# The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy

# Lance Burrows

Abstract Self-efficacy is the expectation that one can successfully complete a particular task within a specific domain. Although it has been used to predict human behavior in several different contexts, e.g., educational psychology and medicine, it has not been widely utilized in second language research. There has been some promising research that has shown preliminarily that reading strategy intervention may help promote higher levels of reading self-efficacy. But the studies that have been used for this research did not account for the students' view of reading strategies and how that sentiment might aid or detract from the learners' level of reading self-efficacy. In this study, 322 Japanese, university students participated in a reading treatment of either extensive reading, reading strategy intervention, a combination of the two (reading strategies and ER), or a comparison group which was conducted largely using intensive reading techniques in the classroom. Students were given a survey to gauge their level of reading self-efficacy and a questionnaire to ascertain what level of utility the learners assigned reading strategies. It was found that there was no significant difference between the utility of reading strategies and resulting reading self-efficacy.

Key words reading strategies, self-efficacy, questionnaire May 26, 2016 accepted

# Self-efficacy in Second Language Research

Although researchers from many fields (i.e., educational psychology, health, medicine, athletics, business, international affairs, psychopathology, and social and political change) (Pajares, 2004) have employed self-efficacy to predict and describe a wide range of human functioning, research in the field of foreign languages remains relatively limited. In the early 1990s a collective criticism rose from the field of SLA referring primarily to Gardner's (1985) socio-educational model (Crookes & Schmidt, 1991; Oxford & Shearin, 1994; Dörnyei, 1994). There was a general consensus among several researchers in the field that research in L2 learning had been restricted by a narrow perspective on motivation. Recommendations that researchers begin to consider non-L2 approaches to motivation were voiced.

In response to these calls, Tremblay and Gardner (1995) investigated the implication of self-efficacy, along with other motivational constructs, and its role in L2 motivation. A sample of 75 French language students in a Francophone secondary school completed questionnaires designed to measure various motivational and attitudinal factors. In addition to these measures, they completed an essay in French. The researchers hypothesized that self-efficacy is directly influenced by students' attributions of their successes and failures in language learning situations. They also hypothesized that self-efficacy would directly influence motivational behavior and that motivational behavior would have a direct affect on achievement. Final grades for the French class were used as a measure of achievement. The results supported the hypothesis that self-efficacy has a direct effect on motivational behavior which subsequently has a direct relation to achievement.

Although the study served as a welcome answer to the calls for further research on L2 motivation, there seemed to be some inherent problems with the design. First, a review of the questionnaire items revealed inconsistencies between the items and the theoretical nature of the construct. Instead of questioning learners' perceived efficacy to perform a specific language task, the items were constructed to test one's perceived "likelihood" of performing certain language functions in French.

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows) The researchers also claimed that the self-efficacy construct in their study contained an anxiety component. Bandura (1977, 1986, 1997) has never included anxiety in his explanations of the theory. This is one of the elements that differentiates Clément's (1980) concept of self-confidence, the balance between perceived self-competence and anxiety, and Bandura's self-efficacy construct.

A second concern about the study was the relatively small size of the sample. The analysis was conducted on a sample of only 75 subjects. The researchers, themselves, voiced a concern over the topic, but explained that other researchers had replicated studies conducted on their earlier model, which was also a part of the model of that study and therefore, they were confident that the basic relationships reported in the study were relatively stable.

Further investigation into the connection between self-efficacy and motivation was also conducted by Mori (2002), in a study redefining motivation to read in a foreign language. At the time of her study, there were, essentially, no models of foreign language reading motivation available, so she turned to the MRQ, proposed by Wigfield and Guthrie (1995) for use with L1 readers. In her study, 447 EFL students at a women's university in Japan completed the questionnaire based on their motivation for reading in a foreign language, English. Similar to the research conducted by Wigfield and Guthrie (1995, 1997), the results supported the idea that reading motivation is a multifaceted construct. Furthermore, the results also showed a clear connection between reading motivation and reading self-efficacy.

Like the common problems with the study by Tremblay and Gardner (1995), one of the major critiques of Mori's (2002) study, has also been an inconsistency between the items on the questionnaire and the fundamentals laid out in the theory of self-efficacy. Mori mistakenly combined measures of other constructs within her foreign language reading efficacy items. For example, the item, "I liked reading classes at junior and senior high schools" questions more the students' enjoyment in reading in a foreign language than reading self-efficacy. Another example, "My grades for English reading classes at junior and senior high schools were not very good" asks students to report information about previous grades instead of their self-perception of reading self-efficacy. Although the above item might al-

lude to the learner's impression of her own self-efficacy based on her evaluation of her grades, the item, itself, does not evaluate students' sense of efficacy for foreign language reading.

In a similar vein, inconsistencies become apparent in a study conducted by Cheng (2002). The researcher aimed to investigate the relationship between foreign language writing anxiety and foreign language writing self-efficacy. The participants were 165 English majors at one university in northern Taiwan. Amongst the multitude of questions from five surveys that the participants completed, there was only one question included to measure foreign language writing self-efficacy and, moreover, it was conceptually flawed. Cheng (2002) asked the learners to "rate their English writing ability" on a Likert-scale from 1 (*Not proficient at all*) to 5 (*Very proficient*). The wording of the question does not reflect the task-specific, domain-specific nature of the self-efficacy theory. The results showed that the participants' self-perceptions of confidence in English writing largely explained the variance in second language writing anxiety (34%), however, as intimated above, the reliability and validity of these results remain under debate.

In a study conducted in Canada with ESL learners, Rossiter (2001) showed that explicit strategy instruction not only helped to increase students' strategy use in L2 speaking but also showed a trend to improve the students' speaking self-efficacy (significant differences were not achieved). The author mentioned a number of limitations to the study of which the most notable was the small number of participants, 30 adult students registered in a full-time intermediate ESL program in Canada. The study lasted 15 weeks, one academic semester. The paper details the strategy instruction and the speaking tasks the students engaged in. The author divided the strategies that were explicitly taught into two groups, communication strategies and affective strategies.

In another study that suffered from an extremely small sample size, Gahungu, (2007), also investigated the relationship between strategy use and self-efficacy. The study was conducted with 37 students enrolled in Intermediate French II classes at Chicago State University. In addition, the author collected data utilizing an adapted version of Oxford's (1990) Strategy Inventory for Language Learning

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows) (SILL), a Likert-scale survey designed to measure the participants' self-efficacy, and a French cloze test for the language ability variable. The author hypothesized a positive relationship between all three variables, language learning strategy use, self-efficacy and language ability and significant results confirmed that hypothesis.

Hseih and Schallert (2008) investigated self-efficacy and attribution in the domain of foreign language learning with 500 students in Spanish, German, and French courses at the University of Texas at Austin in the United States. The participants were first given class test scores and asked if the scores represented a success or failure on the part of the student. Thereafter, the students were asked to rate their self-efficacy and attribution based on the scores. The study supported the hypothesis that self-efficacy was the most powerful predictor of achievement. Ability attributions were considered significant but not as strong as self-efficacy. It was also found that students who attributed failure to a lack of effort had a higher sense of self-efficacy than those who attributed failure to other factors such as ability, task difficulty, and luck. Although a direct link from self-efficacy to achievement was not realized in the study conducted by Tremblay and Gardner (1995), this study showed a relationship.

These attributions to success and failure were also evident in a study by Graham (2006). In this qualitative study, conducted through questionnaires and interviews, Graham observed that most students with high self-efficacy credited both successes and failures to either an ample expenditure of effort or a lack of it, respectively. Those who considered themselves to be less efficacious tended to blame their failures more on external forces such as task difficulty, luck, and ability.

In another study, Graham (2004) showed that students who attributed success to effort, high ability, and effective learning strategies had higher levels of achievement. She detailed the relationship between one's ability to manipulate learning strategies as a source of higher self-efficacy. On the contrary, low ability and task difficulty were blamed for a lack of achievement in French by most students who exhibited low self-efficacy. Graham maintained that if learners could be educated about the use of language strategies and their link to academic performance, they might start to change the attributions they hold for successes and failures, thereby

changing their self-efficacy.

Although this section is not an entirely exhaustive list of all literature dealing with self-efficacy and second language research, I believe that this review highlights the most relevant studies to date on this topic. A review of this section reveals that a strong relationship between self-efficacy and language learning motivation does exist. This link between self-efficacy and motivation has also been translated into gains in achievement, however, a direct relationship between self-efficacy and achievement is still under investigation.

Extant literature on self-efficacy and second language learning often deals with strategy instruction and use, as well. There seems to be a strong positive correlation between strategy use, self-efficacy, and language proficiency. That is, the more proficient learners have been shown to more frequently and more successfully use learning strategies. Research on explicit strategy instruction in foreign language learning seems to yield results that show a positive correlation to increases in achievement but relatively weak improvement in self-efficacy, as a result of that instruction.

In addition, ratings of attribution correlate strongly with self-efficacy beliefs. Students who attributed failure to lack of effort tend to hold a higher sense of self-efficacy than those who attribute failure to other factors such as ability, task difficulty, and luck.

Limitations of the reviewed studies include extremely small sample sizes, leading to results that might not be generalizable to a greater population; inconsistencies in self-efficacy questionnaire items that do not accurately reflect the tenets of Bandura's (1986) social cognitive theory; and a serious dearth of longitudinal studies.

# Overview of Learner Strategies

Since Joan Rubin published her seminal article in 1975, What the "Good Language Learner" Can Teach Us, there has been significant growth in research activity in learner strategies. The research conducted over the past three decades has been based largely on the theoretical underpinnings of three influential books (Naiman,

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows) Fröhlich, Stern, & Todesco, 1978, 1996; O'Malley & Chamot, 1990; Oxford, 1990), in addition to Rubin's seminal work.

Acting as the trailblazer in learner strategy research, Rubin (1975) claimed that successful learners were fundamentally different from less successful learners in their use of techniques and approaches that allowed them to comprehend and manipulate language more skillfully. She postulated that there were two basic sets of techniques, those directly related to learning (i.e., monitoring, memorization, and deductive reasoning), and those indirectly related to learning (i.e., creating opportunities for practice, and participating in production tasks related to communication). Early learner strategy research (Rubin, 1975; Stern, 1975) largely focused on identifying what strategies good language learners deployed and how they differed from those used by less successful learners.

Based on the systematized lists that Rubin (1975) and Stern (1975) had developed, Naiman, Fröhlich, Stern, and Todesco (1978/1996) questioned if it were possible to help less successful learners by teaching them some of the techniques used by good learners. By conducting interviews with adult learners of French as a second language, they proposed that the use of certain strategies partly explained what constituted a good language learner. Based on their research, they proposed that good language learners:

- maintained an active approach to learning,
- were able to make guesses and inferences about language based on their own experiences with their L1,
- concentrated more on fluency than accuracy and searched for communicative opportunities,
- were aware of affective responses that might occur while learning a language and were able to manage those responses,
- monitored their own L2 performance and made adjustments accordingly.

In the end, Naiman et al. (1978, 1996) called for further research "to study critically the different inventories of learning strategies and techniques and to develop an exhaustive list, clearly related to a learning model" (p. 20).

In response to this call, O'Malley and Chamot (1990), categorized learner strategies into three main groups: cognitive, metacognitive, and social/affective. They conceptualized cognitive strategies as those involving manipulation or transformation of the material being learned. Metacognitive strategies entailed those involving an understanding of the learning process and the ability to control that process through planning, monitoring and evaluation. Finally, social/affective strategies included those pertaining to communicative interaction with others (i.e., peers, teachers) in the learning process.

Working in a similar vein, Oxford (1990) went on to create her own set of categories for learner strategies, which was considered to be a more encompassing and comprehensive classification model than the lists of her predecessors. She rooted her understanding of learner strategies in communicative competence and divided strategies into two distinct classes: direct and indirect.

Direct strategies referred to those involving the direct use of language. These direct strategies were further subdivided into three categories: memory, cognitive, and compensation strategies. In her conceptualization, memory strategies referred to building mental connections which could assist in encoding information into long-term memory and/or retrieving it. Cognitive strategies were described as those that require "manipulation or transformation of the target language by the learner" (Oxford, 1990, p. 43). Such strategies include, analyzing, reasoning deductively, or translating directly to the L1. Compensation strategies allow learners to utilize new language despite limitations in their linguistic ability. These strategies might include, inferring unknown word meanings from surrounding context or switching to the mother tongue in order to overcome gaps in knowledge of the language and/or an inability to manipulate that knowledge.

Oxford (1990) divided indirect strategies into three groups: social, affective, and metacognitive strategies. Social strategies, such as asking questions and initiating conversation, facilitated learners' interaction with others. Affective strategies assisted learners in controlling and manipulating their feelings, attitudes, and motivation pertaining to language learning. Finally, metacognitive strategies aided learners

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows) in controlling their language learning process through planning, monitoring, and evaluation.

In general, these early books and the research that evolved from them showed the ever-expanding nature of strategy classification. The initial goal to create an exhaustive list of strategies that good language learners deployed to facilitate learning and use of language was, in many respects, impossible. In addition to the confusion caused by this evolution, there were also distinct problems in developing a comprehensive definition of learner strategies. Skehan claimed that learner strategy research was at an "embryonic stage" and that researchers were "dealing with a clear example of a research-then-theory perspective" (Skehan, 1989, p. 98).

Overall, there were several studies amongst these that alluded to the importance of students recognizing the utility of reading strategies in order for that knowledge to appreciably change their self-efficacy, but none were concrete in their investigation to answer this possible question. Therefore, this study will attempt to answer the research question: Do students who seem to rate the value of reading strategies higher also exhibit a higher level of reading self-efficacy.

#### Method

#### Participants and Setting

In order to answer the abovementioned research questions, 322 first and second year Japanese university learners were given the two questionnaires. They also underwent treatments in extensive reading, reading strategy training, a combination of the two, or intensive reading. The study lasted a whole academic year and the tests were given three times over that time period.

#### Instruments

Reading Self-efficacy Questionnaire. This instrument was developed from Burrows (2012) and includes 14 items asking participants to gauge their level of ability and the perceived ability based on several different situations. For example, "How sure are you that you would be able to read and understand the menu in English

— 31 ( 31 )—

in a fast food restaurant?" These questions were designed to measure the learners sense of reading self-efficacy. The questionnaire was given three times over the course of the study. The first time was in the second week of classes, the second time was at the 14<sup>th</sup> week of classes and the last time was in the 29<sup>th</sup> week of classes. The same was true for the utility of reading strategies questionnaire too.

Perceived Utility of Reading Strategies Questionnaire. This questionnaire was designed to ascertain how highly the students rated the importance of reading strategies in regard to their ability to read English. Some of the questions were "To what degree do you feel that guessing an unknown word's meaning from the surrounding text in a reading passage is important to help you read better?" There were 24 questions. The questionnaire was given in the L1, Japanese. (see Appendices A and B for Japanese and English versions of the questionnaire)

## Results

The research question asked whether the participants who made greater gains on their self-ratings for the utility of reading strategies also made greater gains on their self-ratings for reading self-efficacy over the course of the academic year. This question is accompanied by a directional hypothesis: Those participants who more highly rate the use of reading strategies as practical and useful in improving reading comprehension also make higher reading self-efficacy gains. This research question was investigated using a one-way ANOVA. The 322 participants were ranked in order according to their gain scores on perceived utility of reading strategies, and then divided into three groups; high (n=107), mid (n=108), and low (n=107). These groups were the independent variable in the analysis. The gain scores (Rasch person ability estimates) between time 1 and time 3 were calculated for perceived utility of reading strategies and reading self-efficacy: This was the dependent variable. The objective of this analysis was to determine whether there were any statistically significant differences between these three groups based on their reading self-efficacy gains.

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows)

Before conducting the ANOVA, the assumption of homogeneity of variance was checked using Levene's test of equality of error variances. The results were non-significant, F = .94(df = 2), p > .05. Therefore, the data did not violate the assumption of homogeneity of variance. In addition, the skewness and kurtosis values were within acceptable limits. Therefore, the assumptions necessary to run the ANOVA were met.

The descriptive statistics for perceived utility of reading strategies and reading self-efficacy for the three groups are displayed in Table 1, and Figure 1 shows a graphical display of the means for perceived utility of reading strategies and reading self-efficacy. The mean gain scores for reading self-efficacy decrease monotonically from the high to the mid to the low group. The results of the ANOVA indicated a non-significant group effect, F(2, 319) = 2.10, p = .12. Because the ANOVA did not reveal any statistically significant changes between the three groups, post hoc tests were not conducted.

Table 1. Descriptive Statistics for the Gain Scores for the Perceived Utility of Reading Strategies and Reading Self-Efficacy (High, Mid, and Low Groups)

	Perceived ut	ility of readin	g strategies	Reading self-efficacy				
_	High	Mid	Low	High	Mid	Low		
M	1.175	.079	-1.218	.941	.779	.606		
SE	.066	.021	.103	.114	.110	.122		
95% CI								
LB	1.044	.038	-1.423	.716	.560	.365		
UB	1.307	.121	-1.013	1.167	.998	.847		
SD	.685	.217	1.066	1.179	1.148	1.258		
SK	.134	083	246	.783	208	.045		
SES	.234	.233	.234	.234	.234	.234		
KT	.896	910	.735	.502	.390	.090		
SEK	.463	.461	.463	.463	.461	.463		

Note. CI=95% confidence interval; SK=skewness; KT=kurtosis; SES=Standard error skewness; SEK=Standard error kurtosis; High=group that had highest gains on ratings for the perceived utility of extensive reading questionnaire; Mid=group that had the second highest set of gains on ratings for the perceived utility of extensive reading questionnaire; Low=group that had the lowest gains on ratings for the perceived utility of extensive reading questionnaire.

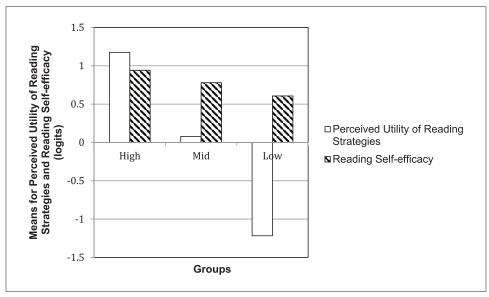


Figure 1. Mean gain scores for the perceived utility of reading strategies questionnaire and the reading self-efficacy questionnaire (high, mid, and low groups).

The results do not support the hypothesis that the participants who experienced higher gains on their perception of the utility of reading strategies over the course of the academic year also made significantly greater gains in reading self-efficacy.

## Discussion

The research question asked whether the participants who made greater gains on their self-ratings for the utility of reading strategies (see Table 1 for descriptive statistics for all groups) also made greater gains on their self-ratings for reading self-efficacy (see Table 1) over the course of the academic year. This question was accompanied by a directional hypothesis: Those participants who more highly rate the use of reading strategies as practical and useful in improving reading comprehension also make higher reading self-efficacy gains. The same approach as above in research question 6 was adopted for this research question; the 322 participants were ranked in order according to their gain scores on perceived utility of reading strategies (see Table 1), and then divided into three groups; high (n=107), mid (n=108), and low (n=107). The objective of this analysis was to determine whether

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows) there were any statistically significant differences between these three groups based on their reading self-efficacy gains. The results of the ANOVA indicated a non-significant group effect, because of this no post hoc tests were conducted. The descriptive statistics for perceived utility of reading strategies and reading self-efficacy for the three groups are displayed in Table 1, and Figure 1 shows a graphical display of the means for perceived utility of reading strategies and reading self-efficacy.

The results do not support the hypothesis that the participants who experienced higher gains on their perception of the utility of reading strategies over the course of the academic year also made significantly greater gains in reading self-efficacy. The results also do not support the results of the studies mentioned above (Brown et al., 1981; Paris, Lipson, & Wixson, 1983; Schunk & Rice, 1987).

The teachers who were in charge of the reading strategies and extensive reading/reading strategies groups conducted their weekly classes following the procedures of CALLA (Chamot, 2005), where much of the onus to use and extend reading strategies is placed on the reader. Following the guidelines of this method, the teacher evaluates what strategies readers already know, and then explains and models the use of appropriate strategies, encourages independent strategy use, and guides readers through self-reflection, but does not play an overly strong role in detailing the utility of reading strategies. In CALLA, much of that must be done by the readers themselves. This might show that the element of providing strategy value information to readers is lacking in the CALLA framework, and that many readers might not be capable, even with opportunity to reflect and monitor their own progress and usage of strategies, of realizing the benefit of reading strategies.

One other explanation for the results might lie in a suspected problem with the instrument, the perceived utility of reading strategies questionnaire. Although this limitation is more fully explained in the limitations section, a brief explanation is warranted here. From the outset of the study, it was considered important to offer the questionnaire to all of the 322 participants so that a measurement for this construct could be taken and the results of all participants could be analyzed. However, not all of the participants in the study were exposed to reading strategies.

Therefore, it was a challenge to develop an instrument that would inform the participants who were not in one of the reading strategies groups of the construct while not exposing them too much to it, as to contaminate the results. In the end, it was thought that some participants might have had difficulty answering the questions on the perceived utility of reading strategies questionnaire because they were unfamiliar with the concepts being highlighted in the survey items.

Finally, the results might also signify inconsistencies among the participants in this study as to the effectiveness of reading strategy use. Again, many of the participants in this study were coming from a background of learning English through the grammar-translation method. Most of them were never exposed to reading strategies and might doubt their usefulness. It was also impossible for those in the intensive reading and extensive reading groups to be exposed to reading strategies that would have lent to further misunderstanding of the constructs by those groups and inconsistencies in the results.

#### Conclusion

Although self-efficacy has been shown to depend on the learners' engagement and awareness of their own motivation and reasons for that motivation, in this study, the learners did not seem to show a clear relationship between their ratings for the perceived utility of reading strategies and reading self-efficacy.

#### References

- (1) Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- (2) Bandura, A. (1982a). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122-147.
- (3) Bandura, A. (1986a). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.
- (4) Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28, 117-148.
- [5] Bandura, A. (1995). *Self-efficacy in changing societies*. New York: Cambridge University Press.
- [6] Bandura, A. (1997a). Self-efficacy: The exercise of control. New York: Freeman.

- [7] Chamot, A. U. (2005). Language learning strategy instruction: Current issues and research. *Annual Review of Applied Linguistics*, 25, 112–130.
- (8) Chamot, A. U. (2005). The cognitive academic language learning approach (CALLA): An update. In P. A. Richard-Amato & M. A. Snow (Eds.), *Academic success for English language learners: Strategies for K-12 mainstream teachers* (pp. 87-101). White Plains, NY: Longman.
- (9) Cheng, Y. (2002). Factors associated with foreign language writing anxiety. *Foreign Language Annals*, 35, 647-656.
- (10) Crookes, G., & Schmidt, R. (1991). Motivation: Reopening the research agenda. *Language Learning*, 41(4), 469-512.
- (11) Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. Language Learning, 40(1), 45-78.
- (12) Dörnyei, Z. (1994). Understanding L2 motivation: On with the challenge! *Modern Language Journal*, 78, 515-523.
- (13) Gahungu, O. N. (2007). The relationship among strategy use, self-efficacy, and language ability in foreign language learners. Unpublished doctoral dissertation. Northern Arizona University.
- (14) Graham, S. J. (2004). Giving up on modern foreign languages? Students' perceptions of learning French. *Modern Language Journal*, 33(2), 171-191.
- (15) Hsieh, P. P., & Schallert, D. L. (2008). Implications from self-efficacy and attribution theories for an understanding of undergraduates' motivation in a foreign language course. *Contemporary Educational Psychology*, 33(4), 513-532.
- (16) Mori, S. (2002). *The relationship between motivation and the amount of out-of class reading.* Unpublished doctoral dissertation. Temple University.
- (17) Naiman, N., Fröhlich, M., Stern, H., & Todesco, A. (1978). *The good language learner*. Research in Education Series 7. Toronto: OISE Press.
- (18) Naiman, N., Fröhlich, M., Stern, H., & Todesco, A. (1996). *The good language learner.* Clevedon, Avon: Multilingual Matters.
- (19) O'Malley, J. M., & Chamot, A. U. (1990). Learning strategies in second language acquisition. New York: Cambridge University Press.
- (20) Oxford, R. L. (1990). Language learning strategies: What every teacher should know. Boston, MA: Heinle & Heinle.
- [21] Pajares, F., & Miller, M. D. (1994). The role of self-efficacy and self-concept beliefs in mathematical problem-solving: A path analysis. *Journal of Educational Psychology*, 86, 193–203.
- [22] Rossiter, M. J. (2001). The effects of strategy training on L2 learners. Unpublished doctoral dissertation. University of Alberta.
- (23) Rubin, J. (1975). What the "good language learner" can teach us. *TESOL Quarterly*, 9, 41-51.
- (24) Skehan, P. (1989). *Individual differences in second-language learning*. London: Edward Arnold.
- (25) Stanovich, K. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly* 16, 32-71.
- (26) Tremblay, P. F., & Gardner, R. C. (1995). Expanding the motivation construct in language learning. *Modern Language Journal*, 79, 505-518.
- [27] Wigfield, A., & Guthrie, J. T. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology*, 89, 420-432.

#### APPENDIX A

# PERCEIVED UTILITY OF READING STRATEGIES QUESTIONNAIRE (JAPANESE VERSION)

リーディングストラテジーの必要性認識に関する調査

これは英語のリーディングストラテジー (読解技術) に関するアンケートです。英語の読解技術は学習することができますが、学習効果の感じ方は学習者によって違います。このアンケートでは、以下の読解技術を学習することがあなたの全般的な英文読解力を伸ばすためにどの程度効果があると感じるかを答えてください。

例えば日本語の読解技術について考えてみましょう。日本語で本を読んでいるときにあなたの知らない漢字(例:鯖、秋刀魚、鯵)が出てきたとしましょう。この場合、たとえ漢字が読めなくても「魚」という文字からこれらの漢字が魚の種類であることが想像できます。これも一つの読解技術です。それでは質問です。この読解技術を習得することがあなたの全般的な日本語読解力向上にどれくらい役立つと感じますか。

では、上記の日本語の場合を参考にして、以下の英語の読解技術に関して考えてみましょう。例えば1番の質問(英文読解で知らない単語の意味を前後の文脈から想像する技術)を見てみましょう。あなたが英文を読んでいて理解できない単語が出てくることがあります。その時に、もしあなたが前後の文脈からその単語の意味を想像できる読解技術を習得すれば、それがあなたの全般的な英文読解力向上にどれくらい役立つと感じますか。

次の1-8の質問はそれぞれ違う英語の読解技術に関するものです。各質問に、「習得すれば、自分の全般的な英文読解力向上にどれくらい役立つと思うか」という視点で、以下の1-6の基準を用いて答えてください。

 1
 2
 3
 4
 5
 6

 全くそう
 そう思わない
 どちらかと言う
 どちらかと言う
 みら思う

 思わない
 とそう思わない
 とそう思う

1 英文読解において、知らない単語の意味を前後の文脈から想像する技術 1 2 3 4 5 6

2 英文読解において、知らない単語の意味を単語の部分の意味から想像す 1 2 3 4 5 6

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows)

る技術(例: unbreakable を知らない単語とし, un (not) と break と able (can) に分け、「壊すことができない」と意味を想像できる)

3	英語の長文読解において、各段落の要点を把握する技術	1	2	3	4	5	6
4	英語の長文読解において、 <u>文章全体</u> の要点を把握する技術	1	2	3	4	5	6
5	英文読解において、文章の終わりを推測する技術	1	2	3	4	5	6
6	英語の長文読解において、各段落の話題を把握する技術	1	2	3	4	5	6
7	英語の長文読解において、文章全体の話題を把握する技術	1	2	3	4	5	6
8	英文読解において、直接書かれていない著者の気持ちや情報を推測する技術	1	2	3	4	5	6

その際、各質問に「習得すれば、自分の全般的な英文読解力向上にどれくらい効果的だと思うか」という視点で、以下の1-6の基準を用いて答えてください。

# 英文読解において……

9	単語を暗記するより,	読解技術①のほうが効果的だと思う。	1	2	3	4	5	6
10	単語を暗記するより,	読解技術②のほうが効果的だと思う。	1	2	3	4	5	6
11	単語を暗記するより,	読解技術③のほうが効果的だと思う。	1	2	3	4	5	6
12	単語を暗記するより,	読解技術④のほうが効果的だと思う。	1	2	3	4	5	6
13	単語を暗記するより,	読解技術⑤のほうが効果的だと思う。	1	2	3	4	5	6
14	単語を暗記するより,	読解技術⑥のほうが効果的だと思う。	1	2	3	4	5	6
15	単語を暗記するより,	読解技術⑦のほうが効果的だと思う。	1	2	3	4	5	6
16	単語を暗記するより,	読解技術⑧のほうが効果的だと思う。	1	2	3	4	5	6

1	2	3	4	5	6
全くそう	そう思わない	どちらかと言う	どちらかと言う	そう思う	強くそう思う
思わない		とそう思わない	とそう思う		

## 英文読解において……

17	文法をおぼえるより,	読解技術①のほうが効果的だと思う。	1	2	3	4	5	6
18	文法をおぼえるより,	読解技術②のほうが効果的だと思う。	1	2	3	4	5	6
19	文法をおぼえるより,	読解技術③のほうが効果的だと思う。	1	2	3	4	5	6
20	文法をおぼえるより,	読解技術④のほうが効果的だと思う。	1	2	3	4	5	6
21	文法をおぼえるより,	読解技術⑤のほうが効果的だと思う。	1	2	3	4	5	6
22	文法をおぼえるより,	読解技術⑥のほうが効果的だと思う。	1	2	3	4	5	6
23	文法をおぼえるより,	読解技術⑦のほうが効果的だと思う。	1	2	3	4	5	6
24	文法をおぼえるより,	読解技術(8)のほうが効果的だと思う。	1	2	3	4	5	6

#### APPENDIX B

# PERCEIVED UTILITY OF READING STRATEGIES QUESTIONNAIRE (ENGLISH VERSION)

This questionnaire is about strategies. Strategies are skills that you can learn that might help you to improve your reading comprehension. Some students think these strategies are helpful, but some students do not think they are helpful. Answer the following questions based on how you feel about these types of strategies and how they can help improve your reading comprehension.

You may use reading strategies in Japanese too. For example, sometimes when you are reading, you may encounter some unknown words (e.g., mackerel (SABA), saury (SANMA)). In this situation, even though you may not be able to read the name, you can see the radical for "fish" in the kanji, therefore you can imagine that the kanji means some kind of fish. This is one kind of reading strategy. So, the question is ... If you were able to master this strategy, to what degree do you think it would help your overall reading comprehension?

Now, let's use the above Japanese example as a reference and think about the following English reading strategies. For example, let's look at number 1 (guessing an unknown word's meaning from the surrounding text in a reading passage). When you are reading, sometimes you meet a word you don't understand. In this case, if you could guess the meaning of the word by looking at the surrounding context, to what degree do you think this would help your reading comprehension overall?

Questions 1-8 are about English reading strategies. For every strategy, consider, if you were able to develop that strategy, to what degree do you agree it would help to improve your overall English reading comprehension? Answer by using the 1-6 scale as listed below.

The Utility of Reading Strategies and Its Connection to Reading Self-Efficacy (Burrows)

	1 2 3 4 5 Strongly Disagree Slightly Slightly agree Agree disagree						6 Strongly Agree						
1	Guessing an	unknown word	's meaning f	rom the surroundi	ng	1	2	3	4	5	6		
	text in a rea	ading passage											
2	Guessing th	e meaning of an	unknown w	ord by breaking th	ne word	1	2	3	4	5	6		
	into its component parts (For example, un-break-able=cannot be												
	broken)												
3	Finding the main idea of a paragraph in a long reading passage							3	4	5	6		
4	Finding the	main idea of an	entire readi	ng passage		1	2	3	4	5	6		
5	Predicting t	he ending of a s	tory			1	2	3	4	5	6		
6	Finding the	topic of an enti	re reading pa	assage		1	2	3	4	5	6		
7	Finding the	topic of a parag	graph in a lo	ng reading passage	)	1	2	3	4	5	6		
8	Inferring th	e author's feelir	ngs or underl	ying information	from	1	2	3	4	5	6		
	reading the	text											

For the following questions, 9–24, please refer to the above strategies 1–8. Use the following 1–6 scale to answer the questions. For the following questions, answer the question, "to what degree do you agree the following strategies help to improve your overall reading comprehension?"

For reading comprehension . . .

9	strategy ${\mathbin{\textcircled{\scriptsize 1}}}$ is more useful than memorizing vocabulary.	1	2	3	4	5	6
10	strategy ② is more useful than memorizing vocabulary.	1	2	3	4	5	6
11	strategy $\ensuremath{\mathfrak{3}}$ is more useful than memorizing vocabulary.	1	2	3	4	5	6
12	strategy $\textcircled{4}$ is more useful than memorizing vocabulary.	1	2	3	4	5	6
13	strategy (5) is more useful than memorizing vocabulary.	1	2	3	4	5	6
14	strategy (6) is more useful than memorizing vocabulary.	1	2	3	4	5	6
15	strategy ${\mathcal T}$ is more useful than memorizing vocabulary.	1	2	3	4	5	6
16	strategy ® is more useful than memorizing vocabulary.	1	2	3	4	5	6

#### 第14巻 第1号

For the following questions, 9–24, please refer to the above strategies 1–8. Use the following 1–6 scale to answer the questions. For the following questions, answer the question, "to what degree do you agree the following strategies help to improve your overall reading comprehension?"

	1 Strongly disagree			6 Strongly Agree										
Fo	For reading comprehension													
17	strategy ①	is more useful t	han learning	grammar.		1	2	3	4	5	6			
18	strategy 2	is more useful t	han learning	grammar.		1	2	3	4	5	6			
19	strategy ③	is more useful t	han learning	grammar.		1	2	3	4	5	6			
20	strategy 4	is more useful t	han learning	grammar.		1	2	3	4	5	6			
21	strategy 5	is more useful t	han learning	grammar.		1	2	3	4	5	6			
22	strategy 6	is more useful t	han learning	grammar.		1	2	3	4	5	6			
23	strategy ⑦	is more useful t	han learning	grammar.		1	2	3	4	5	6			
24	strategy ®	is more useful t	han learning	grammar.		1	2	3	4	5	6			