 730 (Level B) required for overseas deployment (TOEIC Steering Committee, 2006).

Many educational institutions offer instruction on practical communication, including listening comprehension and pronunciation, in addition to instruction in general English on topics such as grammar, vocabulary, and reading. Most workers who are employed by companies and other organizations must be able to use a foreign language in the context of performing their corporate responsibilities. Learning materials should be designed to enable employees to reach this goal. However, in conventional English courses, study materials have focused on language learning that are isolated from business operations (Naitoh et al., 2006). In fact, a survey conducted by Koike (2007) on 7,354 corporate employees revealed that when communicating with a foreigner on the topic of their specialty, more than half could not completely understand what the other was saying and 35% of the employees could understand less than 40%. Listening comprehension is acknowledged as a problem by the employees themselves, who recognize the need to acquire practical English skills that can be applied to their own work (Koike, 2007).

In this study, targeting workers employed by companies, we developed and evaluated study materials that serve the purpose of improving their listening skills in the execution of their business procedures.

***Design of English Listening Materials for Specific Purposes***

Given the above, the development of specialized English listening materials for the purpose of improving employees' abilities in English-related corporate operations, the basic question can be stated as "What topic should be listened to and how?"

The answer to the first part of the question, "What topic should be listened to," involves what is learners are frequently exposed to in their daily lives. For instance, if the learners are university students, the subject would be what is heard in classes, clubs, and part-time jobs. For employees, it would be the work they do in their companies. Clearly, materials need to be designed for English for specific purposes (ESP) (Gilmore, 2007).

For the second part of the question, "how should it be listened to," it is insufficient to simply give learners the materials to listen to as audio information. Listening comprehension in a foreign language is difficult to acquire for learners, and the materials themselves must be designed such that they structure the way in which the materials are to be presented and studied (Field, 1998; Bastukmen, 2006).

### ***English for Specific Business Purposes***

Practical English ability means the ability to achieve goals through the use of English in relation to the specific purpose or occasion for using English (Hutchinson & Waters, 1987; Dudley-Evans & St. John, 1996). English for business purposes (EBP) focuses on English learning materials for business purposes, often in the form of employees' self-development in areas such as MBA preparation and has gained attention in companies in recent years. Among EBP materials, materials that develop English ability based on the use of knowledge or skills in a certain line of work in the business operations are categorized as materials for English for specific business purposes (ESBP) (Dudley-Evans & St. John, 1996). Although named "specific," the range of specific business purposes is broad. For instance, the English necessary for the general business operations of a company can be called ESBP, and the English necessary for the operations of a certain division in a company can also be called ESBP. Therefore, a more detailed consideration is needed for the development of effective ESBP materials. In considering such details, the focus should be on the relationship between the authenticity of materials and the learning needs of the learner.

### ***The Authenticity of Materials and the Relationship Between Materials and Learners***

Authenticity is one of the central factors for designing learning materials in ESBP. Ellis (2003) advocates that the degree to which the materials reflect the activities in the society determines the authenticity in foreign language education. Muranoi (2006) states that the use of language in the materials as spoken and written in language usage situations in the society is an important element in enhancing authenticity in foreign language education.

Previous research (e.g., Field, 1998; Herron, Morris, Secules, & Curtis, 1995) has shown that authenticity in foreign language education improves students' acquisition of foreign language skills. In addition, the use of learners' background knowledge to help them to process information from authentic materials is suggested to have a beneficial effect, especially for listening comprehension (Anderson & Lynch, 1988). Comprehension proceeds as a combination of bottom-up processing and top-down processing. In bottom-up processing, comprehension is built up from smaller linguistic units (e.g., phonemes, words, etc.) to larger units (e.g., clauses, sentences, paragraphs, and passage). In top-down processing, comprehension proceeds from prediction and inferences based on the knowledge of the listener and the general context of the passage. The use of a learning method that takes advantage of the use of background knowledge in top-down processing enhances learners' acquisition of language skills (Field, 1998). Herron et al. (1995) demonstrated the effectiveness of the use of top-down processing of authentic French materials as evidenced in the increase in listening and writing on posttests at the end of the project.

However, it must be reiterated that the above research was conducted in the framework of academic institutions. In academic institutions, scenes from everyday life can be assumed to represent the situations in which the language to be learned will be used. When considering materials for employees of a company, not only the authenticity but also the relationship between the content of the materials (e.g., story) and the learners must be considered (Muranai, 2006).

With regard to this relationship, Breen (1985) focused on authenticity from the learner's perspective to determine the degree to which materials reflect the learner's extant knowledge, interest, and curiosity. Schmidt-Rinehart (1994) examined the effect of the learner's affinity with the listening content and whether that effect varies with learners' level of proficiency in the language. Listening materials in which Spanish speakers talked about Spanish-speaking universities was used to represent materials closely related to learners, and a section from a novel of which students had no prior knowledge was used to represent listening materials with little relation to learners. Before and after the listening materials were presented to students, the recall rate of vocabulary and expressions in the materials was compared. Irrespective of students' proficiency level, the recall rate for the listening materials closely related to the students was higher. In a similar vein, Dörnyei (2001) proposed analyzing the needs of the learners and providing content that activates background knowledge as a way to enhance their learning motivation.

However, many conventional business English materials describe situations that differ from the operational activities of learners (Naitoh et al., 2006). This gap between materials and learners can lead to what Bransford, Brown, and Cocking (1998) call "inactive knowledge" and thus would not be likely to contribute to the improvement of practical business English ability.

### ***Methods for Teaching Listening Comprehension***

The other important element to be considered in developing specialized English materials for business employee is the method of teaching listening comprehension. Listening comprehension, as reading comprehension, is not simply a meaning-reception process but rather a process that actively establishes meaning and that is aided by the preexisting knowledge of the listener (Long, 1990; Rost, 2001). As described above, comprehension proceeds as a combination of top-down and bottom-up processing. A teaching method that makes learners aware of both processes in the form of listening comprehension strategy has been widely discussed (e.g., Mendelsohn, 1994; Numan, 2002; Yokoyama, 2005). Mendelsohn (1994) and Field (1998) proposed a course design in which strategies used by efficient listeners are the instructional core of the course and recommended teaching students to consciously use top-down processing to the maximum extent possible and to use bottom-up processing to compensate for deficiencies when necessary. Prelistening advance organizers play an important role in promoting top-down processing to promote the use of the learner's preexisting knowledge. Learners should listen with awareness of purpose, and questions need to be given to students before listening so that they can use strategies appropriate to that purpose. In addition, in order to make the experience similar to real-life communicative events, it is important to have postlistening activities in a response to what learners heard instead of simply listening to a passage.

Yokoyama (2005) also recommended focusing on process and reported on the effects of seven process-supporting strategies: (a) listening with the purpose in mind, (b) listening while predicting, (c) responding to what was heard and understood, (d) guess the meaning of the parts that were not understood, (e) verifying the results of prediction and guessing, (f) ask-

ing about the parts that were not understood, and (g) monitoring their own comprehension. The efficacy of instruction using these strategies is increased by the use of highly authentic materials (Bacon, 1992).

Based on these findings, the current study combines Yokoyama's (2005) method of teaching listening comprehension strategies with the three stages of prelistening, listening, and postlistening and describes the design of English listening materials that focus on top-down processing, bottom-up processing, and monitoring.

### ***Mobile Learning Devices and Second Language Learning***

Today, mobile devices such as cell phones and PDAs are very commonly used in Japan. Their use is not limited to calling and emailing, but also includes web browsing, camera, and TV functionality; they are utilized broadly as a multipurpose tool. Cellular phones, in particular, have a rate of household ownership of 85% (Japan White Paper on Information and Communications, 2006), which is 17% more than the for personal computers, demonstrating their importance as a vital tool in daily life.

Mobile devices allow for information collection and communication regardless of time or place. This anytime/anywhere convenience also applies to education; learners can now study at any time and at any place outside the classroom (Chinnery, 2006; Naismith, Lonsdale, Vavoula, & Sharples, 2004). Mobile technology can be a major educational tool that can cover a broad range of uses, from complementing computer-based or face-to-face materials to acting as a primary learning tool integrated with other materials which can then increase learners' frequency of studying (Roschelle, 2003). Price and Rogers (2004) suggested that mobile devices can be effective as learning devices by promoting interaction with the real world because of their frequent use in daily life.

These features have generated growing interest in the use of mobile devices in foreign language learning. Krashen (1985) argued that the amount of input in a classroom setting was insufficient for foreign language acquisition, suggesting the necessity of learners selecting additional foreign language input on their own. Particularly in settings such as Japan where learners have few opportunities to use foreign languages outside the classroom, mobile devices can be effective in providing additional learning opportunities.

Thornton and Houser (2005) conducted comparative research concerning the effect of mobile devices on foreign language learning. They distributed vocabulary study materials through mobile phone email to learners in the experimental group and evaluated learning time and student preferences in the experimental group compared to those in the control group, which used paper-based materials. They found that learners in the experimental group spent more time studying than the learners in the control group and suggested that mobile phones were preferable to personal computers for foreign language study.

Levy and Kennedy (2005) also suggested a positive effect of mobile phones on learning performance in a study using SMS for Italian vocabulary acquisition. In their project, an SMS system repeatedly sent questions to students that asked about the usage and meaning of vocabulary items, and learners replied to these messages with their answers. The results of their research suggested that learners seemed to be satisfied with this system and that the system promoted continued learning out of class.

In Japanese companies, the approach to English language learning for employees has changed from corporate training to individual employees' own self-development (TOEIC Steering Com-

mittee, 2006). However, despite the fact that 90% of employees feel the need for self-development, no more than 50% of them actually engaged in this kind of learning, many finding it “impossible to find the time for self-development (too busy)” (Economic Planning Agency of Japan, 2000). This implies that the barrier preventing busy employees from committing to self-development is not easily eliminated. Considering this background, the study described here developed a video system that can be used on mobile devices—Narikiri English! ‘Act in English’—for continuous learning, making use of the free time between business operations (e.g., commuting to work or traveling to meet a client).

### ***Purpose of this Study***

In cooperation with a steel company whose employees are the subjects of this study, ESBP materials closely related to the needs of sales personnel employed at that company were developed and their effectiveness evaluated. The criteria for evaluation included

1. the effect on improving the English listening ability of employees who used the ESBP materials,
2. the effect on improving the English listening ability of employees whose work was closely associated with the content of the ESBP materials, and
3. the effect on the business operations of employees whose work was closely associated with the content of the ESBP materials.

For criteria 1 and 2, we analyzed the subject’s scores on English listening tests given in the prelistening and postlistening stages. For criterion 3, we conducted a survey on the effectiveness of the materials for business operations 2 months after the project. Furthermore, we compared the employees who have close relations to the content of the ESBP materials and those who do not, that is, sales personnel and nonsales personnel for criteria 2 and 3.

## **SYSTEM AND ESBP MATERIALS DEVELOPMENT**

### ***Consideration of the Content of the ESBP Materials***

The Narikiri English! materials we developed for this study aims to improve the employees’ English listening ability necessary for performing their business duties. The content consisted of scenes, 2 minutes in length, of daily work situations likely to be encountered by employees. The development of the story line and the creation of learning materials creation were conducted in a joint effort with the operational manager and a Human Resources representative of the company. The story depicted the sales practices involved in exporting and distributing products to a transport aircraft manufacturer in Thailand—an actual business operation of the company (see Table 1).



Table 1  
Story Line of Sales Practices with Thai Company (3-week sequence)

Episode	Content
1.	Welcome to Thailand: details about present day Thailand and the coil center company's current operation
2.	Overview of Thai coil center: explanation of the processing capability of the coil center
3.	Presentation of your company: explanation of your company's profile to the personnel of the coil center
4.	Discussion of business conditions: details about the recent state of the steel industry
5.	Inventory: description of the inventory of each company
6.	The processing capacity of the coil center: description of the steel processing capacity of the coil center
7.	Lunchtime: description of the overall business conditions in Thailand
8.	Information about competitors' activities: description of your company's competitors
9.	Talk with a customer: greetings to your company's customer and the introduction of sales
10.	Explanation of current market conditions: presentation on the current state of the international steel market
11.	Lunchtime: discussion of the restructuring of steel industry that your company is facing
12.	Listening to the requests of the customer: discussion of the details of your customer's request
13.	Negotiation of price: discussion of the customer's request for price cuts
14.	Explanation of the high quality of your company's products: Presentation on the advantages of your company's products
15.	Lunchtime: discussion of the business circumstances in Thailand, Thai business style, etc.

The goals for each scene were based on consideration of the communicative role of listeners, whether the situation requires only the comprehension of the information presented or some kind of overt response. One of the important elements in developing learners' listening comprehension skills is ensuring that they are aware of the situation in which the language structures they are learning are to be used (Eastman, 1991), something often overlooked in the conventional design of listening materials (Field, 2008).

### **Structure of the Listening Materials**

As mentioned above, the materials used in this study follow a 3-stage structure of prelistening, listening, and postlistening. The prelistening stage, designed to activate background knowledge, engage learners in preparatory activities for efficient listening study by, for example, checking their background knowledge in the form of a quiz and looking up the meaning of important vocabulary items included in the listening passage. In the listening stage, exercises are provided to help learners understand the main idea of the passage and important details such as numbers. In the postlistening stage, exercises that deal with the processing of information are presented, including questions that ask for the correct order of vocabulary items in a sentence that relates to key points in the passage. Other exercises are also presented which focus on the script of the passage and in which learners are expected to reflect back on the materials while listening to the passage. The structure of the materials and the purpose of each part of the materials are shown in Table 2.

Table 2  
Structure of the Listening Comprehension Materials

Structure of Materials		Goal of each stage	Strategy supported		
			Top down	Bottom up	Monitoring
Prelistening	1 Today's goal	To understand the purpose of listening and the role of the listener	●		
	2 Do you know?	To activate background knowledge to aid in predicting what is going to be said	●		
	3 Today's keywords	To understand the minimum keywords required for understanding the passage	●	□	
Listening	4 Trial listening	To listen once before starting the exercises for self-evaluation			●
	5 Rough listening	To understand the main idea by listening to the entire passage	●		□
	6 Catch listening	To understand the words and phrases necessary for comprehension		●	□
	7 Thorough listening	To understand details accurately	●		□
Postlistening	9 Vocabulary study reinforcement	Review the words and phrases related to the content of the passage		●	
	10 Today's summary	To organize what has been understood and to create memos in English			●
	11 Good night listening	To self-evaluate by looking at the English script and Japanese translation			●

Note. ● = primary use of strategy is supported; □ = secondary use of strategy is supported

### System Development

The design of the user interface of learning environments is of course important, especially so when considering the fact that users will be Japanese employees who have limited time for self-development. To select the most effective device for this project, we took the following requirements into account: The device should be able to

1. present the necessary materials (video, audio, multiple-choice questions, etc.) for each of the three stages in listening comprehension instruction (prelistening, listening, and postlistening) and permit flexible and easy development of materials.



2. support continuous learning in short periods of time (e.g., while traveling) and record and save learning progress data (learning history and student scores).
3. to reliably play video and audio for listening exercises and enable learner interactions with the materials.

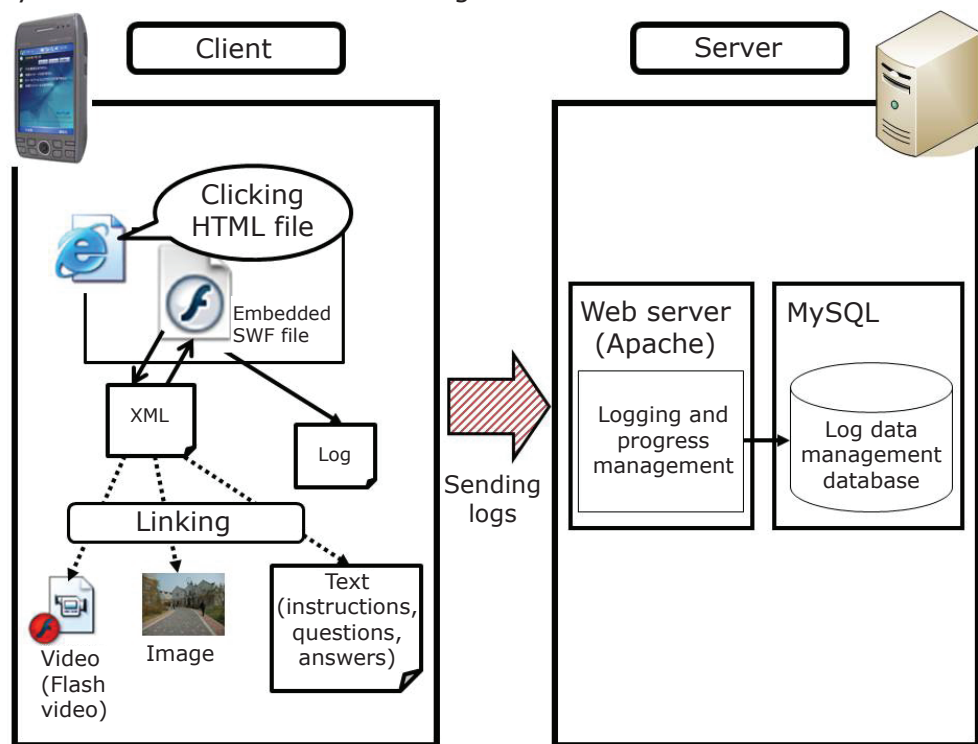
Given these requirements, we adopted Willcom, Inc.'s smart phone W-ZERO3, which has 640 px X 480 px touch panel display and can function in a client-server configuration (see Figure 1).

Figure 1  
W-ZERO-3 Smart Phone



The server side, consisting of a web server and a database server developed with PHP and using an Apache web server, performs the logging and progress management of the learners. The client software is developed in Adobe Flash and Action Script and can be used in a web browser with the Flash Player plug-in. The architecture of the system is displayed in Figure 2.

Figure 2  
System Architecture of Narikiri English!



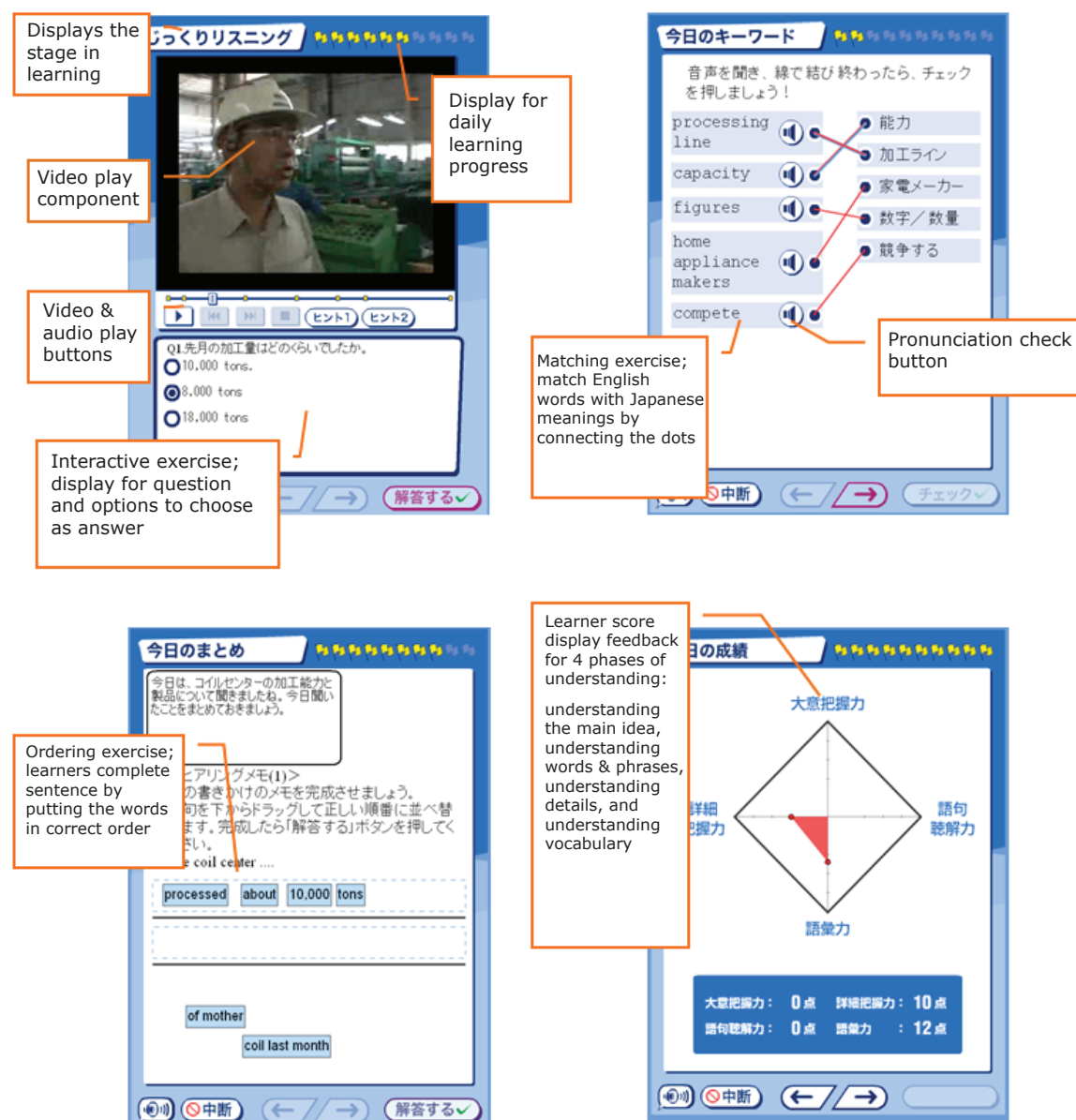
The system has six major client functions.

1. Video player  
The listening materials can be played by the video player for study purposes. This function consists of two parts: one is the video player, and the other is instruction and question area. All files, including video (flv format), image, audio and XML describing structure and text materials, were installed in advance.
2. Question part  
The system offers several types of questions such as putting words in the correct order and matching.
3. Feedback  
Learners can see their score at the end of the course (after stage 11 in Table 2 above). The feedback function displays four kinds of evaluations in a cobweb chart: understanding the main idea, listening comprehension, understanding details, and vocabulary items.
4. Editing  
It is easy to edit materials by controlling the structure of materials and other information information in XML. This makes it possible to control the order of playing the video and audio, as well as questions, correct and incorrect answers, and student scores.

5. Logging and learner progress management function  
Tracking learner progress data in both memory on the client side and the server side makes it possible for learners to resume learning at the point at which they stopped in previous sessions.
6. Learning history data  
Learning history data (i.e., input provided by the learner) is matched with standard scores and correct answers so that appropriate feedback can be presented to learners.

Figure 3 shows the ways information is displayed in the system's learner interface.

Figure 3  
Learner Interface and Display of Information



## **METHOD**

### ***Participants and Procedures***

We recruited participants for the project through the Human Resources representative of the company as part of the company's employee education program. Because the participants were recruited and were permitted use their participation in this project to satisfy their required corporate training, they were well motivated learners. Forty-seven employees participated in the project, but only 39 employees (19 sales personnel, 20 nonsales personnel) were included in data analysis because some applicants were unable to complete the tests in the project.

At the company's training center, the participants completed a preproject questionnaire and took a preliminary test. Then we explained how to use the materials to the participants. The participants used the materials on their own time for 3 weeks. At the end of the 3 weeks, the learners again met at the training center to respond to a postproject questionnaire and to take a posttest. Two months after the project, we distributed another questionnaire to the 39 participants who took the tests via the Human Resources representative. The questionnaire directed the 39 participants to answer questions about the content they learned in the project and the degree to which it helped them in their business operations. We requested that completed questionnaires be returned in approximately 2 weeks. We received completed questionnaires from 23 employees (11 sales personnel, 12 nonsales personnel). Using data obtained from the participants early in the project, we were able to identify the learners with affinity to the content of the materials (sales personnel) and the learners with little affinity to the content of the materials (nonsales personnel).

### ***Listening Tests***

Two kinds of listening tests were used: a general English listening test and an listening test designed specifically for the materials in the project. Thirty-four listening comprehension questions from the Global Test of English Communication (GTEC) implemented by Benesse Corporation were used for the general test. The test developed for the project contained 21 questions. Eighteen questions focused on main ideas (maximum score of 18 points), and three questions focused on details (maximum total of 12 points). The questions tested the employees' comprehension of the English used in business situations that were closely related to the situations used in the project, but not those actual situations.

### ***Effectiveness of the Materials for the Employees' Business Operations***

To examine whether the project's materials were effective for the learners in performing their business operations, two questionnaires were developed. One questionnaire was administered immediately after completion of the project and the other 2 months afterwards. The questionnaire administered immediately after the project consisted of seven questions and dealt with expectations for the effectiveness of the materials, asking whether the vocabulary, expressions, and content learned from the materials would be potentially useful in the learners' business operations. Each question was answered on a 5-point Likert scale (5 = *Very much agree* and 1 = *Don't agree at all*). The second questionnaire administered 2 months after project consisted of eight questions and dealt with the perceived effectiveness of the materials for the business English situations the learners encountered in their business operations. Each question was answered with a simple Yes or No.

## RESULTS

### Learning Effects

To examine the effect of the use of the materials for the first evaluation criterion, improving the English listening ability of the employees, the results of the general and specific pre- and posttests were analyzed. In addition, the scores of the sales personnel versus nonsales personnel were similarly analyzed to address criteria 2 and 3, improving the English listening ability of employees closely associated with the content of the materials and the effect of the business operations of the employees closely associated with the content of the materials. Table 3 summarizes the results of all the tests.

Table 3  
Results of the General Test and the Materials-Specific Pretests and Posttests

		General test						
		Sales ( <i>n</i> = 19)			Nonsales ( <i>n</i> = 20)			Rank sum test (sales- nonsales)
		<i>M</i>	<i>Mdn</i>	<i>SD</i>	<i>M</i>	<i>Mdn</i>	<i>SD</i>	
GTEC	Pretest	123.47	122.00	16.08	128.05	125.50	19.86	<i>z</i> = 0.51
	Posttest	132.84	129.00	19.53	135.70	131.50	20.14	
	Difference	9.37	10.00	13.80	7.65	7.50	11.19	
Pre - post	Signed rank sum test	<i>z</i> = -2.44*			<i>z</i> = -2.71**			
		Materials-specific test						
		Sales ( <i>n</i> = 19)			Nonsales ( <i>n</i> = 20)			Rank sum test (sales- nonsales)
		<i>M</i>	<i>Mdn</i>	<i>SD</i>	<i>M</i>	<i>Mdn</i>	<i>SD</i>	
Understand main idea	Pretest	8.68	9.00	2.58	8.70	8.00	3.29	<i>z</i> = 0.58
	Posttest	13.94	14.00	2.29	13.65	15.00	2.30	
	Difference	5.28	5.00	2.05	4.95	5.00	2.50	
Pre - post	Signed rank sum test	<i>z</i> = -3.74***			<i>z</i> = -3.93***			
		Sales ( <i>n</i> = 19)			Nonsales ( <i>n</i> = 20)			Rank sum test (sales - nonsales)
		<i>M</i>	<i>Mdn</i>	<i>SD</i>	<i>M</i>	<i>Mdn</i>	<i>SD</i>	
Understand details	Pretest	5.89	4.00	3.09	6.60	8.00	4.16	<i>z</i> = 0.86
	Posttest	9.33	8.00	2.74	9.00	8.00	2.87	
	Difference	3.56	4.00	3.60	2.40	2.00	5.26	
Pre - post	Signed rank sum test	<i>z</i> = -3.25**			<i>z</i> = -1.72			

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001

### General listening test

Both the sales and nonsales personnel scored higher on the posttest than the pretest (sales personnel  $z = -2.44$ ,  $p < .05$ ; nonsales personnel  $z = 2.71$ ,  $p < .01$ ). However, the Wilcoxon rank sum test shows no significant difference between the two groups ( $z = 0.51$ ).

### Materials-specific listening test

Both sales and nonsales personnel scored higher on the posttest than the pretest for understanding the main idea (sales personnel  $z = -3.74$ ,  $p < .001$ ; nonsales personnel  $z = -3.93$ ,  $p < .001$ ). The sales personnel scored higher on the posttest for understanding details, but not the nonsales personnel (sales personnel  $z = -3.25$ ,  $p < .01$ ; nonsales personnel  $z = -1.72$ , n.s.). However, the rank sum test shows no difference between the two groups for understanding the main idea ( $z = 0.58$ ) or details ( $z = 0.86$ ).

### Effectiveness on Real-Life Operations

#### Expectations of effectiveness of the materials on real-life operations

To investigate the expected effectiveness of the highly specific materials for sales personnel versus nonsales personnel, a Wilcoxon rank sum test was performed on the learners' responses to the questions on the survey administered at the end of the project. Table 4 lists the results of this analysis.

Table 4  
Comparison of Expected Effectiveness of the Materials on Real-Life Operations by Group (Immediate Survey)

Question	Sales personnel ( $n = 18$ )			Nonsales personnel ( $n = 18$ )			Rank sum test (sales - nonsales)
	<i>M</i>	<i>Mdn</i>	<i>SD</i>	<i>M</i>	<i>Mdn</i>	<i>SD</i>	
1. Do you think the English expressions in "Narikiri English!" would be useful when you speak English in your work?	4.66	5.00	0.48	4.20	4.00	0.52	$z = 2.60^{**}$
2. Do you think the English expressions in "Narikiri English!" would be used when you speak English in your work?	4.38	5.00	0.97	3.65	4.00	0.93	$z = 2.68^{**}$
3. Do you think the English expressions in "Narikiri English!" would be useful when you write English in your work?	4.50	5.00	0.61	3.70	4.00	0.73	$z = 3.20^{**}$

4. Do you think the English expressions in "Narikiri English!" would be used when you write English in your work?	4.11	4.00	0.96	3.35	3.00	0.81	$z = 2.66^{**}$
5. Do you think the English listening practice in "Narikiri English!" would be useful in listening to English in your work?	4.44	5.00	0.70	3.85	4.00	0.87	$z = 2.33^*$
6. Do you think the English learning with "Narikiri English!" would be useful in reading English in your work?	4.22	4.00	0.87	3.75	4.00	0.63	$z = 2.09^*$
7. Do you think the English learning with "Narikiri English!" would be useful in English communication in your work?	4.50	4.50	0.51	4.05	4.00	0.39	$z = 2.76^{**}$

\* $p < .05$ ; \*\* $p < .01$

### Perceived effectiveness of the materials real-life operations 2 months after the project

A  $\chi^2$  test was performed on the learners' responses to the questions on the survey administered 2 months after completion of the project. Table 5 lists the results of this analysis.

Table 5

Comparison of Perceived Effectiveness of the Materials on Real-Life Operations by Group (Delayed Survey)

Question	Group	Yes	No	$\chi^2$
1. Did the English expressions in "Narikiri English!" prove useful in speaking English at work?	Sales	8	4	5.49*
	Nonsales	2	9	
2. Was there an opportunity to apply the English expressions you learned in "Narikiri English!" to speaking English at work?	Sales	5	7	3.16
	Nonsales	1	10	
3. Did the English expressions in "Narikiri English!" prove useful in writing English at work?	Sales	4	8	3.16
	Nonsales	1	10	
4. Was there an opportunity to use the English expressions in "Narikiri English!" in writing English at work?	Sales	4	8	1.98
	Nonsales	1	10	
5. Did the English listening practices in "Narikiri English!" prove useful in listening to English at work?	Sales	6	6	2.56
	Nonsales	2	9	



6. Did the English expressions in "Narikiri English!" prove useful in reading English at work?	Sales	7	5	3.88*
	Nonsales	2	9	
7. Did the English study with "Narikiri English" prove useful in English communication at work?	Sales	8	4	5.49*
	Nonsales	2	9	
8. Was there an opportunity to apply what you learned in "Narikiri English!" to English communication at work?	Sales	7	5	6.13*
	Nonsales	1	10	

\* $p < .05$

Significant differences were found in four of the questions: Did the English expressions in "Narikiri English!" prove useful in speaking English at work? Did the English expressions in "Narikiri English!" prove useful in reading English at work? Did the English study with "Narikiri English" prove useful in English communication at work? and Was there an opportunity to apply what you learned in "Narikiri English!" to English communication at work?

## DISCUSSION

### ***Effect of the ESBP Materials on the Employees' Improvement in English Listening Ability***

The first two evaluation criteria referred to the effect of the materials on improving the English listening abilities of (a) all the employees who participated in the project and (b) especially those whose work was directly related to the content of the materials (the sales personnel). A general listening test and a materials-specific listening test were given at the end of the project to investigate these effects. The employees' scores on both posttests showed significant gains from the pretests on almost all measures. However, analysis did not show any significant differences between the groups (sales vs. nonsales).

The use of the highly specific materials had a clear effect on the employees' listening abilities, but not on the employees whose work was the most closely related to the content of the materials. Two reasons for these results can be inferred. First, the nonsales personnel could have improved their listening abilities by acquiring the background knowledge presented in the prelistening stage of the materials. The materials supported both top-down processing that included the activation of background knowledge and bottom-up processing that focused on individual English words and phrases. The original purpose of step 2 of the prelistening stage (see Table 2 above) was to activate the background knowledge of sales personnel, not that of the nonsales personnel. However, this step could have an opportunity for the nonsales personnel to acquire new knowledge, which in turn may have contributed to the improvement of their listening abilities. Second, employees in the company are routinely reassigned to different divisions. It is possible that the current nonsales personnel had previous experience in sales. This previous experience may have allowed these employees to recognize their affinity with the content of the materials. Time did not permit the researchers to explore this issue.

### ***Authenticity of Materials: Effects of the ESBP Materials on the Business Operations of Employees Whose Work Was Closely Associated with the Content of the Materials***

A survey was conducted immediately after the project and again 2 months later to investigate the effect on the materials on the business operations of employees whose work was closely related to the content of the materials (criterion 3). Analysis of the employees' responses to

the survey questions suggested that employees in the sales division, at whom the materials were targeted, had strong expectations of being able to what they learned in their actual business operations. Learners who were exposed to English language situations in their work that corresponded closely to the content of the materials seem to have been able to use what they learned in speaking, reading, writing, and listening to English in their actual business operations.

There are two possible reasons for this result. One reason is due to the fact that listening provides effective input that transfers to the other skills (Dunkel, 1991; Rubin, 1994). DeMauro (1992) found a correlation of .5 or higher between listening section of the TOEFL and the scores on the other sections measuring different kinds of skills. The second reason is found in the contextual effect of the materials. The Cognition and Technology Group at Vanderbilt (1997) demonstrated that learners who learned mathematics to develop problem-solving skills in situations in which mathematics was actually used were able to transfer what they learned to real-life situations. In the study described here, while there was no statistically significant difference between the sales personnel and nonsales personnel regarding English ability, but the sales personnel had higher expectations and put what they learned to use better than the nonsales personnel. The following two responses on the open-ended questions in the second questionnaire confirmed this finding.

International calls to our pilot number are often transferred to me. It may be the fruit of 'Narikiri English!' and subsequent listening practice. I can catch most of what is said on the phone and speak well.

I had an opportunity to dine with a foreign guest, and during the casual talk relating to steel (e.g., market conditions and higher cost of raw materials) I was able to arrange and use what I learned.

## CONCLUSION

In this study, the following three criteria were established to examine the effects and effectiveness of the materials developed for English for specific business purposes:

1. the effect on improving the English listening ability of employees who used the ESBP materials,
2. the effect on improving the English listening ability of employees whose work was closely associated with the content of the ESBP materials, and
3. the effect on the business operations of employees whose work was closely associated with the content of the ESBP materials.

To examine these three criteria, we created English listening materials that focused on the sales operation of a steel company and used them in an independent corporate training program. We compared the learning outcomes of employees in the company's sales operation to those of employees engaged in operations other than sales. Analysis of the data resulted in following findings:

1. As measured by posttests, learning effects due to the use of these materials were evident and equally effective for all employees. There was no difference between the employees in the sales and nonsales groups.
2. A transfer effect may have occurred in employees whose work situation (i.e., sales) was closely aligned to the content of the learning materials.

Traditionally, second language acquisition research, particularly ESP research, has examined the English usage situation of learners. It can be expected that the use of materials that accord with learners' usage goals has an effect on their learning achievement and affective characteristics, including motivation because learners are aware that what they are learning corresponds directly their real-life needs and interests. However, the themes adopted in many learning materials, even when those materials claim to represent specific English usage situations, tend to be related to generalized situations. For instance, many materials in programs designed for English for academic purposes cover communication in classes and procedures to follow in academic settings. English materials intended for business people are insufficient if the materials are limited to general situations such as marketing negotiation and communicating requests. Business people are required to make full use of their English in the business operations that are deeply rooted in specific corporate areas. The authenticity of learning materials, that is, the degree to which the learning materials match the unique requirements in specific corporate areas has been largely unexamined (Field, 2008; Gilmore, 2007).

This study does have some limits. We undertook the project as a case study for which we collected data from a total of approximately 40 people at a single company. We need to continue to extend this kind of research at other companies to corroborate the findings of our study. Particularly in the examination of the effect of the use of the materials after 2 months, we did not have the opportunity to make direct observations and were limited to examining the possibility of effect self-reported answers to survey questions. A future project could solve this problem by establishing a framework for joint research with a company and using evaluation methods to measure effectiveness of the learning materials in the actual company operations.

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## ACKNOWLEDGEMENTS

This study was supported by Benesse Corporation as collaborative research, and Grant-in-Aid for Young Scientists (B) No.19700629 from the Japan Society for the Promotion of Science (JSPS).

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